

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:00
First Dose M/F: NA / NA
Lab: BNW

C Number:	C88070
Lock Date:	10/05/1995
Cage Range:	All
Date Range:	All
Reasons For Removal:	All
Removal Date Range:	All
Treatment Groups:	All
Study Gender:	Both
PWG Approval Date	06/12/1997

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Time Report Requested: 09:49:00

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 1	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 645 HISTO: 32389
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	
MISSING			
* Lymph Node, Mediastinal			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Epididymis		Mesothelioma Malignant	
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Degeneration	Cystic, Minimal
Note: "Nodule, 6mm dia" noted at necropsy was normal variation in lobar surface morphology.			
* Lung		Inflammation	Granulomatous, Minimal
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 5-15]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Skin	Subcut Tiss	Lipoma	
[Lipoma TGLS = 1-13+14]			
* Spleen			
Note: "Mass, 1cm dia" noted at necropsy was variation in normal shape of spleen.			
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

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First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 2	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 560 HISTO: 32390
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Seminal Vesicle	Skeletal Muscle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			
MISSING			
* Lymph Node, Bronchial	* Mammary Gland		
INSUFFICIENT TISSUE			
* Intestine Large, Rectum			
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Mild
* Adrenal Medulla		Hyperplasia	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Hepatodiaphragmatic Nodule	
	Centrilobular	Necrosis	Minimal
[Hepatodiaphragmatic Nodule TGLS = 4-13]			
* Lymph Node, Mandibular		Infiltration Cellular	Plasma Cell, Moderate
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
	Pars Distalis	Thrombosis	Marked
[Thrombosis TGLS = 3-8]			
* Preputial Gland		Carcinoma	
[Carcinoma TGLS = 1-7+11+12]			
* Prostate		Hyperplasia	Mild
* Testes	Interstit Cell	Hyperplasia	Mild
* Thyroid Gland	C Cell	Hyperplasia	Minimal
Tooth		Developmental Malformation	

* PROTOCOL REQUIRED TISSUE

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First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 2	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 560 HISTO: 32390
ORGAN AND ACCOUNTABLE SITE STATUS			
[Developmental Malformation TGLS = 2-9]			
PRIMARY CAUSE OF DEATH	- Preputial Gland Carcinoma		

* PROTOCOL REQUIRED TISSUE

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First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 3	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32391
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Mammary Gland	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		
MISSING			
* Lymph Node, Mandibular			
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Minimal
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
* Intestine Large, Cecum		Parasite Metazoan	
* Intestine Large, Colon		Parasite Metazoan	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
[Nephropathy TGLS = 7-5]			
* Liver		Basophilic Focus	
		Degeneration	Cystic, Moderate
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Degeneration TGLS = 4-12]			
[Leukemia Mononuclear TGLS = 3-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal

* PROTOCOL REQUIRED TISSUE

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First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 3	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32391
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pancreas		Adenoma Atrophy Basophilic Focus	Minimal
* Pituitary Gland	Pars Distalis	Adenoma Leukemia Mononuclear	
* Spleen		Fibrosis Leukemia Mononuclear	Mild
[Fibrosis TGLS = 2-11]			
[Leukemia Mononuclear TGLS = 1-11]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 5,6-7]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

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Species/Strain: Rat/F 344/N

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First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 4	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Natural Death	DAY ON TEST: 544 HISTO: 32392
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Nose	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
MISSING			
* Lymph Node, Bronchial	* Mammary Gland		
AUTO PRECLUDES DIAG.			
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum		
OBSERVATIONS			
* Epididymis		Mesothelioma Malignant	
* Kidney		Nephropathy	Mild
* Liver	Bile Duct	Hyperplasia	Minimal
* Pituitary Gland		Angiectasis	Moderate
[Angiectasis TGLS = 1-8]			
* Testes		Mesothelioma Malignant	
PRIMARY CAUSE OF DEATH	- Pituitary Gland Angiectasis		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:00
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 5	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 633 HISTO: 32393
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Liver	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Trachea
* Urinary Bladder			
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Moderate
[Nephropathy TGLS = 5-5]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 4-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

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Date Report Requested: 10/20/2014

Time Report Requested: 09:49:00

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 6	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 639 HISTO: 32394
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Spleen	* Stomach, Forestomach
* Trachea			
MISSING			
* Lymph Node, Mandibular	* Thymus		
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Minimal
Blood Vessel	Aorta	Mineralization	Moderate
* Bone		Fibrous Osteodystrophy	Minimal
Eye		Degeneration	Marked
[Degeneration TGLS = 3-13]			
* Heart	Artery	Mineralization	Moderate
* Kidney		Hydronephrosis	Mild
		Mineralization	Mild
		Nephropathy	Marked
[Hydronephrosis TGLS = 6-5]			
[Nephropathy TGLS = 5-5]			
* Liver		Degeneration	Cystic, Mild
* Lung		Hemorrhage	Minimal
	Artery, Mediastinum	Mineralization	Moderate
		Mineralization	Mild
Note: "Focus, 3mm dia, dark" noted at necropsy was not seen at trim or microscopically.			
[Hemorrhage TGLS = 14-11]			
Lymph Node		Hemorrhage	Mild
Note: "Tissue NOS, mass, 5x7mm, dark" noted at trim was lymph node, site unknown, and adjacent mineralized blood vessel.			
[Hemorrhage TGLS = 17-21]			

* PROTOCOL REQUIRED TISSUE

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CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 6	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 639 HISTO: 32394
ORGAN AND ACCOUNTABLE SITE STATUS			
Mesentery	Artery	Mineralization	Mild
		Mineralization	Mild
	Fat	Necrosis	Mild
[Mineralization TGLS = 7-14]			
[Necrosis TGLS = 8-15]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-8]			
* Skin	Subcut Tiss	Sarcoma	
Note: Sarcoma extended through lumbar vertebrae and into abdominal cavity.			
[Sarcoma TGLS = 11,12-17+19+18+20]			
* Stomach, Glandular		Mineralization	Moderate
		Necrosis	Moderate
[Necrosis TGLS = 16-12]			
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 9-7]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Urinary Bladder		Hemorrhage	Minimal
		Necrosis	Minimal
[Hemorrhage TGLS = 10-16]			
PRIMARY CAUSE OF DEATH	- Kidney Nephropathy		
CONTRIBUTORY CAUSE OF DEATH	- Skin Subcut Tiss Sarcoma		

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First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 7	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Natural Death	DAY ON TEST: 467 HISTO: 32395
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Islets, Pancreatic
* Larynx	* Pancreas	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Trachea	* Urinary Bladder
MISSING			
* Lymph Node, Bronchial	* Mammary Gland		
AUTO PRECLUDES DIAG.			
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Thyroid Gland	
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver	Bile Duct	Hyperplasia	Minimal
	Centrilobular	Leukemia Mononuclear	
		Necrosis	Mild
[Leukemia Mononuclear TGLS = 8-4]			
[Necrosis TGLS = 7-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-7]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 7	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Natural Death	DAY ON TEST: 467 HISTO: 32395
ORGAN AND ACCOUNTABLE SITE STATUS			
	Lateral Wall	Leukemia Mononuclear	
	Respirat Epith	Metaplasia	Squamous, Mild
* Pituitary Gland		Metaplasia	Squamous, Mild
* Preputial Gland		Leukemia Mononuclear	
[Adenoma TGLS = 3-12]		Adenoma	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5,6-11]			
* Thymus		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

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First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 8	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 477 HISTO: 32396
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Liver
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Trachea	* Urinary Bladder
MISSING			
* Lymph Node, Bronchial	* Mammary Gland	* Thymus	
OBSERVATIONS			
* Islets, Pancreatic		Carcinoma	
* Kidney		Nephropathy	Moderate
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 2-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
		Inflammation	Suppurative, Minimal
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

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First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 9	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 379 HISTO: 32397
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		
MISSING			
* Lymph Node, Bronchial	* Mammary Gland		
OBSERVATIONS			
* Brain		Astrocytoma Malignant	
[Astrocytoma Malignant TGLS = 2-1]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Liver		Hepatodiaphragmatic Nodule	
Note: "Nodule, 5mm dia" noted at trim was normal variation in lobar morphology.			
[Hepatodiaphragmatic Nodule TGLS = 1-4]			
* Lung		Inflammation	Granulomatous, Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Stomach, Forestomach		Necrosis	Moderate
[Necrosis TGLS = 4-8+11]			
* Testes	Bilateral, Interstit Cell	Adenoma	
PRIMARY CAUSE OF DEATH	- Brain Astrocytoma Malignant		

* PROTOCOL REQUIRED TISSUE

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First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 10	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32398
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			
OBSERVATIONS			
* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Cyst	Mild
		Leukemia Mononuclear	
		Nephropathy	Moderate
[Cyst TGLS = 5,8-5+14]			
[Nephropathy TGLS = 6-5]			
* Liver		Eosinophilic Focus	
	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
[Leukemia Mononuclear TGLS = 4-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Mild
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
	Olfactory Epi	Metaplasia	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 10	TRT#: 1	SEX: Male	DAY ON TEST: 733
	DOSE: CONTROL	DISP: Terminal Sacrifice	HISTO: 32398
ORGAN AND ACCOUNTABLE SITE STATUS			
* Prostate		Leukemia Mononuclear	
* Spleen		Hyperplasia	Mild
		Fibrosis	Mild
		Leukemia Mononuclear	
Note: "Cyst, 3mm dia, clear" noted at trim was dilated lymphatic or vein on splenic capsule.			
[Leukemia Mononuclear TGLS = 1-12]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2,3-7]			
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 11	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32399
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		
INSUFFICIENT TISSUE			
* Intestine Large, Rectum			
OBSERVATIONS			
* Adrenal Medulla		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Mild
* Intestine Large, Cecum		Parasite Metazoan	
* Intestine Large, Colon		Parasite Metazoan	
* Islets, Pancreatic		Carcinoma	
[Carcinoma TGLS = 6-13]			
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 8-5]			
* Liver		Basophilic Focus	
* Lung	Alveolar Epith	Hyperplasia	Mild
		Inflammation	Granulomatous, Mild
		Metaplasia	Squamous, Mild
[Hyperplasia TGLS = 2-11]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 3-14]			
* Nose	Olfactory Epi	Degeneration	
* Pituitary Gland	Pars Distalis	Adenoma	Hyaline, Mild
[Adenoma TGLS = 1-8]			
* Preputial Gland		Adenoma	
[Adenoma TGLS = 9-16]			
* PROTOCOL REQUIRED TISSUE			

ANIMAL ID: 11	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32399
ORGAN AND ACCOUNTABLE SITE STATUS			
* Prostate		Hyperplasia	Minimal
* Spleen			
Note: "Enlarged, 5x1.2 cm" spleen noted at necropsy was within normal limits microscopically.			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 4,5-7]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 12	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32400
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder
MISSING			
* Lymph Node, Bronchial	* Lymph Node, Mediastinal	* Thymus	
OBSERVATIONS			
* Adrenal Cortex		Osteosarcoma	Metastatic (Bone)
* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
* Bone		Osteosarcoma	
[Osteosarcoma TGLS = 9-11]			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 7-5]			
* Liver		Basophilic Focus	
		Clear Cell Focus	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
		Osteosarcoma	Metastatic (Bone)
[Leukemia Mononuclear TGLS = 6-4]			
[Osteosarcoma TGLS = 5-15]			
* Lung		Leukemia Mononuclear	
		Osteosarcoma	Metastatic (Bone)
[Osteosarcoma TGLS = 1-3+3A+12+13]			
Lymph Node	Iliac	Osteosarcoma	Metastatic (Bone)
[Osteosarcoma TGLS = 8-17]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 3-16]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 12	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32400
ORGAN AND ACCOUNTABLE SITE STATUS			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pancreas		Atrophy	Minimal
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-4]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-7]			
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 13	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 650 HISTO: 32401
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Trachea	* Urinary Bladder	
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Leukemia Mononuclear	
[Nephropathy TGLS = 5-5]		Nephropathy	Moderate
* Liver		Degeneration	Fatty, Minimal
		Degeneration	Cystic, Mild
		Eosinophilic Focus	
	Bile Duct	Hyperplasia	Minimal
		Leukemia Mononuclear	
[Degeneration TGLS = 6-12]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-13]			
* Mammary Gland		Galactoceles	Mild
[Galactoceles TGLS = 4-14]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 13	TRT#: 1	SEX: Male	DAY ON TEST: 650
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 32401
ORGAN AND ACCOUNTABLE SITE STATUS			
* Spleen		Fibrosis	Minimal
		Leukemia Mononuclear	
[Fibrosis TGLS = 3-11]			
[Leukemia Mononuclear TGLS = 2-11]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		
CONTRIBUTORY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 14	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 666 HISTO: 32402
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone Marrow	* Brain	* Epididymis
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Lymph Node, Bronchial	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Stomach, Glandular	* Urinary Bladder
MISSING			
* Thymus			
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Moderate
* Bone		Fibrous Osteodystrophy	Mild
* Esophagus		Inflammation	Suppurative, Moderate
* Heart		Cardiomyopathy	Mild
* Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 6-5]			
* Larynx		Necrosis	Moderate
* Liver		Basophilic Focus	
		Clear Cell Focus	
		Degeneration	Fatty, Minimal
* Lung		Inflammation	Suppurative, Moderate
* Lymph Node, Mandibular		Infiltration Cellular	Polymorphnuclr, Moderate
* Nose	Olfactory Epi	Atrophy	Mild
		Inflammation	Suppurative, Marked
	Olfactory Epi	Metaplasia	Mild
* Pancreas		Atrophy	Minimal
		Hyperplasia	Moderate
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-8]			
* Skin		Keratoacanthoma	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 14	TRT#: 1	SEX: Male	DAY ON TEST: 666
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 32402
ORGAN AND ACCOUNTABLE SITE STATUS			
[Keratoacanthoma TGLS = 1-12]			
* Spleen		Fibrosis	Mild
[Fibrosis TGLS = 5-11]			
* Stomach, Forestomach		Necrosis	Moderate
* Testes	Artery	Inflammation	Chronic Active, Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Trachea		Inflammation	Suppurative, Mild
PRIMARY CAUSE OF DEATH	- Kidney Nephropathy		
CONTRIBUTORY CAUSE OF DEATH	- Nose Inflammation		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 15	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 552 HISTO: 32403
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
MISSING			
* Lymph Node, Mediastinal			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Hypertrophy	Moderate
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Testes		Atrophy	Mild
[Atrophy TGLS = 3-7]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 16	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 691 HISTO: 32404
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
* Bone		Fibrous Osteodystrophy	Mild
Eye	Retina	Atrophy	Moderate
[Cataract TGLS = 7-11]		Cataract	Marked
* Heart		Cardiomyopathy	Moderate
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 4-5]			
* Liver		Basophilic Focus	
		Degeneration	Fatty, Minimal
* Lung	Alveolar Epith	Hyperplasia	Minimal
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 3-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pancreas		Adenoma	
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 6-8]			
* Stomach, Forestomach		Necrosis	Moderate
[Necrosis TGLS = 5-14]			
* Testes	Interstit Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 16	TRT#: 1	SEX: Male	DAY ON TEST: 691
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 32404
ORGAN AND ACCOUNTABLE SITE STATUS			
* Thyroid Gland	Artery	Inflammation	Chronic Active, Moderate
	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Kidney Nephropathy		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 17	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 636 HISTO: 32405
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Islets, Pancreatic
* Larynx	* Liver	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Mammary Gland	* Pancreas
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Urinary Bladder	
MISSING			
* Parathyroid Gland	* Thymus		
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia Pheochromocytoma Benign	Mild
* Heart		Cardiomyopathy	Mild
* Intestine Small, Jejunum [Carcinoma TGLS = 1-11+12]		Carcinoma	
* Kidney		Nephropathy	Mild
* Lymph Node, Mesenteric [Ectasia TGLS = 3,4-13+14]		Ectasia	Marked
* Nose	Olfactory Epi Olfactory Epi	Atrophy Degeneration Inflammation	Mild Hyaline, Mild Suppurative, Mild
* Pituitary Gland [Adenoma TGLS = 2-8]	Olfactory Epi Pars Distalis	Metaplasia Adenoma	Mild
* Preputial Gland		Hyperplasia	Mild
* Stomach, Glandular		Necrosis	Minimal
* Testes	Interstit Cell	Hyperplasia	Mild
* Thyroid Gland	C Cell	Hyperplasia	Minimal
Tooth		Developmental Malformation	
* Trachea		Inflammation	Suppurative, Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 17	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 636 HISTO: 32405
ORGAN AND ACCOUNTABLE SITE STATUS			
PRIMARY CAUSE OF DEATH	- Intestine Small, Jejunum Carcinoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 18	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 719 HISTO: 32406
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Mild
* Bone		Fibrous Osteodystrophy	Mild
* Heart		Cardiomyopathy	Mild
* Intestine Small, Duodenum		Necrosis	Mild
* Kidney	Renal Tubule	Adenoma	
		Nephropathy	Marked
[Nephropathy TGLS = 6-5]			
* Liver		Degeneration	Fatty, Minimal
		Degeneration	Cystic, Minimal
		Mixed Cell Focus	
[Mixed Cell Focus TGLS = 7-4]			
* Lung		Alveolar/Bronchiolar Adenoma	
		Inflammation	Granulomatous, Minimal
[Alveolar/Bronchiolar Adenoma TGLS = 3-3A]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 8-12]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 4-13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pancreas		Atrophy	Minimal

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 18	TRT#: 1	SEX: Male	DAY ON TEST: 719
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 32406
ORGAN AND ACCOUNTABLE SITE STATUS			
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
[Adenoma TGLS = 1-8]		Adenoma	
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 5-7]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
Tongue		Necrosis	Mild
[Necrosis TGLS = 2-11]			
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 19	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 720 HISTO: 32407
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 5-5]			
* Liver		Degeneration	Fatty, Mild
		Degeneration	Cystic, Mild
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Stomach, Forestomach		Necrosis	Marked
[Necrosis TGLS = 4-11]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2,3-7]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 20	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 628 HISTO: 32408
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Trachea		
MISSING			
* Lymph Node, Bronchial	* Mammary Gland		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Moderate
		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Eosinophilic Focus	
	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
[Leukemia Mononuclear TGLS = 4-4]			
* Lung	Alveolar Epith	Hyperplasia	Mild
		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 20	TRT#: 1	SEX: Male	DAY ON TEST: 628
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 32408
ORGAN AND ACCOUNTABLE SITE STATUS			
		Leukemia Mononuclear	
[Adenoma TGLS = 1-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-11]			
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 2-7]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Urinary Bladder		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 21	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 706 HISTO: 32409
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Liver	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Trachea	* Urinary Bladder	
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Mild
		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Minimal
* Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 3-5]			
* Lung		Inflammation	Granulomatous, Minimal
[Inflammation TGLS = 2-3A]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 22	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 580 HISTO: 332410
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Parathyroid Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thymus	* Trachea	* Urinary Bladder
OBSERVATIONS			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Moderate
* Liver	Bile Duct	Hyperplasia	Minimal
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
		Inflammation	Suppurative, Minimal
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-13]			
* Preputial Gland		Adenoma	
[Adenoma TGLS = 1-12]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 23	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Natural Death	DAY ON TEST: 574 HISTO: 32411
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Islets, Pancreatic	* Larynx	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Trachea	* Urinary Bladder	
MISSING			
* Lymph Node, Bronchial			
AUTO PRECLUDES DIAG.			
* Intestine Large, Cecum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Nose
* Thyroid Gland			
OBSERVATIONS			
* Adrenal Medulla		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Lung		Inflammation	Granulomatous, Minimal
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Preputial Gland		Inflammation	Chronic Active, Moderate
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 24	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 476 HISTO: 32412
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Glandular
* Testes	* Thymus	* Trachea	* Urinary Bladder
MISSING			
* Mammary Gland			
OBSERVATIONS			
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Degeneration	Fatty, Minimal
Note: "Focus, 2mm dia, pale" noted at necropsy was not apparent microscopically.			
* Lung		Inflammation	Granulomatous, Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pancreas		Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Stomach, Forestomach		Necrosis	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 25	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 683 HISTO: 32413
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Mammary Gland	* Parathyroid Gland	* Preputial Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Trachea
* Urinary Bladder			
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Mild
* Adrenal Medulla		Hyperplasia	Moderate
* Heart		Cardiomyopathy	Moderate
* Kidney		Leukemia Mononuclear	
		Nephropathy	Marked
[Nephropathy TGLS = 6-5]			
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 3-8]			
* Prostate		Inflammation	Chronic Active, Moderate
[Inflammation TGLS = 4-12]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-11]			
* Thyroid Gland	C Cell	Hyperplasia	Mild

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 25	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 683 HISTO: 32413
ORGAN AND ACCOUNTABLE SITE STATUS			
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		
CONTRIBUTORY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 26	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 616 HISTO: 32414
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Intestine Large, Rectum		Leukemia Mononuclear	
		Polyp Adenomatous	
[Polyp Adenomatous TGLS = 7-12]			
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Eosinophilic Focus	
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 6-13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
		Inflammation	Suppurative, Minimal
		Thrombosis	Mild

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 26	TRT#: 1	SEX: Male	DAY ON TEST: 616
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 32414
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pituitary Gland	Pars Distalis	Adenoma	Chronic Active, Marked
* Preputial Gland		Inflammation	
[Inflammation TGLS = 3-7]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-11]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 4-7]			
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 27	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32415
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Mammary Gland
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia Hypertrophy Leukemia Mononuclear	Moderate Mild
* Adrenal Medulla	Bilateral	Leukemia Mononuclear Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Moderate
* Islets, Pancreatic		Adenoma	
* Kidney		Leukemia Mononuclear Nephropathy	Moderate
[Nephropathy TGLS = 7-5]			
* Liver	Bile Duct	Degeneration Hyperplasia Leukemia Mononuclear	Cystic, Mild Mild
[Leukemia Mononuclear TGLS = 6-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 2,3-14+15]			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 27	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32415
ORGAN AND ACCOUNTABLE SITE STATUS			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pancreas		Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
* Skin		Keratoacanthoma	
[Keratoacanthoma TGLS = 1-13]			
* Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
[Fibrosis TGLS = 5-4]			
[Leukemia Mononuclear TGLS = 4-11]			
* Testes	Interstit Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 28	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32416
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		
MISSING			
* Lymph Node, Mediastinal			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Mild
* Intestine Large, Colon		Parasite Metazoan	
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 3-5]			
* Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Skin		Inflammation	Chronic Active, Moderate
[Inflammation TGLS = 1-12]			
* Spleen		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 29	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 670 HISTO: 32417
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Trachea		
MISSING			
* Lymph Node, Bronchial	* Thymus		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Hypertrophy	Mild
* Adrenal Medulla		Hyperplasia	Mild
* Bone		Fibrous Osteodystrophy	Minimal
* Heart		Cardiomyopathy	Mild
	Artery	Mineralization	Mild
* Kidney	Pelvis	Inflammation	Acute, Moderate
		Mineralization	Mild
		Nephropathy	Marked
[Nephropathy TGLS = 6-5]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
		Inflammation	Suppurative, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1,10-8+1]			
* Preputial Gland		Adenoma	
[Adenoma TGLS = 2-12]			
* Prostate		Inflammation	Chronic Active, Moderate
* Seminal Vesicle		Inflammation	Chronic Active, Moderate
* Testes	Interstit Cell	Adenoma	
		Atrophy	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 29	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 670 HISTO: 32417
ORGAN AND ACCOUNTABLE SITE STATUS			
[Adenoma TGLS = 3-7] [Atrophy TGLS = 4-7]			
* Thyroid Gland * Urinary Bladder [Inflammation TGLS = 5-11]	C Cell	Adenoma Inflammation	Suppurative, Moderate
PRIMARY CAUSE OF DEATH	- Kidney Nephropathy		
CONTRIBUTORY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 30	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 678 HISTO: 32418
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Mammary Gland	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
	Bilateral	Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Epididymis		Mesothelioma Malignant	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Marked
[Nephropathy TGLS = 3-5]			
* Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
	Centrilobular	Leukemia Mononuclear	
		Necrosis	Minimal
[Leukemia Mononuclear TGLS = 4-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-7]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Thrombosis	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 30	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 678 HISTO: 32418
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma Leukemia Mononuclear Leukemia Mononuclear	
* Spleen [Leukemia Mononuclear TGLS = 1-11]			
* Testes [Adenoma TGLS = 2-7]	Interstit Cell	Adenoma Mesothelioma Malignant	
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Urinary Bladder		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	
CONTRIBUTORY CAUSE OF DEATH	- Kidney	Nephropathy	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 31	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 516 HISTO: 32419
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Testes
* Thymus	* Trachea	* Urinary Bladder	
MISSING			
* Mammary Gland			
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Moderate
[Nephropathy TGLS = 3-5]			
* Liver		Degeneration	Fatty, Marked
[Degeneration TGLS = 5,6,7-4+12]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 2-13]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-11]			
* Stomach, Forestomach		Necrosis	Marked
[Necrosis TGLS = 4-8]			
* Stomach, Glandular		Necrosis	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 32	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 539 HISTO: 32420
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Preputial Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Thymus	* Trachea
* Urinary Bladder			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Bone		Fibrous Osteodystrophy	Moderate
* Heart		Cardiomyopathy	Moderate
* Kidney	Renal Tubule	Hyperplasia	Moderate
		Mineralization	Minimal
		Nephropathy	Marked
[Nephropathy TGLS = 3-5]			
* Liver		Degeneration	Fatty, Minimal
	Bile Duct	Hyperplasia	Minimal
[Degeneration TGLS = 2-4]			
Mesentery		Pigmentation	Mild
[Pigmentation TGLS = 4-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pancreas		Atrophy	Mild
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Prostate		Inflammation	Chronic Active, Moderate
* Spleen		Hematopoietic Cell Proliferation	Mild
* Stomach, Forestomach		Necrosis	Mild
* Stomach, Glandular		Mineralization	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 32	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 539 HISTO: 32420
ORGAN AND ACCOUNTABLE SITE STATUS			
* Testes	Bilateral, Interstit Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Kidney Nephropathy		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 33	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 590 HISTO: 32421
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Mammary Gland	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Trachea	* Urinary Bladder		
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
		Thrombosis	Moderate
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
		Inflammation	Suppurative, Minimal
		Thrombosis	Marked
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 6-8]			
* Spleen		Fibrosis	Mild

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 33	TRT#: 1	SEX: Male	DAY ON TEST: 590
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 32421
ORGAN AND ACCOUNTABLE SITE STATUS			
		Hemorrhage	Mild
		Leukemia Mononuclear	
[Fibrosis TGLS = 3-12]			
[Hemorrhage TGLS = 4-13]			
[Leukemia Mononuclear TGLS = 2-11]			
* Stomach, Forestomach		Necrosis	Moderate
* Stomach, Glandular		Necrosis	Moderate
[Necrosis TGLS = 7-14]			
* Testes	Interstit Cell	Hyperplasia	Minimal
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 34	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Natural Death	DAY ON TEST: 681 HISTO: 32422
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	
OBSERVATIONS			
* Adrenal Cortex		Adenoma	
		Atrophy	Marked
* Adrenal Medulla		Atrophy	Marked
* Heart		Cardiomyopathy	Moderate
* Kidney		Nephropathy	Moderate
* Liver		Degeneration	Cystic, Minimal
	Centrilobular	Leukemia Mononuclear	
		Necrosis	Minimal
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Mammary Gland		Carcinoma	Multiple
[Carcinoma TGLS = 7,8-12+11]			
* Nose		Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 9-8]			
* Prostate		Inflammation	Chronic Active, Moderate
* Spleen		Leukemia Mononuclear	
* Stomach, Glandular		Necrosis	Moderate
[Necrosis TGLS = 6-13]			
* Testes	Interstit Cell	Adenoma	
		Atrophy	Moderate
[Adenoma TGLS = 5-7]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 34	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Natural Death	DAY ON TEST: 681 HISTO: 32422
ORGAN AND ACCOUNTABLE SITE STATUS			
[Atrophy TGLS = 4-7]			
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 35	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 684 HISTO: 32423
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Spleen	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney [Nephropathy TGLS = 3-5]		Nephropathy	Moderate
* Liver		Degeneration	Fatty, Mild
		Degeneration	Cystic, Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
		Inflammation	Suppurative, Mild
* Pancreas		Hyperplasia	Moderate
* Pituitary Gland [Adenoma TGLS = 2-8]	Pars Distalis	Adenoma	
* Skin [Schwannoma Benign TGLS = 1-12]	Subcut Tiss	Schwannoma Benign	
* Stomach, Forestomach [Necrosis TGLS = 4-11]		Necrosis	Marked
* Testes	Interstit Cell	Adenoma	
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 36	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32424
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Hypertrophy	Mild
* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Moderate
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 4-5]			
* Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Minimal
		Leukemia Mononuclear	
* Lung	Alveolar Epith	Hyperplasia	Mild
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 3-12]			
* Nose	Olfactory Epi	Atrophy	Minimal
	Olfactory Epi	Degeneration	Hyaline, Mild
	Olfactory Epi	Metaplasia	Minimal
* Pancreas		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1,2-7]			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 36	TRT#: 1	SEX: Male	DAY ON TEST: 733
	DOSE: CONTROL	DISP: Terminal Sacrifice	HISTO: 32424
ORGAN AND ACCOUNTABLE SITE STATUS			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 37	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 706 HISTO: 32425
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Thymus	* Trachea	* Urinary Bladder
MISSING			
* Lymph Node, Bronchial	* Lymph Node, Mandibular		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Moderate
* Bone		Fibrous Osteodystrophy	Mild
* Heart		Cardiomyopathy	Mild
* Intestine Small, Duodenum		Necrosis	Mild
* Kidney		Cyst	Mild
		Nephropathy	Marked
[Cyst TGLS = 4-12]			
[Nephropathy TGLS = 2-5+12]			
* Liver		Angiectasis	Mild
		Basophilic Focus	
[Angiectasis TGLS = 3-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
		Inflammation	Suppurative, Moderate
* Pancreas		Atrophy	Minimal
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Stomach, Forestomach		Necrosis	Moderate
[Necrosis TGLS = 5-14]			
* Stomach, Glandular		Necrosis	Mild

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 37	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 706 HISTO: 32425
ORGAN AND ACCOUNTABLE SITE STATUS			
* Testes	Artery	Inflammation	Chronic Active, Mild
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Kidney Nephropathy		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 38	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 576 HISTO: 32426
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Glandular
* Trachea	* Urinary Bladder		
MISSING			
* Lymph Node, Bronchial	* Thymus		
OBSERVATIONS			
* Adrenal Medulla		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Moderate
[Nephropathy TGLS = 4-5]			
* Liver		Degeneration	Cystic, Mild
		Degeneration	Fatty, Marked
[Degeneration TGLS = 5-4]	Bile Duct	Hyperplasia	Minimal
* Nose		Inflammation	Suppurative, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Stomach, Forestomach		Necrosis	Mild
* Testes		Atrophy	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 39	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 719 HISTO: 32427
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Pancreas	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Testes
* Trachea			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
	Bilateral	Pheochromocytoma Benign	
Blood Vessel	Aorta	Mineralization	Moderate
* Bone		Fibrous Osteodystrophy	Moderate
* Bone Marrow		Leukemia Mononuclear	
Eye		Cataract	Marked
[Cataract TGLS = 2-16]			
* Heart		Cardiomyopathy	Mild
	Artery	Mineralization	Moderate
* Islets, Pancreatic		Carcinoma	
* Kidney	Renal Tubule	Adenoma	
	Transit Epithe	Hyperplasia	Moderate
		Leukemia Mononuclear	
		Mineralization	Moderate
		Nephropathy	Marked
[Nephropathy TGLS = 8-5+12]			
* Liver		Basophilic Focus	
		Eosinophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-4]			
* Lung		Cyst	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 39	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 719 HISTO: 32427
ORGAN AND ACCOUNTABLE SITE STATUS			
	Artery, Mediastinum	Leukemia Mononuclear Mineralization Mineralization	Moderate Moderate
[Cyst TGLS = 4-3A]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Inflammation	Chronic, Moderate
[Inflammation TGLS = 3-15]			
* Nose	Olfactory Epi	Degeneration Inflammation Leukemia Mononuclear	Hyaline, Minimal Suppurative, Mild
* Parathyroid Gland		Hyperplasia	Marked
* Pituitary Gland	Pars Distalis	Adenoma Leukemia Mononuclear	
[Adenoma TGLS = 5-8]			
* Preputial Gland		Inflammation	Chronic Active, Mild
* Spleen		Fibrosis Leukemia Mononuclear	Mild
[Leukemia Mononuclear TGLS = 6-11]			
* Stomach, Forestomach		Mineralization	Moderate
[Mineralization TGLS = 9-14]			
* Stomach, Glandular		Mineralization	Moderate
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Urinary Bladder	Transit Epithe	Hyperplasia Leukemia Mononuclear	Mild
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	
CONTRIBUTORY CAUSE OF DEATH	- Kidney	Nephropathy	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 40	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 495 HISTO: 32428
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Trachea	* Urinary Bladder
MISSING			
* Lymph Node, Bronchial	* Thymus		
OBSERVATIONS			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Moderate
* Liver		Degeneration	Fatty, Minimal
* Lung	Alveolar Epith	Hyperplasia	Mild
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 41	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 539 HISTO: 32429
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Pancreas
* Parathyroid Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Testes	* Thyroid Gland
* Trachea	* Urinary Bladder		
MISSING			
* Lymph Node, Bronchial	* Mammary Gland	* Thymus	
OBSERVATIONS			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Moderate
		Stromal Nephroma	
[Stromal Nephroma TGLS = 4-11+12+13+14+15]			
* Liver		Clear Cell Focus	
		Hepatodiaphragmatic Nodule	
[Hepatodiaphragmatic Nodule TGLS = 3-4]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Preputial Gland		Hyperplasia	Moderate
[Hyperplasia TGLS = 1-16]			
* Spleen		Hematopoietic Cell Proliferation	Moderate
* Stomach, Glandular		Necrosis	Minimal
PRIMARY CAUSE OF DEATH	- Kidney Stromal Nephroma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 42	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 580 HISTO: 32430
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thymus	* Trachea	* Urinary Bladder
OBSERVATIONS			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Moderate
[Nephropathy TGLS = 5-5]			
* Liver		Degeneration	Fatty, Minimal
		Eosinophilic Focus	
		Hyperplasia	Minimal
	Bile Duct	Alveolar/Bronchiolar Adenoma	
* Lung			
[Alveolar/Bronchiolar Adenoma TGLS = 2-3A]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-12]			
* Prostate		Hyperplasia	Minimal
* Spleen		Fibrosis	Mild
[Fibrosis TGLS = 4-4]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 43	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 621 HISTO: 32431
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Spleen
* Stomach, Glandular	* Testes	* Thymus	* Trachea
* Urinary Bladder			
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Brain		Oligodendroglioma Malignant	
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Moderate
* Liver		Degeneration	Fatty, Mild
	Bile Duct	Hyperplasia	Mild
		Mixed Cell Focus	
Note: "Cyst, 2mm dia, (2) clear" noted at necropsy was a dilated lymphatic or vein at the surface.			
[Degeneration TGLS = 6-11]			
[Mixed Cell Focus TGLS = 7,8-12+4]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
		Inflammation	Suppurative, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-8]			
* Skin		Keratoacanthoma	
[Keratoacanthoma TGLS = 3-13]			
* Stomach, Forestomach		Necrosis	Mild
* Thyroid Gland	C Cell	Hyperplasia	Minimal

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 43	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 621 HISTO: 32431
ORGAN AND ACCOUNTABLE SITE STATUS			
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		
CONTRIBUTORY CAUSE OF DEATH	- Brain Oligodendroglioma Malignant		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 44	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 705 HISTO: 32432
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Parathyroid Gland	* Preputial Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Trachea		
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
	Bilateral	Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
[Nephropathy TGLS = 7-5]			
* Liver		Angiectasis	Minimal
		Basophilic Focus	
		Degeneration	Cystic, Mild
		Histiocytic Sarcoma	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-4]			
* Lung		Histiocytic Sarcoma	
		Leukemia Mononuclear	
[Histiocytic Sarcoma TGLS = 2-3+3A]			
Lymph Node		Histiocytic Sarcoma	
	Iliac	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
		Leukemia Mononuclear	
Note: Lymph nodes with no site listed were axillary.			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 44	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 705 HISTO: 32432
ORGAN AND ACCOUNTABLE SITE STATUS			
[Histiocytic Sarcoma TGLS = 9-12]			
[Leukemia Mononuclear TGLS = 1,9-11+12]			
[Leukemia Mononuclear TGLS = 10-13]			
[Leukemia Mononuclear TGLS = 12-14]			
* Lymph Node, Bronchial		Histiocytic Sarcoma Leukemia Mononuclear Leukemia Mononuclear	
* Lymph Node, Mandibular			
[Leukemia Mononuclear TGLS = 11-7]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy Leukemia Mononuclear	Mild
* Pituitary Gland	Pars Distalis	Adenoma Leukemia Mononuclear	
[Adenoma TGLS = 3-8]			
* Prostate		Hyperplasia	Mild
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-15]			
* Stomach, Forestomach		Necrosis	Moderate
[Necrosis TGLS = 13-16]			
* Stomach, Glandular		Necrosis	Minimal
* Testes	Interstit Cell	Adenoma Atrophy	Mild
[Adenoma TGLS = 5-7]			
[Atrophy TGLS = 4-7]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Adenoma	
* Urinary Bladder		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 45	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 683 HISTO: 32433
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Liver	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Moderate
* Kidney		Cyst	Mild
		Nephropathy	Marked
[Cyst TGLS = 5-5]			
[Nephropathy TGLS = 6-5]			
* Lung	Alveolar Epith	Hyperplasia	Mild
		Inflammation	Granulomatous, Minimal
* Mammary Gland		Galactoceles	Moderate
[Galactoceles TGLS = 7,8-12+13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Spleen		Fibrosis	Mild
[Fibrosis TGLS = 10-11]			
* Stomach, Forestomach		Necrosis	Marked
[Necrosis TGLS = 9-8]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 4-7]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 45	TRT#: 1	SEX: Male	DAY ON TEST: 683
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 32433
ORGAN AND ACCOUNTABLE SITE STATUS			
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 46	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 692 HISTO: 32434
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Mammary Gland
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Islets, Pancreatic		Adenoma	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
[Nephropathy TGLS = 4-5]			
* Liver		Degeneration	Cystic, Moderate
		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
[Degeneration TGLS = 7-4]			
[Hepatodiaphragmatic Nodule TGLS = 3-11]			
[Leukemia Mononuclear TGLS = 2-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 46	TRT#: 1	SEX: Male	DAY ON TEST: 692
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 32434
ORGAN AND ACCOUNTABLE SITE STATUS			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pancreas		Atrophy	Moderate
		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Seminal Vesicle		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-12]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 6-7]			
* Thymus		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 47	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 540 HISTO: 32435
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Parathyroid Gland	* Preputial Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla	Bilateral	Hyperplasia	Moderate
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Minimal
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver	Bile Duct	Hyperplasia	Moderate
	Centrilobular	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 4-4]	Necrosis	Minimal
* Lung		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-3+3A]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
		Leukemia Mononuclear	
* Prostate		Hyperplasia	Mild

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 47	TRT#: 1	SEX: Male	DAY ON TEST: 540
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 32435
ORGAN AND ACCOUNTABLE SITE STATUS			
* Spleen		Accessory Spleen	
		Leukemia Mononuclear	
	[Accessory Spleen TGLS = 3-11]		
	[Leukemia Mononuclear TGLS = 2-11]		
* Testes	Bilateral, Interstit Cell	Adenoma	
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 48	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 661 HISTO: 32436
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Mammary Gland	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Glandular	* Trachea	* Urinary Bladder	
MISSING			
* Lymph Node, Bronchial	* Thymus		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Minimal
		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Minimal
* Kidney		Hyperplasia	Oncocytic, Mild
		Nephropathy	Marked
[Nephropathy TGLS = 5-5]			
* Liver		Degeneration	Fatty, Minimal
		Leukemia Mononuclear	
		Mixed Cell Focus	
[Leukemia Mononuclear TGLS = 8-4]			
[Mixed Cell Focus TGLS = 6-11]			
* Lung		Inflammation	Granulomatous, Minimal
		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 7,9-13+14]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pancreas		Atrophy	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 48	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 661 HISTO: 32436
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pituitary Gland [Adenoma TGLS = 2-8]	Pars Distalis	Adenoma	
* Spleen [Leukemia Mononuclear TGLS = 4-12]		Leukemia Mononuclear	
* Stomach, Forestomach [Necrosis TGLS = 10-15]		Necrosis	Marked
* Testes [Adenoma TGLS = 3-7]	Interstit Cell	Adenoma	
* Thyroid Gland [Carcinoma TGLS = 1-2]	Follicular Cel	Carcinoma	
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		
CONTRIBUTORY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 49	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 648 HISTO: 32437
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Brain	* Epididymis	* Esophagus	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Mammary Gland	* Pancreas	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Minimal
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
	Bilateral	Pheochromocytoma Benign	
* Bone		Fibrous Osteodystrophy	Mild
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
* Intestine Large, Cecum		Parasite Metazoan	
* Intestine Large, Colon		Parasite Metazoan	
* Islets, Pancreatic		Carcinoma	
* Kidney	Renal Tubule	Hyperplasia	Moderate
		Nephropathy	Marked
[Nephropathy TGLS = 4-5+13]			
* Liver		Angiectasis	Moderate
		Basophilic Focus	
		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Angiectasis TGLS = 5-11]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 49	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 648 HISTO: 32437
ORGAN AND ACCOUNTABLE SITE STATUS			
[Leukemia Mononuclear TGLS = 6-14]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 2-8]			
* Skin	Subcut Tiss	Fibroma	
[Fibroma TGLS = 1-16]			
* Spleen		Leukemia Mononuclear	
* Stomach, Forestomach		Necrosis	Marked
[Necrosis TGLS = 7-15]			
* Testes		Atrophy	Mild
	Artery	Inflammation	Chronic Active, Mild
[Atrophy TGLS = 3-7]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		
CONTRIBUTORY CAUSE OF DEATH	- Kidney Nephropathy;Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 50	TRT#: 1 DOSE: CONTROL	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 614 HISTO: 32438
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
* Liver	Bile Duct	Hyperplasia	Moderate
	Centrilobular	Leukemia Mononuclear	
		Necrosis	Minimal
		Thrombosis	Moderate
[Leukemia Mononuclear TGLS = 7-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Thrombosis	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
		Leukemia Mononuclear	
* Skin		Hyperkeratosis	Moderate
[Hyperkeratosis TGLS = 6-13]			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 50	TRT#: 1	SEX: Male	DAY ON TEST: 614
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 32438
ORGAN AND ACCOUNTABLE SITE STATUS			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-11]			
* Stomach, Forestomach		Necrosis	Minimal
[Necrosis TGLS = 8-12]			
* Testes	Interstit Cell	Adenoma	
		Atrophy	Mild
[Adenoma TGLS = 3-7]			
[Atrophy TGLS = 4-7]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 201	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 664 HISTO: 32689
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone Marrow	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Liver
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Preputial Gland	* Salivary Glands
* Seminal Vesicle	* Spleen	* Stomach, Glandular	* Testes
* Thymus	* Trachea	* Urinary Bladder	
MISSING			
* Lymph Node, Mediastinal			
OBSERVATIONS			
* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
* Bone		Fibrous Osteodystrophy	Mild
* Brain		Angiectasis	Mild
[Angiectasis TGLS = 6-1]			
* Heart		Cardiomyopathy	Mild
* Islets, Pancreatic		Carcinoma	
[Carcinoma TGLS = 5-12]			
* Kidney	Renal Tubule	Hyperplasia	Moderate
[Nephropathy TGLS = 3-5]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Prostate		Inflammation	Chronic Active, Moderate
* Skin		Keratoacanthoma	
[Keratoacanthoma TGLS = 1-11]			
* Stomach, Forestomach		Necrosis	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 201	TRT#: 3	SEX: Male	DAY ON TEST: 664
	DOSE: 500 PPM	DISP: Moribund Sacrifice	HISTO: 32689

ORGAN AND ACCOUNTABLE SITE STATUS

CONTRIBUTORY CAUSE OF DEATH	- Kidney Nephropathy
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* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 202	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 579 HISTO: 32690
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Skin	* Trachea		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Moderate
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
[Leukemia Mononuclear TGLS = 8-5]			
* Liver		Angiectasis	Minimal
		Degeneration	Fatty, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3,6-4+13]			
* Lung		Alveolar/Bronchiolar Adenoma	
		Leukemia Mononuclear	
[Alveolar/Bronchiolar Adenoma TGLS = 5-12]			
[Leukemia Mononuclear TGLS = 4-3+3A+11+12]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-17+6]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 202	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 579 HISTO: 32690
ORGAN AND ACCOUNTABLE SITE STATUS			
* Nose	Olfactory Epi	Degeneration Leukemia Mononuclear Thrombosis	Hyaline, Mild Moderate
* Pancreas	Pars Distalis	Leukemia Mononuclear	
* Pituitary Gland		Adenoma Leukemia Mononuclear	
* Seminal Vesicle		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-14]			
* Stomach, Forestomach	Interstit Cell	Necrosis	Mild
* Stomach, Glandular		Necrosis	Mild
* Testes		Adenoma Leukemia Mononuclear Necrosis	 Marked
[Necrosis TGLS = 7-7]			
* Thymus		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-2]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Urinary Bladder		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-15]			
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 203	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 560 HISTO: 32691
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Leukemia Mononuclear	
* Adrenal Medulla	Bilateral	Hyperplasia	Moderate
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
* Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
[Leukemia Mononuclear TGLS = 1-4]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-3+3A]			
Lymph Node	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-13]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
		Thrombosis	Mild

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 203	TRT#: 3	SEX: Male	DAY ON TEST: 560
	DOSE: 500 PPM	DISP: Moribund Sacrifice	HISTO: 32691
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Spleen	Note: "Deformity, 4mm dia" noted at necropsy was normal variation in surface morphology. [Leukemia Mononuclear TGLS = 3-11]	Leukemia Mononuclear	
		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
* Thyroid Gland	[Adenoma TGLS = 6-7]	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 204

TRT#: 3

SEX: Male

DAY ON TEST: 642

DOSE: 500 PPM

DISP: Moribund Sacrifice

HISTO: 32692

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Minimal
* Islets, Pancreatic		Hyperplasia	Moderate
* Kidney		Nephropathy	Moderate
[Nephropathy TGLS = 4-5]			
* Liver		Basophilic Focus	
Note: "Nodule, 4x8mm" noted at trim was variation in normal lobar morphology.			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 3-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Prostate		Hyperplasia	Mild
* Thyroid Gland	C Cell	Adenoma	

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 205	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 547 HISTO: 32693
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Trachea	* Urinary Bladder	
MISSING			
* Lymph Node, Bronchial	* Lymph Node, Mediastinal		
OBSERVATIONS			
* Epididymis		Mesothelioma Malignant	
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Moderate
* Liver		Basophilic Focus	
		Degeneration	Fatty, Minimal
* Mammary Gland		Galactoceles	Moderate
[Galactoceles TGLS = 1-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Inflammation	Suppurative, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 206	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 662 HISTO: 32694
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Liver	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			
OBSERVATIONS			
* Epididymis		Mesothelioma Malignant	
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Moderate
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Spleen		Fibrosis	Minimal
[Fibrosis TGLS = 3-11]		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-7]		Mesothelioma Malignant	
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 207	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 692 HISTO: 32695
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Pancreas	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia Pheochromocytoma Benign	Moderate
* Epididymis			
Note: "Mass, 3mm diam, pale" noted at necropsy was not apparent microscopically.			
* Heart		Cardiomyopathy	Mild
* Islets, Pancreatic		Carcinoma	
[Carcinoma TGLS = 6-15]			
* Kidney		Nephropathy	Moderate
[Nephropathy TGLS = 7-5]			
* Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Minimal
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Mammary Gland		Galactoceles	Moderate
[Galactoceles TGLS = 1,3-14+11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Preputial Gland		Carcinoma	
[Carcinoma TGLS = 4-12+13]			
* Testes	Interstitial Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 207	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 692 HISTO: 32695
ORGAN AND ACCOUNTABLE SITE STATUS			
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 208	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32696
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Hypertrophy	Minimal
		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Marked
[Nephropathy TGLS = 7-5+11]			
* Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Minimal
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Lymph Node	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-14]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-6]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Minimal
		Hyperplasia	Moderate

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 208	TRT#: 3	SEX: Male	DAY ON TEST: 733
	DOSE: 500 PPM	DISP: Terminal Sacrifice	HISTO: 32696
ORGAN AND ACCOUNTABLE SITE STATUS			
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Preputial Gland		Adenoma	
[Adenoma TGLS = 1-12]			
* Prostate		Hyperplasia	Minimal
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2,3-4]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 4,5-7+13]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 209	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 624 HISTO: 32697
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Mammary Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Glandular
* Testes	* Thymus	* Trachea	* Urinary Bladder
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Hypertrophy	Moderate
		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Moderate
		Leukemia Mononuclear	
* Bone		Fibrous Osteodystrophy	Mild
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 5-5]			
* Liver		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Minimal
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pancreas		Atrophy	Mild
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-8]			
* Preputial Gland		Hyperplasia	Mild
		Inflammation	Acute, Mild
[Hyperplasia TGLS = 1-11]			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 209	TRT#: 3	SEX: Male	DAY ON TEST: 624
	DOSE: 500 PPM	DISP: Moribund Sacrifice	HISTO: 32697
ORGAN AND ACCOUNTABLE SITE STATUS			
* Spleen		Leukemia Mononuclear	
* Stomach, Forestomach		Necrosis	Marked
[Necrosis TGLS = 6,7-8+12+13]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	
CONTRIBUTORY CAUSE OF DEATH	- Kidney	Nephropathy	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 210	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 526 HISTO: 32698
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Liver	* Lung
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
MISSING			
* Lymph Node, Bronchial	* Lymph Node, Mandibular		
OBSERVATIONS			
* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland		Carcinoma	
[Carcinoma TGLS = 1-11+12]			
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 2-7]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Preputial Gland Carcinoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 211	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 526 HISTO: 32699
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular
* Mammary Gland	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Trachea	
MISSING			
* Lymph Node, Bronchial	* Thymus		
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Moderate
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Islets, Pancreatic		Hyperplasia	Moderate
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Basophilic Focus	
		Degeneration	Fatty, Minimal
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Thrombosis	Minimal
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 211	TRT#: 3	SEX: Male	DAY ON TEST: 526
	DOSE: 500 PPM	DISP: Moribund Sacrifice	HISTO: 32699
ORGAN AND ACCOUNTABLE SITE STATUS			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-11]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Urinary Bladder		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 212	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 660 HISTO: 32700
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Pancreas	* Preputial Gland	* Seminal Vesicle
* Skin	* Stomach, Glandular	* Trachea	
MISSING			
* Thymus			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Minimal
* Kidney		Leukemia Mononuclear	
		Nephropathy	Marked
[Nephropathy TGLS = 7-5]			
* Liver		Degeneration	Fatty, Minimal
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 4-14]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
		Inflammation	Suppurative, Minimal
* Parathyroid Gland		Hyperplasia	Minimal
* Pituitary Gland		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-8]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 212	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 660 HISTO: 32700
ORGAN AND ACCOUNTABLE SITE STATUS			
* Prostate		Inflammation	Chronic Active, Mild
* Salivary Glands		Leukemia Mononuclear	
* Spleen		Fibrosis	Moderate
		Leukemia Mononuclear	
[Fibrosis TGLS = 3-12]			
[Leukemia Mononuclear TGLS = 2-11]			
* Stomach, Forestomach		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 5-7]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Urinary Bladder		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 213	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 671 HISTO: 32701
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Parathyroid Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
[Pheochromocytoma Benign TGLS = 6-5]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 4-5]			
* Liver		Basophilic Focus	
		Degeneration	Fatty, Minimal
	Bile Duct	Hyperplasia	Minimal
		Galactocoele	Moderate
* Mammary Gland			
[Galactocoele TGLS = 2-13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
		Inflammation	Suppurative, Mild
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Preputial Gland		Inflammation	Chronic Active, Moderate
[Inflammation TGLS = 1-12]			
* Prostate		Inflammation	Chronic Active, Moderate
[Inflammation TGLS = 5-11]			
* Testes	Interstit Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 213	TRT#: 3	SEX: Male	DAY ON TEST: 671
	DOSE: 500 PPM	DISP: Moribund Sacrifice	HISTO: 32701
ORGAN AND ACCOUNTABLE SITE STATUS			
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 214	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 671 HISTO: 32702
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 4-5]			
* Liver		Degeneration	Fatty, Mild
		Degeneration	Cystic, Mild
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Inflammation	Suppurative, Mild
* Pancreas		Atrophy	Minimal
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Stomach, Forestomach		Necrosis	Moderate
[Necrosis TGLS = 5-11]			
* Testes	Interstit Cell	Hyperplasia	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 215	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 670 HISTO: 32703
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone Marrow	* Brain	* Epididymis	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Glandular	* Trachea	* Urinary Bladder	
MISSING			
* Thymus			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
* Bone		Fibrous Osteodystrophy	Moderate
* Esophagus		Inflammation	Suppurative, Marked
* Heart		Cardiomyopathy	Mild
	Artery	Mineralization	Mild
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 3-5]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Spleen		Fibrosis	Mild
[Fibrosis TGLS = 4-12]			
* Stomach, Forestomach		Necrosis	Mild
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 5-7]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Kidney Nephropathy		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 216	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 678 HISTO: 32704
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			
MISSING			
* Mammary Gland			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 4-5]			
* Liver		Basophilic Focus	
		Degeneration	Fatty, Mild
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Stomach, Forestomach		Necrosis	Marked
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2,3-7]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Kidney Nephropathy		
CONTRIBUTORY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 217	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 627 HISTO: 32705
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 5-5]			
* Liver		Degeneration	Fatty, Moderate
[Degeneration TGLS = 4-4]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Stomach, Forestomach		Necrosis	Marked
[Necrosis TGLS = 6-11]			
* Testes	Interstit Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 218	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 583 HISTO: 32706
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Minimal
* Bone		Osteosarcoma	
[Osteosarcoma TGLS = 3-12]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Moderate
[Nephropathy TGLS = 4-5]			
* Liver	Bile Duct	Basophilic Focus	
		Hyperplasia	Minimal
		Mixed Cell Focus	
[Mixed Cell Focus TGLS = 6-11]			
* Lung		Hemorrhage	Mild
[Hemorrhage TGLS = 5-3A]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Mild
		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Testes	Interstit Cell	Hyperplasia	Mild
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Bone Osteosarcoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 219	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 632 HISTO: 32707
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Parathyroid Gland
* Preputial Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	
MISSING			
* Mammary Gland			
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Epididymis		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-14]			
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
* Liver		Basophilic Focus	
		Degeneration	Fatty, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
Note: "Nodule, .9x.5cm, mottled" noted at trim was variation in normal lobar morphology made more prominent by leukemia.			
[Leukemia Mononuclear TGLS = 6-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-13]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 219	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 632 HISTO: 32707
ORGAN AND ACCOUNTABLE SITE STATUS			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 2-8]			
* Prostate		Hyperplasia	Minimal
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-12]			
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 5-7]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Urinary Bladder		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 220	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 614 HISTO: 32708
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thymus	* Trachea	* Urinary Bladder
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Minimal
		Necrosis	Mild
		Carcinoma	
* Mammary Gland [Carcinoma TGLS = 1-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pancreas		Atrophy	Minimal
* Pituitary Gland [Adenoma TGLS = 2-8]	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 221	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 523 HISTO: 32709
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Thymus
* Trachea	* Urinary Bladder		
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Minimal
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
* Lung	Alveolar Epith	Hyperplasia	Mild
		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
		Leukemia Mononuclear	
* Pancreas		Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 221	TRT#: 3	SEX: Male	DAY ON TEST: 523
	DOSE: 500 PPM	DISP: Moribund Sacrifice	HISTO: 32709
ORGAN AND ACCOUNTABLE SITE STATUS			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-11]			
* Stomach, Glandular		Necrosis	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 222	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 592 HISTO: 32710
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		
MISSING			
* Lymph Node, Mediastinal			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Moderate
[Nephropathy TGLS = 4-5]			
* Liver		Degeneration	Fatty, Mild
* Lung		Inflammation	Granulomatous, Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Stomach, Forestomach		Necrosis	Moderate
[Necrosis TGLS = 5-8+11]			
* Testes	Interstit Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 223	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 552 HISTO: 32711
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Testes	* Thyroid Gland	* Trachea	* Urinary Bladder
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
* Islets, Pancreatic		Hyperplasia	Marked
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
[Leukemia Mononuclear TGLS = 4-5]			
* Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-14]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-6]			
* Mammary Gland		Galactoceles	Moderate
[Galactoceles TGLS = 8-15]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 223	TRT#: 3	SEX: Male	DAY ON TEST: 552
	DOSE: 500 PPM	DISP: Moribund Sacrifice	HISTO: 32711
ORGAN AND ACCOUNTABLE SITE STATUS			
		Leukemia Mononuclear	
[Adenoma TGLS = 1-8]			
* Skin		Keratoacanthoma	
[Keratoacanthoma TGLS = 6-16]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2,3-11]			
* Stomach, Forestomach		Necrosis	Mild
* Stomach, Glandular		Leukemia Mononuclear	
		Necrosis	Minimal
[Leukemia Mononuclear TGLS = 9-13]			
* Thymus		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 224	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 684 HISTO: 32712
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Prostate	* Spleen	* Thymus
* Trachea	* Urinary Bladder		
OBSERVATIONS			
* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
Blood Vessel	Aorta	Mineralization	Marked
[Mineralization TGLS = 7-4]			
* Bone		Fibrous Osteodystrophy	Moderate
* Heart	Artery	Cardiomyopathy	Moderate
	Renal Tubule	Mineralization	Marked
* Kidney		Hyperplasia	Mild
		Mineralization	Marked
		Nephropathy	Marked
[Nephropathy TGLS = 6-5]			
* Liver		Degeneration	Cystic, Moderate
		Degeneration	Fatty, Mild
[Degeneration TGLS = 5-13]			
* Lung	Artery, Mediastinum	Mineralization	Moderate
		Mineralization	Moderate
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 3-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
		Inflammation	Suppurative, Mild
* Pancreas		Hyperplasia	Marked
* Parathyroid Gland		Hyperplasia	Marked
* Pituitary Gland	Pars Distalis	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 224	TRT#: 3	SEX: Male	DAY ON TEST: 684
	DOSE: 500 PPM	DISP: Moribund Sacrifice	HISTO: 32712
ORGAN AND ACCOUNTABLE SITE STATUS			
[Adenoma TGLS = 2-8]			
* Preputial Gland	Artery	Inflammation	Chronic Active, Mild
* Salivary Glands		Mineralization	Moderate
* Seminal Vesicle		Mineralization	Mild
* Skin		Squamous Cell Papilloma	
[Squamous Cell Papilloma TGLS = 1-11]			
* Stomach, Forestomach	Bilateral, Interstit Cell	Mineralization	Mild
* Stomach, Glandular		Mineralization	Marked
* Testes		Adenoma	
[Adenoma TGLS = 4-7]			
* Thyroid Gland	Follicular Cel	Hyperplasia	Marked
PRIMARY CAUSE OF DEATH	- Kidney Nephropathy		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 225	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 537 HISTO: 33520
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			
MISSING			
* Lymph Node, Mandibular			
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
		Leukemia Mononuclear	
		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
* Larynx		Necrosis	Moderate
* Liver		Degeneration	Fatty, Minimal
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Mild
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
		Thrombosis	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 225	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 537 HISTO: 33520
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pituitary Gland [Adenoma TGLS = 2-8]	Pars Distalis	Adenoma Leukemia Mononuclear	
* Prostate [Inflammation TGLS = 6-8]		Inflammation	Chronic Active, Marked
* Spleen [Leukemia Mononuclear TGLS = 4-4]		Leukemia Mononuclear	
* Stomach, Forestomach		Necrosis	Moderate
* Testes [Adenoma TGLS = 3-7]	Interstit Cell	Adenoma Necrosis	Moderate
* Thyroid Gland Tooth	C Cell	Hyperplasia Inflammation	Mild Chronic Active, Moderate
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		
CONTRIBUTORY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 226

TRT#: 3

SEX: Male

DAY ON TEST: 389

DOSE: 500 PPM

DISP: Natural Death

HISTO: 32714

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Liver	* Lymph Node, Mesenteric
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Testes	* Thyroid Gland
* Trachea			

MISSING

* Lymph Node, Bronchial	* Mammary Gland
-------------------------	-----------------

AUTO PRECLUDES DIAG.

* Adrenal Cortex	* Adrenal Medulla	* Bone Marrow	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Nose
* Pituitary Gland	* Prostate	* Seminal Vesicle	* Spleen
* Stomach, Glandular	* Thymus	* Urinary Bladder	

OBSERVATIONS

* Heart		Cardiomyopathy	Minimal
* Kidney		Infarct	Moderate
	Pelvis	Inflammation	Acute, Marked
* Lung	Alveolar Epith	Hyperplasia	Minimal
Note: "Focus, 1-5mm dia, pale, multiple" noted at trim was not apparent microscopically.			
* Pituitary Gl			
Note: "Focus, 2mm dia, dark" noted at necropsy was probably blood in the normal vasculature.			
* Urin Bladder			
Note: "Mass, 1x2cm, dark" noted at trim was actually autolytic prostate outside the bladder wall.			

PRIMARY CAUSE OF DEATH

- Kidney Pelvis Inflammation

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 227	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 604 HISTO: 32715
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Glandular
* Thymus	* Trachea		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 6-5+12]			
* Liver		Basophilic Focus	
		Degeneration	Fatty, Mild
		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Minimal
	Centrilobular	Necrosis	Mild
[Degeneration TGLS = 8-4]			
[Necrosis TGLS = 7-13]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 5-15]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Spleen		Hematopoietic Cell Proliferation	Moderate
		Leukemia Mononuclear	
* Stomach, Forestomach		Necrosis	Marked
[Necrosis TGLS = 9-16]			
* Testes	Interstit Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 227	TRT#: 3	SEX: Male	DAY ON TEST: 604
	DOSE: 500 PPM	DISP: Moribund Sacrifice	HISTO: 32715
ORGAN AND ACCOUNTABLE SITE STATUS			
[Adenoma TGLS = 4-7]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Urinary Bladder		Inflammation	Chronic Active, Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		
CONTRIBUTORY CAUSE OF DEATH	- Kidney Nephropathy		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 228	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32716
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Pancreas
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Stomach, Forestomach	* Testes	* Trachea	* Urinary Bladder
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Minimal
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
	Bilateral	Pheochromocytoma Benign	
Blood Vessel	Aorta	Mineralization	Moderate
* Bone		Fibrous Osteodystrophy	Moderate
* Bone Marrow		Leukemia Mononuclear	
* Heart	Artery	Cardiomyopathy	Moderate
		Mineralization	Mild
* Kidney	Renal Tubule	Hyperplasia	Mild
		Leukemia Mononuclear	
		Mineralization	Moderate
		Nephropathy	Marked
[Nephropathy TGLS = 4-5+11]			
* Liver	Bile Duct	Basophilic Focus	
		Hyperplasia	Moderate
		Leukemia Mononuclear	
* Lung		Alveolar/Bronchiolar Carcinoma	
		Leukemia Mononuclear	
	Artery, Mediastinum	Mineralization	Moderate
		Mineralization	Moderate
[Alveolar/Bronchiolar Carcinoma TGLS = 2-3A]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 228		TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32716
ORGAN AND ACCOUNTABLE SITE STATUS				
* Lymph Node, Mediastinal			Leukemia Mononuclear	
* Lymph Node, Mesenteric			Leukemia Mononuclear	
* Mammary Gland			Galactoceles	Mild
[Galactoceles TGLS = 1-12]				
Mesentery	Artery		Mineralization	Moderate
	Fat		Necrosis	Mild
[Necrosis TGLS = 5-14]				
* Nose	Olfactory Epi		Degeneration	Hyaline, Minimal
* Parathyroid Gland			Hyperplasia	Marked
* Pituitary Gland	Pars Distalis		Hyperplasia	Marked
[Hyperplasia TGLS = 7-8]				
* Skin			Keratoacanthoma	
[Keratoacanthoma TGLS = 6-13]				
* Spleen			Fibrosis	Mild
			Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-4]				
* Stomach, Glandular			Mineralization	Moderate
* Thymus			Leukemia Mononuclear	
* Thyroid Gland	C Cell		Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 229

TRT#: 3

SEX: Male

DAY ON TEST: 607

DOSE: 500 PPM

DISP: Moribund Sacrifice

HISTO: 32717

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Minimal
	Centrilobular	Necrosis	Minimal
[Degeneration TGLS = 4-4]			
* Nose		Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 6-8]			
* Skin		Basal Cell Carcinoma	
[Basal Cell Carcinoma TGLS = 3,8-14]			
* Spleen		Hematopoietic Cell Proliferation	Moderate
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 5-7]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
Zymbal's Gland		Carcinoma	
[Carcinoma TGLS = 2,7-11+12+13]			

PRIMARY CAUSE OF DEATH

- Zymbal's Gland Carcinoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 230	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 664 HISTO: 32718
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Spleen	* Thymus
* Trachea	* Urinary Bladder		
OBSERVATIONS			
* Adrenal Medulla		Pheochromocytoma Benign Pheochromocytoma Malignant	
[Pheochromocytoma Benign TGLS = 4-5] [Pheochromocytoma Malignant TGLS = 4-11]			
* Bone		Fibrous Osteodystrophy	Moderate
* Heart		Cardiomyopathy	Moderate
	Artery	Mineralization	Minimal
* Kidney		Cyst	Mild
		Nephropathy	Marked
[Cyst TGLS = 6-11] [Nephropathy TGLS = 5-5+11]			
* Liver		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Mild
* Mammary Gland		Galactoceles	Moderate
[Galactoceles TGLS = 1-13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
		Inflammation	Suppurative, Mild
* Pancreas		Atrophy	Mild
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Skin	Sebaceous GI	Adenoma	
[Adenoma TGLS = 2-14]			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 230	TRT#: 3	SEX: Male	DAY ON TEST: 664
	DOSE: 500 PPM	DISP: Moribund Sacrifice	HISTO: 32718
ORGAN AND ACCOUNTABLE SITE STATUS			
* Stomach, Forestomach [Necrosis TGLS = 3-15]		Necrosis	Marked
* Stomach, Glandular		Mineralization	Minimal
* Testes	Artery	Inflammation	Chronic Active, Moderate
* Thyroid Gland	C Cell	Hyperplasia	Minimal
Tooth		Inflammation	Chronic Active, Mild
PRIMARY CAUSE OF DEATH	- Kidney Nephropathy		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 231	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 684 HISTO: 32719
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Liver	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Glandular	* Testes	* Thymus
* Trachea	* Urinary Bladder		
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Mild
* Adrenal Medulla		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney	Renal Tubule	Adenoma	
[Nephropathy TGLS = 2-5]		Nephropathy	Marked
* Lung		Alveolar/Bronchiolar Adenoma	
Mesentery	Fat	Hemorrhage	Mild
[Hemorrhage TGLS = 4-13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pancreas		Adenoma	
[Adenoma TGLS = 3-12]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Spleen		Hematopoietic Cell Proliferation	Mild
* Stomach, Forestomach		Necrosis	Marked
[Necrosis TGLS = 5-14]			
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 232	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: 641 HISTO: 32720
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Islets, Pancreatic	* Larynx	* Mammary Gland	* Nose
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
AUTO PRECLUDES DIAG.			
* Bone Marrow	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Lymph Node, Mediastinal	* Seminal Vesicle	* Thymus
* Thyroid Gland			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Parasite Metazoan	
* Intestine Large, Colon		Parasite Metazoan	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
	[Hepatodiaphragmatic Nodule TGLS = 4-11]		
	[Leukemia Mononuclear TGLS = 3-4]		
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 2-8]		
* Prostate		Hyperplasia	Mild
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 5-12]		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 232	TRT#: 3	SEX: Male	DAY ON TEST: 641
	DOSE: 500 PPM	DISP: Natural Death	HISTO: 32720
ORGAN AND ACCOUNTABLE SITE STATUS			
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 6-7]			
* Urinary Bladder	Transit Epithe	Hyperplasia	Marked
Zymbal's Gland		Carcinoma	
[Carcinoma TGLS = 1-13]			
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		
CONTRIBUTORY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 233	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: 482 HISTO: 32721
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thymus	* Trachea	* Urinary Bladder
MISSING			
* Lymph Node, Bronchial	* Mammary Gland		
AUTO PRECLUDES DIAG.			
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Seminal Vesicle	* Thyroid Gland		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Kidney		Nephropathy	Moderate
* Liver	Bile Duct	Hyperplasia	Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 234	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 702 HISTO: 32722
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Parathyroid Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear Necrosis	Mild
* Adrenal Medulla	Bilateral	Leukemia Mononuclear Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
* Liver		Leukemia Mononuclear Nephropathy	Moderate
	Bile Duct	Basophilic Focus Hyperplasia	Moderate
	Centrilobular	Leukemia Mononuclear Necrosis	Minimal
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose		Inflammation	Suppurative, Mild
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 234	TRT#: 3	SEX: Male	DAY ON TEST: 702
	DOSE: 500 PPM	DISP: Moribund Sacrifice	HISTO: 32722
ORGAN AND ACCOUNTABLE SITE STATUS			
* Preputial Gland		Inflammation	Chronic Active, Mild
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-11]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3,4-7]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 235	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 684 HISTO: 32723
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thymus	* Trachea	* Urinary Bladder
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Mild
* Heart		Cardiomyopathy	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Moderate
[Nephropathy TGLS = 5-5]			
* Liver		Degeneration	Fatty, Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Skin	Sebaceous Gl	Adenoma	
		Keratoacanthoma	
	Pinna, Subcut Tiss	Melanoma Malignant	
[Adenoma TGLS = 6-14]			
[Keratoacanthoma TGLS = 2-12]			
[Melanoma Malignant TGLS = 4-13]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
	Follicular Cel	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 236	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 583 HISTO: 32724
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Liver	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		
MISSING			
* Lymph Node, Mediastinal			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Moderate
[Nephropathy TGLS = 4-5]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Preputial Gland		Adenoma	
[Adenoma TGLS = 5-11]			
* Prostate		Hyperplasia	Mild
* Testes	Artery	Inflammation	Chronic Active, Mild
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 237	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32725
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Minimal
* Islets, Pancreatic		Hyperplasia	Moderate
* Kidney		Nephropathy	Mild
* Liver	Bile Duct	Hyperplasia	Minimal
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 2-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Skin		Basal Cell Carcinoma	
[Basal Cell Carcinoma TGLS = 4-12]			
* Spleen		Hematopoietic Cell Proliferation	Mild
[Hematopoietic Cell Proliferation TGLS = 3-4]			
* Testes	Interstitial Cell	Hyperplasia	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 238	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 469 HISTO: 32726
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	
MISSING			
* Lymph Node, Bronchial	* Mammary Gland		
OBSERVATIONS			
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Clear Cell Focus	
		Degeneration	Cystic, Mild
* Lung			
Note: "Focus, 4mm dia, (2), dark" noted at trim was not apparent microscopically.			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Skin	Subcut Tiss	Schwannoma Malignant	
[Schwannoma Malignant TGLS = 1-11+12+13+14]			
* Spleen		Hematopoietic Cell Proliferation	Moderate
* Stomach, Forestomach		Necrosis	Mild
[Necrosis TGLS = 3-8]			
* Testes	Interstit Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Skin Subcut Tiss Schwannoma Malignant		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 239	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 626 HISTO: 32727
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Thyroid Gland
* Trachea	* Urinary Bladder		
MISSING			
* Mammary Gland			
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Moderate
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Degeneration	Cystic, Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-4]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3,4,5-11+12+13]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 12-16]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 8,11-17+15]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 239	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 626 HISTO: 32727
ORGAN AND ACCOUNTABLE SITE STATUS			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-14]		Leukemia Mononuclear	
* Stomach, Glandular		Necrosis	Mild
[Necrosis TGLS = 13-18]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 9-7]			
* Thymus		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 240	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 706 HISTO: 32728
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	
MISSING			
* Thymus			
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney	Renal Tubule	Cyst	Moderate
		Hyperplasia	Mild
		Nephropathy	Marked
[Nephropathy TGLS = 4-5]			
* Liver		Degeneration	Cystic, Minimal
		Necrosis	Moderate
Lymph Node	Renal	Hemorrhage	Mild
[Hemorrhage TGLS = 7-12]			
* Mammary Gland		Hyperplasia	Atypical, Moderate
Mesentery	Fat	Liposarcoma	
		Necrosis	Mild
[Liposarcoma TGLS = 5-15+16]			
[Necrosis TGLS = 2-17]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Inflammation	Suppurative, Moderate
* Pancreas		Atrophy	Minimal
		Basophilic Focus	
* Parathyroid Gland		Hyperplasia	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 240	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 706 HISTO: 32728
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pituitary Gland	Pars Distalis	Adenoma	
* Preputial Gland [Carcinoma TGLS = 1-13+14]	Bilateral	Carcinoma	
* Spleen [Fibrosis TGLS = 6-11]		Fibrosis	Mild
* Testes [Adenoma TGLS = 3-7]	Bilateral, Interstit Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Preputial Gland Bilateral Carcinoma		
CONTRIBUTORY CAUSE OF DEATH	- Kidney Nephropathy;Mesentery Liposarcoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 241	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 625 HISTO: 32729
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Liver	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Thymus
* Trachea	* Urinary Bladder		
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Moderate
* Bone		Fibrous Osteodystrophy	Minimal
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 4-5+12]			
* Lung		Inflammation	Granulomatous, Minimal
[Inflammation TGLS = 5-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Stomach, Forestomach		Necrosis	Moderate
[Necrosis TGLS = 6-13]			
* Stomach, Glandular		Necrosis	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Moderate
PRIMARY CAUSE OF DEATH	- Kidney Nephropathy		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 242	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 527 HISTO: 32730
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Trachea	* Urinary Bladder	
MISSING			
* Lymph Node, Bronchial	* Lymph Node, Mediastinal		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Moderate
[Nephropathy TGLS = 2-5]			
* Liver		Degeneration	Fatty, Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
		Inflammation	Suppurative, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 243	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 244 HISTO: 32731
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Kidney
* Larynx	* Liver	* Lung	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thyroid Gland	* Trachea	* Urinary Bladder
MISSING			
* Lymph Node, Bronchial	* Mammary Gland	* Thymus	
OBSERVATIONS			
* Lymph Node, Mandibular [Infiltration Cellular TGLS = 1-11]		Infiltration Cellular	Plasma Cell, Marked
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
Tooth		Developmental Malformation	
		Necrosis	Mild
PRIMARY CAUSE OF DEATH	- Tooth Developmental Malformation		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 244	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 692 HISTO: 32732
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
	Bilateral	Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
	Atrium	Thrombosis	Marked
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
* Liver		Eosinophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
[Leukemia Mononuclear TGLS = 7,8-13+4]			
* Lung	Mediastinum	Alveolar/Bronchiolar Carcinoma	Metastatic (Lung)
		Alveolar/Bronchiolar Carcinoma	
		Leukemia Mononuclear	
Note: Carcinoma metastasized throughout lung and mediastinum.			
[Alveolar/Bronchiolar Carcinoma TGLS = 2,3,9-3A+12+11]			
Lymph Node	Pancreatic	Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 244	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 692 HISTO: 32732
ORGAN AND ACCOUNTABLE SITE STATUS			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Galactoceles	Mild
[Galactoceles TGLS = 1-14]			
Mesentery	Artery	Inflammation	Chronic Active, Mild
	Fat	Necrosis	Mild
[Inflammation TGLS = 10-16]			
[Necrosis TGLS = 5-16]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Inflammation	Suppurative, Moderate
		Thrombosis	Mild
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 4-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-15]			
* Testes	Interstitial Cell	Adenoma	
		Necrosis	Mild
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Lung Alveolar/Bronchiolar Carcinoma		
CONTRIBUTORY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 245	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32733
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Parathyroid Gland	* Preputial Gland	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
	Bilateral	Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
* Kidney		Cyst	Mild
		Leukemia Mononuclear	
		Nephropathy	Moderate
[Nephropathy TGLS = 6-5]			
* Liver		Eosinophilic Focus	
	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-13]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 245	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32733
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pituitary Gland [Adenoma TGLS = 1-8]	Pars Distalis	Adenoma Leukemia Mononuclear	
* Prostate		Hyperplasia	Mild
* Spleen [Fibrosis TGLS = 5-13] [Leukemia Mononuclear TGLS = 4-13]		Fibrosis Leukemia Mononuclear	Mild
* Testes [Adenoma TGLS = 2-7]	Bilateral, Interstit Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 246	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 460 HISTO: 32734
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
MISSING			
* Lymph Node, Mediastinal			
OBSERVATIONS			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Degeneration	Fatty, Minimal
		Mixed Cell Focus	
	Centrilobular	Necrosis	Minimal
[Mixed Cell Focus TGLS = 2-11]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
		Inflammation	Granulomatous, Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Testes	Interstit Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 247	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32735
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Parathyroid Gland	* Preputial Gland	* Prostate	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
	Bilateral	Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
[Nephropathy TGLS = 6-5]			
* Liver		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
[Hepatodiaphragmatic Nodule TGLS = 5-12]			
[Leukemia Mononuclear TGLS = 8-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Thrombosis	Mild
* Pancreas		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 247	TRT#: 3	SEX: Male	DAY ON TEST: 733
	DOSE: 500 PPM	DISP: Terminal Sacrifice	HISTO: 32735
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 2-8]			
* Salivary Glands		Leukemia Mononuclear	
* Seminal Vesicle		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3-7]			
* Thymus		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-2]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Urinary Bladder		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 248	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: 507 HISTO: 32736
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		
MISSING			
* Lymph Node, Bronchial	* Mammary Gland		
AUTO PRECLUDES DIAG.			
* Intestine Large, Cecum	* Intestine Small, Ileum	* Intestine Small, Jejunum	
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 5-5]			
* Liver		Degeneration	Fatty, Minimal
	Bile Duct	Hyperplasia	Minimal
Note: "Mass, 6mm dia, dark" noted at necropsy to be filled with blood was normal blood-filled vein.			
* Lymph Node, Mediastinal		Hemorrhage	Moderate
[Hemorrhage TGLS = 2-2]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 249	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 716 HISTO: 32737
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Epididymis	* Esophagus	* Intestine Small, Duodenum
* Islets, Pancreatic	* Larynx	* Preputial Gland	* Prostate
* Seminal Vesicle	* Trachea	* Urinary Bladder	
MISSING			
* Mammary Gland	* Thymus		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Minimal
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Intestine Large, Colon		Leukemia Mononuclear	
* Intestine Large, Rectum		Leukemia Mononuclear	
* Intestine Small, Ileum		Leukemia Mononuclear	
* Intestine Small, Jejunum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
[Leukemia Mononuclear TGLS = 8-5+13]			
* Liver		Degeneration	Fatty, Moderate
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-16]			
[Leukemia Mononuclear TGLS = 9-17]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 249	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 716 HISTO: 32737
ORGAN AND ACCOUNTABLE SITE STATUS			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-19]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Leukemia Mononuclear	
* Pancreas		Atrophy	Mild
		Leukemia Mononuclear	
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 2-8]			
* Salivary Glands		Leukemia Mononuclear	
* Skin		Cyst Epithelial Inclusion	
[Cyst Epithelial Inclusion TGLS = 10-18]			
* Spleen		Hemorrhage	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4,5-11+12]			
* Stomach, Forestomach		Leukemia Mononuclear	
		Necrosis	Moderate
[Leukemia Mononuclear TGLS = 12-14]			
* Stomach, Glandular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 13-15]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3-7]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 250	TRT#: 3 DOSE: 500 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: 514 HISTO: 32738
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thyroid Gland	* Trachea	* Urinary Bladder
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-12]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Thrombosis	Minimal
* Pancreas		Atrophy	Mild
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 250	TRT#: 3	SEX: Male	DAY ON TEST: 514
	DOSE: 500 PPM	DISP: Natural Death	HISTO: 32738
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 1-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-11]			
* Thymus		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 401	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 497 HISTO: 32589
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Trachea	* Urinary Bladder		
MISSING			
* Lymph Node, Bronchial	* Thymus		
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Degeneration	Fatty, Minimal
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Nose		Inflammation	Suppurative, Minimal
Oral Mucosa	Pharyngeal	Squamous Cell Papilloma	
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-4]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		
CONTRIBUTORY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 402	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: 565 HISTO: 32590
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Mammary Gland	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Testes	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Moderate
* Liver		Basophilic Focus	
		Degeneration	Fatty, Minimal
* Lung	Alveolar Epith	Hyperplasia	Moderate
[Hyperplasia TGLS = 4-11]			
* Lymph Node, Mesenteric		Ectasia	Mild
[Ectasia TGLS = 2-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Inflammation	Suppurative, Moderate
Note: Hair and masses of fungal hyphae in level II were associated with the inflammation.			
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Stomach, Glandular		Necrosis	Minimal
[Necrosis TGLS = 3-14]			
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 403	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 620 HISTO: 32591
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Glandular	* Thyroid Gland	* Trachea	
MISSING			
* Mammary Gland			
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
	Bilateral	Pheochromocytoma Benign	
[Pheochromocytoma Benign TGLS = 6-5]			
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Intestine Large, Cecum		Necrosis	Moderate
[Necrosis TGLS = 10-11]			
* Intestine Large, Rectum		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-12]			
* Islets, Pancreatic		Carcinoma	
[Carcinoma TGLS = 15-15]			
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
* Liver		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
		Necrosis	Moderate
[Leukemia Mononuclear TGLS = 7-4]			
[Necrosis TGLS = 8-14]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 403	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 620 HISTO: 32591
ORGAN AND ACCOUNTABLE SITE STATUS			
	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 12-13]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 14-6]			
* Nose		Inflammation	Suppurative, Mild
		Thrombosis	Moderate
* Pancreas		Atrophy	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
* Preputial Gland		Hyperplasia	Mild
* Prostate		Inflammation	Chronic Active, Moderate
* Seminal Vesicle		Leukemia Mononuclear	
* Spleen		Fibrosis	Moderate
		Leukemia Mononuclear	
[Fibrosis TGLS = 2-16]			
[Leukemia Mononuclear TGLS = 1,3-15]			
* Stomach, Forestomach		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 16-8]			
* Testes	Interstit Cell	Adenoma	
		Atrophy	Minimal
[Adenoma TGLS = 4-7]			
[Atrophy TGLS = 5-7]			
* Thymus		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 404	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: 585 HISTO: 32592
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Parathyroid Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Thymus
* Trachea	* Urinary Bladder		
MISSING			
* Mammary Gland			
OBSERVATIONS			
* Adrenal Cortex		Necrosis	Mild
* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Minimal
* Intestine Large, Cecum		Parasite Metazoan	
* Intestine Large, Colon		Parasite Metazoan	
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Degeneration	Fatty, Minimal
	Bile Duct	Hyperplasia	Mild
	Centrilobular	Necrosis	Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Preputial Gland		Carcinoma	
[Carcinoma TGLS = 1-12+7]			
* Spleen		Hematopoietic Cell Proliferation	Moderate
[Hematopoietic Cell Proliferation TGLS = 3-4]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Preputial Gland Carcinoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 404	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: 585 HISTO: 32592
ORGAN AND ACCOUNTABLE SITE STATUS			
CONTRIBUTORY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 405	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 614 HISTO: 32593
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Vacuolization Cytoplasmic	Minimal
* Adrenal Medulla		Hyperplasia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 2-5]			
* Liver		Basophilic Focus	
		Eosinophilic Focus	
	Bile Duct	Hyperplasia	Minimal
		Mixed Cell Focus	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Stom Gland			
Note: "Nodule, 2mm dia, white" noted at trim was normal limiting ridge between forestomach and glandular stomach.			
* Testes	Interstitial Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Urinary Bladder	Transit Epithe	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 406	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 650 HISTO: 32594
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Parathyroid Gland	* Preputial Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Trachea
MISSING			
* Thymus			
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Moderate
		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
		Leukemia Mononuclear	
		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
Eye	Retina	Atrophy	Moderate
		Cataract	Moderate
[Cataract TGLS = 3-13]			
* Heart		Cardiomyopathy	Minimal
	Atrium	Thrombosis	Minimal
* Kidney	Pelvis	Inflammation	Acute, Mild
		Leukemia Mononuclear	
		Nephropathy	Marked
[Nephropathy TGLS = 8-5]			
* Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Iliac	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-14]			
* Lymph Node, Bronchial		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 406	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 650 HISTO: 32594
ORGAN AND ACCOUNTABLE SITE STATUS			
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland [Inflammation TGLS = 2-12]		Inflammation	Chronic, Moderate
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Thrombosis	Minimal
* Pancreas		Atrophy	Moderate
* Pituitary Gland [Adenoma TGLS = 4-8]	Pars Distalis	Adenoma	
* Prostate [Inflammation TGLS = 9-8]		Inflammation	Chronic Active, Marked
* Seminal Vesicle		Inflammation	Chronic Active, Moderate
* Skin Note: There was no microscopic finding to account for the "alopecia" noted at necropsy.			
* Spleen [Fibrosis TGLS = 7-15] [Leukemia Mononuclear TGLS = 6-15]		Fibrosis Leukemia Mononuclear	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Urinary Bladder		Inflammation	Chronic Active, Mild
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 407	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 558 HISTO: 32995
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Pancreas	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
MISSING			
* Lymph Node, Bronchial	* Preputial Gland		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Hypertrophy	Mild
* Adrenal Medulla		Hyperplasia	Mild
		Pheochromocytoma Benign	
* Bone		Fibrous Osteodystrophy	Mild
* Heart		Cardiomyopathy	Moderate
* Kidney	Renal Tubule	Hyperplasia	Marked
		Nephropathy	Marked
[Nephropathy TGLS = 2-5]			
* Liver		Clear Cell Focus	
		Degeneration	Fatty, Minimal
		Eosinophilic Focus	
[Eosinophilic Focus TGLS = 3-4]			
* Parathyroid Gland		Hyperplasia	Mild
[Hyperplasia TGLS = 5-2]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Stomach, Forestomach		Necrosis	Moderate
* Testes	Interstit Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 407	TRT#: 5	SEX: Male	DAY ON TEST: 558
	DOSE: 2000 PPM	DISP: Moribund Sacrifice	HISTO: 32995
ORGAN AND ACCOUNTABLE SITE STATUS			
PRIMARY CAUSE OF DEATH	- Kidney Nephropathy		
CONTRIBUTORY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 408

TRT#: 5

SEX: Male

DAY ON TEST: 574

DOSE: 2000 PPM

DISP: Natural Death

HISTO: 32596

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Mediastinal

AUTO PRECLUDES DIAG.

* Thyroid Gland

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Moderate
* Heart		Cardiomyopathy	Moderate
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 4-5]			
* Liver			
Note: "Granular" appearance noted at necropsy was normal lobular pattern of blood in the liver.			
* Nose		Inflammation	Suppurative, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Skin		Keratoacanthoma	
[Keratoacanthoma TGLS = 5-13]			
* Testes	Interstit Cell	Adenoma	

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

CONTRIBUTORY CAUSE OF DEATH

- Kidney Nephropathy

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 409	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 512 HISTO: 32597
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Mild
* Heart		Cardiomyopathy	Mild
* Islets, Pancreatic		Hyperplasia	Moderate
* Kidney		Nephropathy	Moderate
* Liver		Degeneration	Cystic, Minimal
		Degeneration	Fatty, Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Testes	Interstit Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 410	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 706 HISTO: 32598
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Testes	* Thymus	* Trachea	* Urinary Bladder
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
* Bone		Fibrous Osteodystrophy	Mild
* Heart		Cardiomyopathy	Mild
	Artery	Mineralization	Minimal
* Kidney	Renal Tubule	Hyperplasia	Minimal
		Nephropathy	Marked
[Nephropathy TGLS = 2-5]			
* Liver		Basophilic Focus	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Inflammation	Suppurative, Minimal
* Pancreas		Atrophy	Minimal
		Hyperplasia	Mild
* Parathyroid Gland		Hyperplasia	Marked
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Stomach, Forestomach		Necrosis	Moderate
* Stomach, Glandular		Mineralization	Mild
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	- Kidney Nephropathy		
CONTRIBUTORY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 411	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 516 HISTO: 32599
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Forestomach	* Testes	* Thymus
* Trachea	* Urinary Bladder		
MISSING			
* Lymph Node, Bronchial	* Lymph Node, Mediastinal		
OBSERVATIONS			
* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Hyperplasia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Liver		Degeneration	Fatty, Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Inflammation	Suppurative, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Stomach, Glandular		Necrosis	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 412	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 579 HISTO: 32600
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Glandular	* Testes	* Trachea
* Urinary Bladder			
MISSING			
* Thymus			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Moderate
* Esophagus		Inflammation	Suppurative, Marked
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 4-5]			
* Liver		Degeneration	Fatty, Moderate
* Lung	Mediastinum	Inflammation	Suppurative, Marked
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Inflammation	Suppurative, Minimal
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-8]			
* Stomach, Forestomach		Necrosis	Marked
[Necrosis TGLS = 6-8+12]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Kidney Nephropathy		
CONTRIBUTORY CAUSE OF DEATH	- Esophagus Inflammation;Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 413	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 678 HISTO: 32601
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Liver	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Moderate
* Adrenal Medulla	Bilateral	Hyperplasia	Moderate
* Heart		Cardiomyopathy	Mild
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 2-16]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
* Skin	Subcut Tiss	Fibroma	
[Fibroma TGLS = 1-11+12+13+14]			
* Spleen		Hematopoietic Cell Proliferation	Mild
* Testes	Bilateral, Interstit Cell	Adenoma	
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	- Skin Subcut Tiss Fibroma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 414	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 714 HISTO: 32602
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Pancreas	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			
MISSING			
* Mammary Gland			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Mild
* Heart		Cardiomyopathy	Moderate
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 6-5]			
* Liver		Degeneration	Cystic, Mild
		Eosinophilic Focus	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Parathyroid Gland		Hyperplasia	Marked
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Stomach, Forestomach		Necrosis	Marked
[Necrosis TGLS = 7-8+12]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 4,5-11+7]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		
CONTRIBUTORY CAUSE OF DEATH	- Kidney Nephropathy		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 415

TRT#: 5

SEX: Male

DAY ON TEST: 706

DOSE: 2000 PPM

DISP: Moribund Sacrifice

HISTO: 32603

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

MISSING

* Lymph Node, Mandibular

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Mild
		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 5-5]			
* Liver		Basophilic Focus	
* Lung		Alveolar/Bronchiolar Carcinoma	
	Alveolar Epith	Hyperplasia	Minimal
[Alveolar/Bronchiolar Carcinoma TGLS = 7-3A]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 6-16]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pancreas		Atrophy	Mild
* Parathyroid Gland		Hyperplasia	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Skin	Subcut Tiss	Fibroma	
[Fibroma TGLS = 1-11+12+13+14]			
* Testes	Bilateral, Interstit Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 415	TRT#: 5	SEX: Male	DAY ON TEST: 706
	DOSE: 2000 PPM	DISP: Moribund Sacrifice	HISTO: 32603
ORGAN AND ACCOUNTABLE SITE STATUS			
[Adenoma TGLS = 3,4-7]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate
PRIMARY CAUSE OF DEATH	- Kidney Nephropathy		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 416	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 551 HISTO: 32604
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Glandular	* Testes	* Thymus
* Trachea	* Urinary Bladder		
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Intestine Small, Duodenum		Necrosis	Moderate
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 4-5]			
* Liver		Degeneration	Fatty, Marked
[Degeneration TGLS = 6-4]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Spleen		Fibrosis	Mild
[Fibrosis TGLS = 3-4]			
* Stomach, Forestomach		Necrosis	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 417	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 671 HISTO: 32605
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Preputial Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Thymus	* Trachea	* Urinary Bladder	
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Moderate
* Bone		Fibrous Osteodystrophy	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 4-5]			
* Liver		Degeneration	Cystic, Mild
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 5-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Prostate		Hyperplasia	Moderate
* Stomach, Forestomach		Necrosis	Marked
[Necrosis TGLS = 6-12]			
* Stomach, Glandular		Mineralization	Minimal
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2,3-7]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Kidney Nephropathy		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 418	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 590 HISTO: 32606
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Thymus
* Trachea	* Urinary Bladder		
MISSING			
* Lymph Node, Mediastinal			
OBSERVATIONS			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Liver		Degeneration	Cystic, Minimal
		Hepatodiaphragmatic Nodule	
		Mixed Cell Focus	
[Hepatodiaphragmatic Nodule TGLS = 5-11]			
[Mixed Cell Focus TGLS = 4-4]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Stomach, Forestomach		Necrosis	Minimal
* Stomach, Glandular		Necrosis	Mild
* Testes	Interstit Cell	Adenoma	
		Atrophy	Minimal
[Adenoma TGLS = 3-7]			
[Atrophy TGLS = 2-7]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 418	TRT#: 5	SEX: Male	DAY ON TEST: 590
	DOSE: 2000 PPM	DISP: Moribund Sacrifice	HISTO: 32606

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 419	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 701 HISTO: 32607
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Glandular	* Trachea	* Urinary Bladder	
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
	Bilateral	Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart	Atrium	Thrombosis	Moderate
[Thrombosis TGLS = 2-11]			
* Kidney	Renal Tubule	Carcinoma	
		Leukemia Mononuclear	
[Carcinoma TGLS = 9-5]		Nephropathy	Moderate
* Liver		Degeneration	Fatty, Mild
		Degeneration	Cystic, Moderate
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-4]	Centrilobular	Necrosis	Minimal
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Inflammation	Suppurative, Minimal

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 419	TRT#: 5	SEX: Male	DAY ON TEST: 701
	DOSE: 2000 PPM	DISP: Moribund Sacrifice	HISTO: 32607
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pituitary Gland [Leukemia Mononuclear TGLS = 3-8]		Leukemia Mononuclear	Mild
		Thrombosis	
		Leukemia Mononuclear	
* Spleen [Fibrosis TGLS = 7-12] [Leukemia Mononuclear TGLS = 6-12+13]		Fibrosis	Mild
		Leukemia Mononuclear	
* Stomach, Forestomach [Necrosis TGLS = 10-14]		Necrosis	Moderate
* Testes [Adenoma TGLS = 4,5-7]	Bilateral, Interstit Cell	Adenoma	
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 420	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32608
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Mild
		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Mild
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney	Renal Tubule	Carcinoma	
		Nephropathy	Marked
[Carcinoma TGLS = 8-14]			
[Nephropathy TGLS = 7-5]			
* Liver		Basophilic Focus	
		Clear Cell Focus	
		Degeneration	Cystic, Mild
		Inflammation	Granulomatous, Mild
[Clear Cell Focus TGLS = 5-4]			
[Inflammation TGLS = 6-11]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Mammary Gland		Fibroadenoma	
		Galactocele	Moderate
[Fibroadenoma TGLS = 2-12]			
[Galactocele TGLS = 1-13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 420	TRT#: 5	SEX: Male	DAY ON TEST: 733
	DOSE: 2000 PPM	DISP: Terminal Sacrifice	HISTO: 32608
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pancreas		Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Atrophy	Minimal
[Adenoma TGLS = 3-8]		Adenoma	
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 4-7]	Artery	Inflammation	Chronic Active, Moderate
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 421	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 520 HISTO: 32609
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thyroid Gland	* Trachea	* Urinary Bladder
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Minimal
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Minimal
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
	[Leukemia Mononuclear TGLS = 3-4+11]		
* Lung		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-3+3A]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Thrombosis	Minimal
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 421	TRT#: 5	SEX: Male	DAY ON TEST: 520
	DOSE: 2000 PPM	DISP: Moribund Sacrifice	HISTO: 32609
ORGAN AND ACCOUNTABLE SITE STATUS			
* Spleen		Leukemia Mononuclear	
		Fibrosis	Mild
		Leukemia Mononuclear	
[Fibrosis TGLS = 5-13]			
[Leukemia Mononuclear TGLS = 2-12]			
* Testes	Bilateral, Interstit Cell	Adenoma	
* Thymus		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:01

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 422	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 654 HISTO: 32610
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Mammary Gland	* Parathyroid Gland
* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach	* Thymus
* Trachea	* Urinary Bladder		
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla	Bilateral	Hyperplasia	Moderate
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
	Atrium	Thrombosis	Moderate
[Thrombosis TGLS = 2-4]			
* Intestine Large, Rectum		Necrosis	Mild
* Islets, Pancreatic		Hyperplasia	Moderate
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Degeneration	Fatty, Minimal
	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-4]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-12]			
Lymph Node	Pancreatic	Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-6+14]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 422	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 654 HISTO: 32610
ORGAN AND ACCOUNTABLE SITE STATUS			
* Nose	Olfactory Epi	Degeneration Thrombosis	Hyaline, Mild Moderate
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia Leukemia Mononuclear	Moderate
[Hyperplasia TGLS = 4-8]			
* Preputial Gland		Adenoma	
[Adenoma TGLS = 1-15]			
* Prostate		Hyperplasia	Moderate
* Skin		Hyperkeratosis	Moderate
[Hyperkeratosis TGLS = 10-11]			
* Spleen		Fibrosis Leukemia Mononuclear Necrosis	Mild Mild
[Leukemia Mononuclear TGLS = 6-13]			
[Necrosis TGLS = 7-13]			
* Stomach, Glandular		Necrosis	Mild
[Necrosis TGLS = 12-8+16]			
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 5-7]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 423	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 352 HISTO: 32611
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland
* Pituitary Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
MISSING			
* Lymph Node, Bronchial	* Lymph Node, Mediastinal		
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Mild
* Kidney		Nephropathy	Minimal
* Lung		Inflammation	Granulomatous, Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pancreas		Atrophy	Minimal
* Testes	Interstit Cell	Hyperplasia	Mild
* Thyroid Gland	C Cell	Hyperplasia	Minimal
Tooth		Inflammation	Chronic Active, Mild
[Inflammation TGLS = 1-9]			
PRIMARY CAUSE OF DEATH	- Tooth Inflammation		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 424	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: 705 HISTO: 32612
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Small, Duodenum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	
MISSING			
* Lymph Node, Bronchial			
AUTO PRECLUDES DIAG.			
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Ileum
* Intestine Small, Jejunum			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Moderate
* Bone		Fibrous Osteodystrophy	Minimal
* Heart		Cardiomyopathy	Mild
	Artery	Mineralization	Minimal
Note: "Mass, 7x4mm, pale" noted in the right atrium at trim was a post mortem clot.			
* Kidney		Nephropathy	Marked
* Liver	Centrilobular	Necrosis	Mild
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Inflammation	Suppurative, Mild
* Pancreas		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Stomach, Forestomach		Necrosis	Marked
[Necrosis TGLS = 5-12]			
* Stomach, Glandular		Necrosis	Mild
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 4-7]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 424	TRT#: 5	SEX: Male	DAY ON TEST: 705
	DOSE: 2000 PPM	DISP: Natural Death	HISTO: 32612

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma
CONTRIBUTORY CAUSE OF DEATH	- Kidney Nephropathy

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:01
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 425	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 580 HISTO: 32613
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Testes	* Trachea	* Urinary Bladder	
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
	Bilateral	Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Degeneration	Fatty, Moderate
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
[Leukemia Mononuclear TGLS = 4-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Thrombosis	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 425	TRT#: 5	SEX: Male	DAY ON TEST: 580
	DOSE: 2000 PPM	DISP: Moribund Sacrifice	HISTO: 32613
ORGAN AND ACCOUNTABLE SITE STATUS			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-12]			
* Stomach, Forestomach		Necrosis	Marked
[Necrosis TGLS = 5-13]			
* Stomach, Glandular		Necrosis	Mild
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		
CONTRIBUTORY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 426	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 500 HISTO: 32614
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder			
MISSING			
* Mammary Gland			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Minimal
		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
* Liver		Degeneration	Fatty, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
[Leukemia Mononuclear TGLS = 3-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-11]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 426	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 500 HISTO: 32614
ORGAN AND ACCOUNTABLE SITE STATUS			
[Leukemia Mononuclear TGLS = 2-12]			
* Nose	Olfactory Epi	Degeneration Thrombosis	Hyaline, Moderate Mild
* Pancreas		Hyperplasia	Minimal
* Pituitary Gland	Pars Distalis	Adenoma Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-11]			
* Testes	Interstit Cell	Adenoma	
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 427	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32615
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 6-5]			
* Liver		Basophilic Focus	
		Clear Cell Focus	
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 3-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Preputial Gland		Hyperplasia	Moderate
* Prostate		Hyperplasia	Moderate
* Skin		Keratoacanthoma	
		Squamous Cell Papilloma	
[Keratoacanthoma TGLS = 1-12]			
[Squamous Cell Papilloma TGLS = 7-13]			
* Spleen			
Note: "Enlarged, 5x1cm, granular" spleen noted at necropsy was within normal limits microscopically.			
* Testes	Bilateral, Interstit Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 427	TRT#: 5	SEX: Male	DAY ON TEST: 733
	DOSE: 2000 PPM	DISP: Terminal Sacrifice	HISTO: 32615
ORGAN AND ACCOUNTABLE SITE STATUS			
[Adenoma TGLS = 4-7]			
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 428	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 652 HISTO: 32616
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Testes	* Trachea	* Urinary Bladder
MISSING			
* Thymus			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Mild
* Epididymis		Granuloma Sperm	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 6-5]			
* Liver		Degeneration	Cystic, Mild
[Degeneration TGLS = 5-4]			
* Liver		Degeneration	Fatty, Mild
[Degeneration TGLS = 5-4]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Inflammation	Suppurative, Mild
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-8]			
* Stomach, Forestomach		Necrosis	Marked
[Necrosis TGLS = 8-12]			
* Stomach, Glandular		Necrosis	Moderate
[Necrosis TGLS = 7-11]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH			
- Pituitary Gland Pars Distalis Adenoma			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 428	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 652 HISTO: 32616
ORGAN AND ACCOUNTABLE SITE STATUS			
CONTRIBUTORY CAUSE OF DEATH	- Kidney Nephropathy		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 429	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 680 HISTO: 32617
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Stomach, Glandular	* Trachea	* Urinary Bladder
MISSING			
* Lymph Node, Bronchial	* Thymus		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Intestine Large, Colon		Diverticulum	
		Parasite Metazoan	
[Diverticulum TGLS = 5-14]			
* Intestine Small, Jejunum		Carcinoma	
[Carcinoma TGLS = 4-13]			
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
* Liver	Bile Duct	Hyperplasia	Minimal
		Leukemia Mononuclear	
		Vacuolization Cytoplasmic	Focal, Mild
[Vacuolization Cytoplasmic TGLS = 3-12]			
* Lung		Alveolar/Bronchiolar Adenoma	
		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 429	TRT#: 5	SEX: Male	DAY ON TEST: 680
	DOSE: 2000 PPM	DISP: Moribund Sacrifice	HISTO: 32617
ORGAN AND ACCOUNTABLE SITE STATUS			
[Adenoma TGLS = 2-8]			
* Skin		Inflammation	Chronic Active, Moderate
[Inflammation TGLS = 1-16]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-11]			
* Stomach, Forestomach		Necrosis	Moderate
[Necrosis TGLS = 7-15]			
* Testes	Bilateral, Interstit Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		
CONTRIBUTORY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 430	TRT#: 5	SEX: Male	DAY ON TEST: 607
	DOSE: 2000 PPM	DISP: Moribund Sacrifice	HISTO: 32618

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
	[Nephropathy TGLS = 6-5]		
* Liver	Bile Duct	Hyperplasia	Minimal
		Leukemia Mononuclear	
		Mixed Cell Focus	
	[Leukemia Mononuclear TGLS = 9-4+11]		
* Lung		Alveolar/Bronchiolar Adenoma	
		Leukemia Mononuclear	
	Note: "Focus, 4mm dia, pale" noted at trim was not apparent microscopically.		
	[Alveolar/Bronchiolar Adenoma TGLS = 1-3A]		
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
	[Adenoma TGLS = 4-8]		
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 430	TRT#: 5	SEX: Male	DAY ON TEST: 607
	DOSE: 2000 PPM	DISP: Moribund Sacrifice	HISTO: 32618
ORGAN AND ACCOUNTABLE SITE STATUS			
[Leukemia Mononuclear TGLS = 5-12]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		
CONTRIBUTORY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 431	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32619
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Brain	* Epididymis	* Esophagus	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Mammary Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		
MISSING			
* Lymph Node, Mesenteric			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
* Bone		Fibrous Osteodystrophy	Mild
* Bone Marrow		Histiocytic Sarcoma	
Eye	Retina	Atrophy	Marked
[Cataract TGLS = 1-20]		Cataract	Moderate
* Heart		Cardiomyopathy	Mild
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney		Histiocytic Sarcoma	
	Renal Tubule	Hyperplasia	Marked
[Nephropathy TGLS = 7-5]		Nephropathy	Marked
* Liver		Basophilic Focus	
		Histiocytic Sarcoma	
[Histiocytic Sarcoma TGLS = 2-4+11+12]			
* Lung		Histiocytic Sarcoma	
[Histiocytic Sarcoma TGLS = 12,13-3A+3+15]			
Lymph Node	Pancreatic	Histiocytic Sarcoma	
		Histiocytic Sarcoma	
Note: Lymph node with no site listed was axillary.			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 431	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32619
ORGAN AND ACCOUNTABLE SITE STATUS			
[Histiocytic Sarcoma TGLS = 11-19]			
[Histiocytic Sarcoma TGLS = 8-17]			
* Lymph Node, Bronchial		Histiocytic Sarcoma	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Mild
		Basophilic Focus	
* Parathyroid Gland		Hyperplasia	Moderate
[Hyperplasia TGLS = 3-2]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 14-8]			
Skeletal Muscle		Histiocytic Sarcoma	
[Histiocytic Sarcoma TGLS = 9-13+14]			
* Skin	Subcut Tiss	Histiocytic Sarcoma	
[Histiocytic Sarcoma TGLS = 10-18]			
* Spleen		Fibrosis	Mild
[Fibrosis TGLS = 4-4]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 5,6-7]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 432	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 614 HISTO: 32620
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Trachea			
MISSING			
* Thymus			
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
Eye		Inflammation	Chronic Active, Marked
[Inflammation TGLS = 2-11]			
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
* Liver		Degeneration	Fatty, Minimal
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Mixed Cell Focus TGLS = 4-13]		Mixed Cell Focus	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 432	TRT#: 5	SEX: Male	DAY ON TEST: 614
	DOSE: 2000 PPM	DISP: Moribund Sacrifice	HISTO: 32620
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pancreas		Atrophy	Minimal
		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
	[Adenoma TGLS = 3-8]		
* Spleen		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-12]		
* Testes	Interstit Cell	Hyperplasia	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Urinary Bladder		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 433	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 552 HISTO: 32621
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Mammary Gland	* Parathyroid Gland	* Prostate
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Trachea	* Urinary Bladder	
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Degeneration	Fatty, Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-14]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-15]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Thrombosis	Mild
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 433	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 552 HISTO: 32621
ORGAN AND ACCOUNTABLE SITE STATUS			
* Preputial Gland [Leukemia Mononuclear TGLS = 6-13]		Leukemia Mononuclear	
* Seminal Vesicle		Leukemia Mononuclear	
* Spleen [Leukemia Mononuclear TGLS = 1-11]		Leukemia Mononuclear	
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 434	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: 614 HISTO: 32622
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder
MISSING			
* Thymus			
AUTO PRECLUDES DIAG.			
* Intestine Large, Colon	* Intestine Small, Ileum	* Intestine Small, Jejunum	
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Moderate
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
* Liver		Degeneration	Cystic, Mild
	Bile Duct	Eosinophilic Focus	
		Hyperplasia	Mild
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
[Leukemia Mononuclear TGLS = 3-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 434	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: 614 HISTO: 32622
ORGAN AND ACCOUNTABLE SITE STATUS			
* Nose	Olfactory Epi	Degeneration Inflammation	Hyaline, Moderate Suppurative, Mild
* Pituitary Gland	Pars Distalis	Adenoma Leukemia Mononuclear	
* Spleen		Accessory Spleen Leukemia Mononuclear	
[Accessory Spleen TGLS = 2-11]			
[Leukemia Mononuclear TGLS = 1-11]			
* Testes	Bilateral, Interstit Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 435	TRT#: 5	SEX: Male	DAY ON TEST: 628
	DOSE: 2000 PPM	DISP: Moribund Sacrifice	HISTO: 32623
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Testes	* Trachea		
MISSING			
* Mammary Gland			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Moderate
		Leukemia Mononuclear	
* Bone		Fibrous Osteodystrophy	Minimal
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Minimal
* Kidney	Pelvis	Inflammation	Acute, Marked
		Leukemia Mononuclear	
		Mineralization	Mild
		Nephropathy	Marked
[Inflammation TGLS = 7-5]			
[Nephropathy TGLS = 6-5]			
* Liver		Basophilic Focus	
		Degeneration	Cystic, Moderate
	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
[Degeneration TGLS = 10,11,12,13-12+13+11]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 435	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 628 HISTO: 32623
ORGAN AND ACCOUNTABLE SITE STATUS			
* Lymph Node, Mesenteric [Leukemia Mononuclear TGLS = 14-6]		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration Leukemia Mononuclear	Hyaline, Mild
* Pituitary Gland [Adenoma TGLS = 3-8]	Pars Distalis	Adenoma	
* Preputial Gland [Adenoma TGLS = 4-16]		Adenoma	
* Prostate [Inflammation TGLS = 8-8]		Inflammation	Chronic Active, Moderate
* Sem Ves Note: "Dark" appearance noted at necropsy had no corresponding microscopic change to explain it.			
* Spleen [Leukemia Mononuclear TGLS = 15,16-15+14]		Leukemia Mononuclear	
* Stomach, Forestomach [Necrosis TGLS = 17-18]		Necrosis	Moderate
* Stomach, Glandular		Mineralization Necrosis	Moderate Mild
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Urinary Bladder [Inflammation TGLS = 5-17]		Inflammation	Chronic Active, Marked
PRIMARY CAUSE OF DEATH	- Kidney Pelvis Inflammation		
CONTRIBUTORY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 436	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 520 HISTO: 32624
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Liver	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Parathyroid Gland
* Pituitary Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		
MISSING			
* Mammary Gland			
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Lung	Alveolar Epith	Hyperplasia	Minimal
Lymph Node	Iliac	Ectasia	Mild
[Ectasia TGLS = 3-15]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Minimal
* Preputial Gland		Carcinoma	
[Carcinoma TGLS = 1-12+13+14]			
* Spleen		Hematopoietic Cell Proliferation	Marked
[Hematopoietic Cell Proliferation TGLS = 2-11]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 4-7]			
* Thyroid Gland	C Cell	Carcinoma	
PRIMARY CAUSE OF DEATH	- Preputial Gland Carcinoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 437	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 496 HISTO: 32625
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder		
MISSING			
* Thymus			
OBSERVATIONS			
* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Histiocytic Sarcoma	
* Brain		Hemorrhage	Moderate
		Histiocytic Sarcoma	
[Hemorrhage TGLS = 2-1]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Moderate
* Liver		Degeneration	Fatty, Mild
		Histiocytic Sarcoma	
		Necrosis	Mild
[Histiocytic Sarcoma TGLS = 4-4]			
* Lung		Histiocytic Sarcoma	
[Histiocytic Sarcoma TGLS = 1-3+3A]			
* Lymph Node, Bronchial		Histiocytic Sarcoma	
* Lymph Node, Mandibular		Hemorrhage	Mild
[Hemorrhage TGLS = 5-7]			
* Lymph Node, Mediastinal		Histiocytic Sarcoma	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Thrombosis	Marked
* Spleen		Hematopoietic Cell Proliferation	Marked

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 437	TRT#: 5	SEX: Male	DAY ON TEST: 496
	DOSE: 2000 PPM	DISP: Moribund Sacrifice	HISTO: 32625
ORGAN AND ACCOUNTABLE SITE STATUS			
[Hematopoietic Cell Proliferation TGLS = 3-11]		Histiocytic Sarcoma	
* Testes	Interstit Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Bone Marrow Histiocytic Sarcoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 438	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 480 HISTO: 32626
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Liver	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Preputial Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Testes	* Trachea		
MISSING			
* Lymph Node, Bronchial	* Thymus		
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Mild
Blood Vessel	Aorta	Mineralization	Minimal
* Heart	Artery	Mineralization	Minimal
* Kidney	Papilla	Mineralization	Moderate
		Necrosis	Marked
		Nephropathy	Moderate
[Mineralization TGLS = 3-5]			
* Lung	Artery, Mediastinum	Mineralization	Mild
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Inflammation	Suppurative, Minimal
* Pancreas		Atrophy	Moderate
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Prostate		Inflammation	Chronic Active, Moderate
* Stomach, Forestomach		Necrosis	Minimal
		Perforation	
Note: The "perforation, 4mm dia" noted at trim was not apparent microscopically.			
[Perforation TGLS = 5-11]			
* Stomach, Glandular		Mineralization	Minimal

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 438	TRT#: 5	SEX: Male	DAY ON TEST: 480
	DOSE: 2000 PPM	DISP: Moribund Sacrifice	HISTO: 32626
ORGAN AND ACCOUNTABLE SITE STATUS			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Urinary Bladder		Hemorrhage	Marked
		Inflammation	Chronic Active, Moderate
[Hemorrhage TGLS = 4-12]			
PRIMARY CAUSE OF DEATH	- Urinary Bladder Hemorrhage		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 439	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32627
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	
MISSING			
* Mammary Gland			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Moderate
		Pheochromocytoma Benign	
[Pheochromocytoma Benign TGLS = 8-5]			
* Heart		Cardiomyopathy	Mild
* Islets, Pancreatic		Hyperplasia	Moderate
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Basophilic Focus	
		Eosinophilic Focus	
	Bile Duct	Hyperplasia	Mild
	Centrilobular	Leukemia Mononuclear	
		Necrosis	Minimal
[Leukemia Mononuclear TGLS = 9-4]			
* Lung	Alveolar Epith	Hyperplasia	Moderate
		Leukemia Mononuclear	
Note: "Focus, 2x4mm, pale" noted at necropsy was not apparent microscopically.			
[Hyperplasia TGLS = 10-11]			
Lymph Node	Pancreatic	Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 439	TRT#: 5	SEX: Male	DAY ON TEST: 733
	DOSE: 2000 PPM	DISP: Terminal Sacrifice	HISTO: 32627
ORGAN AND ACCOUNTABLE SITE STATUS			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 5,6-14+15]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Inflammation	Suppurative, Mild
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
[Fibrosis TGLS = 3,4-13+12]			
[Leukemia Mononuclear TGLS = 2-12+13]			
* Testes	Interstit Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 440	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 628 HISTO: 32628
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Pancreas	* Preputial Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Thymus	* Trachea
* Urinary Bladder			
MISSING			
* Mammary Gland			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Moderate
[Hyperplasia TGLS = 5-13]			
* Bone		Fibrous Osteodystrophy	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 4-5+13]			
* Liver		Basophilic Focus	
		Degeneration	Fatty, Minimal
	Bile Duct	Hyperplasia	Minimal
Note: "Focus, 2mm dia, dark" was blood in normal hepatic vasculature.			
* Lung	Alveolar Epith	Hyperplasia	Moderate
[Hyperplasia TGLS = 8-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Parathyroid Gland		Hyperplasia	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Prostate		Hyperplasia	Moderate
* Stomach, Forestomach		Necrosis	Marked
[Necrosis TGLS = 7-14]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 440	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 628 HISTO: 32628
ORGAN AND ACCOUNTABLE SITE STATUS			
* Stomach, Glandular [Necrosis TGLS = 9-14]		Necrosis	Minimal
* Testes	Interstit Cell	Hyperplasia	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Kidney Nephropathy		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 441	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 555 HISTO: 32629
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Testes	* Thymus	* Trachea	* Urinary Bladder
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Moderate
* Esophagus		Inflammation	Suppurative, Moderate
* Heart		Cardiomyopathy	Mild
* Intestine Small, Duodenum		Necrosis	Minimal
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 4-5]			
* Liver		Degeneration	Fatty, Marked
	Bile Duct	Hyperplasia	Minimal
[Degeneration TGLS = 5-4]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 2-13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Stomach, Forestomach		Necrosis	Marked
[Necrosis TGLS = 3-11]			
* Stomach, Glandular		Necrosis	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Kidney Nephropathy		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 441	TRT#: 5	SEX: Male	DAY ON TEST: 555
	DOSE: 2000 PPM	DISP: Moribund Sacrifice	HISTO: 32629

ORGAN AND ACCOUNTABLE SITE STATUS

CONTRIBUTORY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma
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* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 442	TRT#: 5	SEX: Male	DAY ON TEST: 714
	DOSE: 2000 PPM	DISP: Moribund Sacrifice	HISTO: 32630

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Mammary Gland
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Trachea			

MISSING			
* Thymus			

OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
Eye	Retina	Atrophy	Moderate
		Cataract	Moderate
		Inflammation	Chronic Active, Marked
		Leukemia Mononuclear	
[Cataract TGLS = 9-16]			
[Inflammation TGLS = 8-16]			
* Heart		Cardiomyopathy	Moderate
* Islets, Pancreatic		Adenoma	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Marked
[Nephropathy TGLS = 12-5]			
* Liver		Basophilic Focus	
		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Marked
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-4]			
* Lung		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 442	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 714 HISTO: 32630
ORGAN AND ACCOUNTABLE SITE STATUS			
[Leukemia Mononuclear TGLS = 5-3+3A]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-13]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 15-12]			
* Nose	Olfactory Epi	Degeneration Leukemia Mononuclear	Hyaline, Mild
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma Leukemia Mononuclear	
[Adenoma TGLS = 10-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 13,14-4]			
* Testes	Bilateral, Interstit Cell	Adenoma	
* Thyroid Gland	C Cell C Cell	Adenoma Hyperplasia	Minimal
* Urinary Bladder		Leukemia Mononuclear	
Zymbal's Gland		Carcinoma	
[Carcinoma TGLS = 6-14+15]			
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		
CONTRIBUTORY CAUSE OF DEATH	- Zymbal's Gland Carcinoma		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 443	TRT#: 5	SEX: Male	DAY ON TEST: 733
	DOSE: 2000 PPM	DISP: Terminal Sacrifice	HISTO: 32631

ORGAN AND ACCOUNTABLE SITE STATUS

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

MISSING			
* Lymph Node, Bronchial			

INSUFFICIENT TISSUE			
* Mammary Gland			

OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Mild
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
* Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Lymph Node	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-12]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Inflammation	Suppurative, Moderate
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 443	TRT#: 5	SEX: Male	DAY ON TEST: 733
	DOSE: 2000 PPM	DISP: Terminal Sacrifice	HISTO: 32631
ORGAN AND ACCOUNTABLE SITE STATUS			
* Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
[Fibrosis TGLS = 1-11]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2,3-7]			
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 444	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 627 HISTO: 32632
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Mammary Gland	* Parathyroid Gland
* Preputial Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	
MISSING			
* Thymus			
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Moderate
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Epididymis		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Inguinal	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-14]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-3]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-13]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 444	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 627 HISTO: 32632
ORGAN AND ACCOUNTABLE SITE STATUS			
* Nose	Olfactory Epi	Degeneration Leukemia Mononuclear	Hyaline, Mild
* Pancreas		Atrophy Leukemia Mononuclear	Mild
* Pituitary Gland [Leukemia Mononuclear TGLS = 2-8]		Leukemia Mononuclear	
* Prostate		Leukemia Mononuclear	
* Seminal Vesicle		Leukemia Mononuclear	
* Spleen [Leukemia Mononuclear TGLS = 4-11+12]		Necrosis	Marked
* Testes [Adenoma TGLS = 7,8-7]	Bilateral, Interstit Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 445	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 700 HISTO: 32633
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Thymus
* Trachea	* Urinary Bladder		
OBSERVATIONS			
* Adrenal Cortex		Vacuolization Cytoplasmic	Mild
* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
Blood Vessel	Aorta	Mineralization	Marked
[Mineralization TGLS = 2-4]			
* Bone		Fibrous Osteodystrophy	Marked
* Heart		Cardiomyopathy	Moderate
	Artery	Mineralization	Marked
[Mineralization TGLS = 3-12]			
* Intestine Large, Cecum		Necrosis	Moderate
* Kidney		Mineralization	Moderate
		Nephropathy	Marked
[Nephropathy TGLS = 5-5]			
* Liver		Degeneration	Cystic, Mild
		Mineralization	Mild
		Necrosis	Moderate
[Necrosis TGLS = 6-11]			
* Lung		Mineralization	Moderate
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 9-13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas	Artery	Mineralization	Mild
* Parathyroid Gland		Hyperplasia	Marked
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 445	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 700 HISTO: 32633
ORGAN AND ACCOUNTABLE SITE STATUS			
* Seminal Vesicle		Mineralization	Marked
* Skin [Adenoma TGLS = 1-14]	Sebaceous Gl	Adenoma	
* Spleen [Fibrosis TGLS = 4-4]		Fibrosis	Mild
* Stomach, Forestomach [Mineralization TGLS = 10-8+15]		Mineralization Necrosis	Moderate Mild
* Stomach, Glandular		Mineralization	Marked
* Testes [Adenoma TGLS = 7,8-7]	Bilateral, Interstit Cell	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Kidney Nephropathy		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 446	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: 453 HISTO: 32634
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Trachea	* Urinary Bladder	
MISSING			
* Lymph Node, Mediastinal	* Mammary Gland	* Thymus	
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia Pheochromocytoma Malignant	Mild
[Pheochromocytoma Malignant TGLS = 2-5]			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Moderate
* Liver	Centrilobular	Necrosis	Mild
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- UNCERTAIN		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 447

TRT#: 5

SEX: Male

DAY ON TEST: 733

DOSE: 2000 PPM

DISP: Terminal Sacrifice

HISTO: 32635

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Pituitary Gland	* Preputial Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Moderate
* Intestine Large, Rectum		Parasite Metazoan	
* Intestine Small, Jejunum		Hemangiosarcoma	
[Hemangiosarcoma TGLS = 2-12]			
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 6-5]			
* Liver		Basophilic Focus	
		Degeneration	Cystic, Mild
* Lung	Alveolus	Infiltration Cellular	Histiocyte, Moderate
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 7-13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Marked
* Prostate		Hyperplasia	Mild
* Sem Ves			
Note: "Lesion, .7x1cm, white" noted at necropsy was not apparent at trim or microscopically.			
* Testes	Interstit Cell	Adenoma	
		Atrophy	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 447

TRT#: 5

SEX: Male

DAY ON TEST: 733

DOSE: 2000 PPM

DISP: Terminal Sacrifice

HISTO: 32635

ORGAN AND ACCOUNTABLE SITE STATUS

[Adenoma TGLS = 5-7]

[Atrophy TGLS = 4-7]

* Thyroid Gland

C Cell

Carcinoma

[Carcinoma TGLS = 8-2]

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 448

TRT#: 5

SEX: Male

DAY ON TEST: 583

DOSE: 2000 PPM

DISP: Moribund Sacrifice

HISTO: 32636

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Stomach, Glandular	* Testes	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Minimal
* Bone		Fibrous Osteodystrophy	Minimal
* Heart		Cardiomyopathy	Moderate
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 1,2-5+13]			
* Liver		Degeneration	Cystic, Minimal
	Bile Duct	Hyperplasia	Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Inflammation	Suppurative, Minimal
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Stomach, Forestomach		Necrosis	Marked
[Necrosis TGLS = 4-14]			

PRIMARY CAUSE OF DEATH

- Kidney Nephropathy

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 449	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: 654 HISTO: 32637
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Islets, Pancreatic	* Larynx	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Stomach, Forestomach	* Thymus	* Trachea
* Urinary Bladder			
AUTO PRECLUDES DIAG.			
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Thyroid Gland	
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
* Liver	Bile Duct	Hyperplasia	Mild
	Centrilobular	Leukemia Mononuclear	
		Necrosis	Marked
[Necrosis TGLS = 3-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
		Thrombosis	Moderate
* Seminal Vesicle		Leukemia Mononuclear	
* Skin		Squamous Cell Papilloma	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 449	TRT#: 5	SEX: Male	DAY ON TEST: 654
	DOSE: 2000 PPM	DISP: Natural Death	HISTO: 32637
ORGAN AND ACCOUNTABLE SITE STATUS			
[Squamous Cell Papilloma TGLS = 5-13]			
* Spleen		Leukemia Mononuclear	
* Stomach, Glandular		Necrosis	Mild
[Necrosis TGLS = 6-12]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1,2-7]			
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 450	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 568 HISTO: 32638
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Mammary Gland	* Parathyroid Gland
* Preputial Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Glandular	* Trachea	* Urinary Bladder	
MISSING			
* Lymph Node, Mediastinal			
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone		Hyperostosis	Mild
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7,8,9-1+11]			
* Heart		Cardiomyopathy	Moderate
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
[Nephropathy TGLS = 10-5]			
* Liver	Bile Duct	Hyperplasia	Minimal
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
		Leukemia Mononuclear	
[Hyperplasia TGLS = 6-12]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 450	TRT#: 5 DOSE: 2000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 568 HISTO: 32638
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pituitary Gland	Pars Distalis	Leukemia Mononuclear Adenoma	
* Prostate		Leukemia Mononuclear Hyperplasia	Minimal
* Spleen [Leukemia Mononuclear TGLS = 3-13]		Leukemia Mononuclear	
* Stomach, Forestomach [Necrosis TGLS = 11-8]		Necrosis	Moderate
* Testes [Adenoma TGLS = 4-7]	Interstit Cell	Adenoma	
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 601	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 648 HISTO: 32489
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Parathyroid Gland	* Preputial Gland	* Salivary Glands	* Seminal Vesicle
* Stomach, Glandular	* Trachea	* Urinary Bladder	
MISSING			
* Mammary Gland			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
[Nephropathy TGLS = 9-5]			
* Liver		Degeneration	Fatty, Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 601	TRT#: 7	SEX: Male	DAY ON TEST: 648
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32489
ORGAN AND ACCOUNTABLE SITE STATUS			
* Prostate		Inflammation	Chronic Active, Mild
* Skin		Hyperkeratosis	Moderate
		Inflammation	Chronic Active, Mild
[Hyperkeratosis TGLS = 2-12]			
[Inflammation TGLS = 1-11]			
* Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
[Fibrosis TGLS = 7-13]			
[Leukemia Mononuclear TGLS = 6-13]			
* Stomach, Forestomach		Necrosis	Mild
[Necrosis TGLS = 11-14]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 4,5-7]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		
CONTRIBUTORY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 602	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 664 HISTO: 32490
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Pancreas
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Thymus	* Trachea	
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Islets, Pancreatic		Adenoma	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
[Nephropathy TGLS = 9-5]			
* Liver		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
* Lung		Inflammation	Granulomatous, Moderate
		Leukemia Mononuclear	
[Inflammation TGLS = 8-3+3A]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
		Galactocele	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 602	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 664 HISTO: 32490
ORGAN AND ACCOUNTABLE SITE STATUS			
[Fibroadenoma TGLS = 1-11]			
[Galactocoele TGLS = 7-13]			
Mesentery	Fat	Necrosis	Mild
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Parathyroid Gland		Hyperplasia	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Skin			
Note: "Mass, 2.5x6.5cm, pale" noted at necropsy was normal adipose tissue and mammary gland.			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-14]			
* Stomach, Forestomach		Necrosis	Moderate
[Necrosis TGLS = 5,10-15]			
* Stomach, Glandular		Necrosis	Moderate
[Necrosis TGLS = 11-16]			
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 4-7]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Urinary Bladder		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 603	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 534 HISTO: 32491
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Lymph Node, Mandibular	* Mammary Gland
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thymus	* Trachea	* Urinary Bladder
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Mild
* Islets, Pancreatic		Carcinoma	
* Kidney		Nephropathy	Moderate
* Liver		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Atrophy	Moderate
* Pituitary Gland [Adenoma TGLS = 1-11]	Pars Distalis	Adenoma	
* Spleen		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 604

TRT#: 7

SEX: Male

DAY ON TEST: 688

DOSE: 8000 PPM

DISP: Moribund Sacrifice

HISTO: 32492

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Thymus
* Trachea	* Urinary Bladder		

MISSING

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Mild
	Atrium	Thrombosis	Marked
[Thrombosis TGLS = 5-12]			
* Kidney		Nephropathy	Moderate
* Liver		Degeneration	Cystic, Moderate
	Bile Duct	Hyperplasia	Minimal
	Centrilobular	Necrosis	Minimal
[Degeneration TGLS = 4-4+11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Preputial Gland		Carcinoma	
[Carcinoma TGLS = 2-13]			
* Prostate		Inflammation	Chronic Active, Moderate
* Thyroid Gland	Follicular Cel	Carcinoma	

PRIMARY CAUSE OF DEATH

- Preputial Gland Carcinoma

CONTRIBUTORY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 604	TRT#: 7	SEX: Male	DAY ON TEST: 688
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32492

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 605	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 664 HISTO: 32493
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thyroid Gland	* Trachea	* Urinary Bladder
MISSING			
* Thymus			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Islets, Pancreatic		Carcinoma	
* Kidney		Nephropathy	Mild
* Liver		Clear Cell Focus	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Inflammation	Suppurative, Mild
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 606	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 650 HISTO: 32494
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Forestomach	* Thymus
* Trachea	* Urinary Bladder		
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia Pheochromocytoma Benign	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy Stromal Nephroma	Moderate
[Nephropathy TGLS = 2-5]			
[Stromal Nephroma TGLS = 1-13+14+15]			
* Liver		Basophilic Focus Degeneration	Fatty, Minimal
	Centrilobular	Necrosis	Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Basophilic Focus	
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Hematopoietic Cell Proliferation	Marked
* Stomach, Glandular		Necrosis	Mild
[Necrosis TGLS = 4-8]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3-7]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Kidney Stromal Nephroma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 607

TRT#: 7

SEX: Male

DAY ON TEST: 733

DOSE: 8000 PPM

DISP: Terminal Sacrifice

HISTO: 32495

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
* Bone		Fibrous Osteodystrophy	Minimal
* Heart		Cardiomyopathy	Mild
	Atrium	Thrombosis	Mild
* Intestine Large, Colon		Parasite Metazoan	
* Kidney	Renal Tubule	Hyperplasia	Minimal
		Leukemia Mononuclear	
		Nephropathy	Marked
[Nephropathy TGLS = 7-5]			
* Liver		Basophilic Focus	
		Degeneration	Cystic, Moderate
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Mild
		Regeneration	Mild
[Degeneration TGLS = 5-14]			
[Regeneration TGLS = 4-12]			
* Lung	Bronchiole	Hyperplasia	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-3A]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 607	TRT#: 7	SEX: Male	DAY ON TEST: 733
	DOSE: 8000 PPM	DISP: Terminal Sacrifice	HISTO: 32495
ORGAN AND ACCOUNTABLE SITE STATUS			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 1-8]			
* Prostate		Hyperplasia	Mild
* Skin		Inflammation	Chronic Active, Marked
[Inflammation TGLS = 6-11]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-4]			
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 2-7]			
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 608	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32496
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ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Pancreas	* Preputial Gland	* Salivary Glands	* Seminal Vesicle
* Spleen	* Stomach, Forestomach	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		

MISSING

* Lymph Node, Mediastinal

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Mild
		Pheochromocytoma Benign	
Blood Vessel	Aorta	Mineralization	Minimal
* Bone		Fibrous Osteodystrophy	Moderate
* Heart		Cardiomyopathy	Moderate
	Artery	Mineralization	Mild
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney	Renal Tubule	Adenoma	
		Cyst	Mild
	Renal Tubule	Hyperplasia	Moderate
		Mineralization	Minimal
		Nephropathy	Marked
[Cyst TGLS = 5-11]			
[Nephropathy TGLS = 4-5]			
* Liver		Basophilic Focus	
		Degeneration	Cystic, Mild
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Parathyroid Gland		Hyperplasia	Marked
[Hyperplasia TGLS = 6-2]			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 608	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32496
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pituitary Gland [Adenoma TGLS = 2-8]	Pars Distalis	Adenoma	
* Prostate		Hyperplasia	Minimal
* Skin [Keratoacanthoma TGLS = 1-12]		Keratoacanthoma	
* Stomach, Glandular		Mineralization	Mild
* Testes [Adenoma TGLS = 3-7]	Bilateral, Interstit Cell	Adenoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 609	TRT#: 7	SEX: Male	DAY ON TEST: 611
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32497

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Glandular
* Trachea	* Urinary Bladder		

OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4,5,8-4+13]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
		Leukemia Mononuclear	
* Prostate		Hyperplasia	Minimal
* Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
[Fibrosis TGLS = 2-12]			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 609	TRT#: 7	SEX: Male	DAY ON TEST: 611
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32497
ORGAN AND ACCOUNTABLE SITE STATUS			
[Leukemia Mononuclear TGLS = 1-12]			
* Stom Gland			
Note: The "diverticulum, 3mm dia" noted at necropsy was not apparent microscopically.			
* Stomach, Forestomach		Necrosis	Minimal
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3-7]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Moderate
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 610	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 667 HISTO: 32498
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Mediastinal
* Mammary Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Glandular	* Testes	* Thymus
* Trachea	* Urinary Bladder		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
	Bilateral	Pheochromocytoma Benign	
* Bone		Fibrous Osteodystrophy	Moderate
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Moderate
	Artery	Mineralization	Mild
* Kidney	Renal Tubule	Hyperplasia	Moderate
		Nephropathy	Marked
[Nephropathy TGLS = 2-5+12]			
* Liver		Basophilic Focus	
		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Inflammation	Suppurative, Moderate
* Pancreas		Atrophy	Minimal
		Hyperplasia	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 610	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 667 HISTO: 32498
ORGAN AND ACCOUNTABLE SITE STATUS			
* Parathyroid Gland	Pars Distalis	Hyperplasia	Moderate
* Pituitary Gland [Adenoma TGLS = 1-8]		Adenoma	
* Preputial Gland		Hyperplasia Inflammation	Moderate Chronic Active, Moderate
* Spleen [Leukemia Mononuclear TGLS = 3-11]	C Cell	Leukemia Mononuclear	
* Stomach, Forestomach		Necrosis	Mild
* Thyroid Gland		Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Kidney	Nephropathy	
CONTRIBUTORY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 611	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 670 HISTO: 32499
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
	Atrium	Thrombosis	Moderate
[Thrombosis TGLS = 6-4]			
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-11]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-13]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 611	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 670 HISTO: 32499
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pituitary Gland [Leukemia Mononuclear TGLS = 2-8]		Thrombosis Leukemia Mononuclear	Moderate
* Spleen [Leukemia Mononuclear TGLS = 4-12]		Leukemia Mononuclear	
* Testes [Adenoma TGLS = 3-7]	Interstit Cell	Adenoma	
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Urinary Bladder		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 612	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 701 HISTO: 32500
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Pancreas
* Parathyroid Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Trachea	* Urinary Bladder
MISSING			
* Mammary Gland			
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
	Bilateral	Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
	Atrium	Thrombosis	Mild
* Islets, Pancreatic		Carcinoma	
[Carcinoma TGLS = 15-16]			
* Kidney		Infarct	Moderate
		Leukemia Mononuclear	
		Nephropathy	Moderate
[Infarct TGLS = 9-12]			
[Nephropathy TGLS = 10-5]			
* Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
[Leukemia Mononuclear TGLS = 8-4]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-3+3A]			
Lymph Node	Iliac	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-17]			
* Lymph Node, Bronchial		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 612		TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 701 HISTO: 32500
ORGAN AND ACCOUNTABLE SITE STATUS				
* Lymph Node, Mandibular			Leukemia Mononuclear	
* Lymph Node, Mediastinal			Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-2]				
* Lymph Node, Mesenteric			Leukemia Mononuclear	
Mesentery	Fat		Necrosis	Mild
[Necrosis TGLS = 14-13]				
* Nose	Olfactory Epi		Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis		Hyperplasia	Mild
[Hyperplasia TGLS = 4-8]				
* Preputial Gland			Carcinoma	
[Carcinoma TGLS = 5-15]			Inflammation	Chronic Active, Marked
* Spleen			Fibrosis	Mild
[Fibrosis TGLS = 13-11]			Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-11]				
* Stomach, Glandular			Necrosis	Moderate
[Necrosis TGLS = 12-14]				
* Testes	Interstit Cell		Adenoma	
[Adenoma TGLS = 6-7]				
* Thymus			Leukemia Mononuclear	
* Thyroid Gland	Follicular Cel		Carcinoma	
[Carcinoma TGLS = 1-2]				
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 613		TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 688 HISTO: 32501
ORGAN AND ACCOUNTABLE SITE STATUS				
NORMAL				
* Brain	* Epididymis	* Esophagus	* Intestine Large, Colon	
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	
* Islets, Pancreatic	* Larynx	* Parathyroid Gland	* Preputial Gland	
* Prostate	* Salivary Glands	* Skin	* Stomach, Forestomach	
* Stomach, Glandular	* Trachea			
MISSING				
* Pituitary Gland				
OBSERVATIONS				
* Adrenal Cortex		Leukemia Mononuclear		
* Adrenal Medulla		Leukemia Mononuclear		
		Pheochromocytoma Benign		
* Bone		Hyperostosis	Moderate	
* Bone Marrow		Leukemia Mononuclear		
* Heart		Leukemia Mononuclear		
	Atrium	Thrombosis	Moderate	
[Thrombosis TGLS = 3-11]				
* Intestine Large, Cecum		Necrosis	Mild	
* Kidney		Leukemia Mononuclear		
		Nephropathy	Moderate	
* Liver		Degeneration	Fatty, Mild	
	Bile Duct	Hyperplasia	Mild	
		Leukemia Mononuclear		
[Leukemia Mononuclear TGLS = 4-4]				
* Lung		Leukemia Mononuclear		
Lymph Node	Pancreatic	Leukemia Mononuclear		
* Lymph Node, Bronchial		Leukemia Mononuclear		
* Lymph Node, Mandibular		Leukemia Mononuclear		
* Lymph Node, Mediastinal		Leukemia Mononuclear		
[Leukemia Mononuclear TGLS = 6-2]				
* Lymph Node, Mesenteric		Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 613	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 688 HISTO: 32501
ORGAN AND ACCOUNTABLE SITE STATUS			
* Mammary Gland [Galactocoele TGLS = 5-13]		Galactocoele	Moderate
* Nose	Olfactory Epi	Degeneration Inflammation Thrombosis	Hyaline, Moderate Suppurative, Moderate Marked
* Pancreas		Atrophy	Mild
* Seminal Vesicle		Leukemia Mononuclear	
* Spleen [Leukemia Mononuclear TGLS = 2-12]		Leukemia Mononuclear Leukemia Mononuclear	
* Testes [Adenoma TGLS = 1-7]	Bilateral, Interstit Cell	Adenoma	
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Adenoma	
* Urinary Bladder		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 614	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 534 HISTO: 32502
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Trachea
* Urinary Bladder			
OBSERVATIONS			
* Heart		Cardiomyopathy	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Moderate
[Nephropathy TGLS = 5-5]			
* Liver		Basophilic Focus	
		Cyst	Mild
		Degeneration	Fatty, Minimal
		Hepatodiaphragmatic Nodule	
[Cyst TGLS = 4-12]			
[Degeneration TGLS = 2-14]			
[Hepatodiaphragmatic Nodule TGLS = 3-13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-1+8]			
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 615	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 666 HISTO: 32503
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Mammary Gland
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Skin	* Stomach, Glandular	* Trachea	
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Minimal
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
	Bilateral	Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Minimal
* Kidney		Leukemia Mononuclear	
		Nephropathy	Marked
[Nephropathy TGLS = 9-5]			
* Liver		Basophilic Focus	
		Degeneration	Fatty, Minimal
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-4]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-3+3A]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11-7]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 615	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 666 HISTO: 32503
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma Leukemia Mononuclear	
[Adenoma TGLS = 3-8]			
* Seminal Vesicle		Leukemia Mononuclear	
* Spleen		Fibrosis Leukemia Mononuclear	Moderate
[Fibrosis TGLS = 6-11]			
[Leukemia Mononuclear TGLS = 5-11]			
* Stomach, Forestomach		Necrosis	Moderate
* Testes	Interstit Cell	Adenoma Atrophy	Moderate
[Adenoma TGLS = 7-7]			
[Atrophy TGLS = 8-7]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Urinary Bladder		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	
CONTRIBUTORY CAUSE OF DEATH	- Kidney	Nephropathy;Pituitary Gland Pars Distalis	Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 616	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 647 HISTO: 32504
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Mammary Gland
* Preputial Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Minimal
* Islets, Pancreatic		Adenoma	
* Kidney		Leukemia Mononuclear	
[Nephropathy TGLS = 2-5]		Nephropathy	Marked
* Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Atrophy	Mild
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Prostate		Inflammation	Chronic Active, Moderate
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-11]			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 616	TRT#: 7	SEX: Male	DAY ON TEST: 647
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32504
ORGAN AND ACCOUNTABLE SITE STATUS			
* Testes	Interstit Cell	Adenoma	
* Urinary Bladder	Transit Epithe	Hyperplasia	Moderate
		Inflammation	Chronic Active, Moderate
[Inflammation TGLS = 4-12]			
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 617	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 576 HISTO: 32505
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thymus	* Trachea	* Urinary Bladder
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Mild
* Adrenal Medulla		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 4-5]			
* Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Inflammation	Suppurative, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8+1]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 618	TRT#: 7	SEX: Male	DAY ON TEST: 583
	DOSE: 8000 PPM	DISP: Natural Death	HISTO: 32506
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Islets, Pancreatic	* Larynx	* Liver
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		
MISSING			
* Lymph Node, Mediastinal	* Parathyroid Gland		
AUTO PRECLUDES DIAG.			
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Nose	
OBSERVATIONS			
* Adrenal Cortex		Adenoma	
* Adrenal Medulla		Hyperplasia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 3-5]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Skin			
Note: "Mass, 4x2mm, dark" noted at necropsy was normal tactile hair follicle with blood-filled sinusoids.			
* Testes	Interstit Cell	Adenoma	
	Artery	Inflammation	Chronic Active, Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 619	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 604 HISTO: 32507
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Testes
* Trachea			
MISSING			
* Lymph Node, Mandibular	* Mammary Gland	* Thymus	
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Moderate
* Heart		Cardiomyopathy	Mild
* Intestine Large, Cecum		Inflammation	Acute, Mild
* Kidney	Renal Tubule	Hyperplasia	Moderate
	Transit Epithe	Hyperplasia	Moderate
	Pelvis	Inflammation	Acute, Mild
		Mineralization	Mild
		Nephropathy	Marked
[Nephropathy TGLS = 7-5]			
* Liver	Centrilobular	Necrosis	Moderate
[Necrosis TGLS = 8,9-4]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
[Hyperplasia TGLS = 5-3]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 6-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Inflammation	Suppurative, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-8]			
* Spleen		Hematopoietic Cell Proliferation	Moderate

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 619	TRT#: 7	SEX: Male	DAY ON TEST: 604
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32507
ORGAN AND ACCOUNTABLE SITE STATUS			
* Stomach, Forestomach [Necrosis TGLS = 10-11]		Necrosis	Marked
* Stomach, Glandular		Necrosis	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Urinary Bladder	Transit Epithe	Hyperplasia	Moderate
		Inflammation	Chronic Active, Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		
CONTRIBUTORY CAUSE OF DEATH	- Kidney Nephropathy		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 620	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 688 HISTO: 32508
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Spleen	* Thymus
* Trachea	* Urinary Bladder		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
* Bone		Fibrous Osteodystrophy	Mild
* Heart	Artery	Mineralization	Mild
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 3-5]			
* Liver		Basophilic Focus	
		Degeneration	Cystic, Mild
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Atrophy	Moderate
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Skin		Basal Cell Adenoma	
[Basal Cell Adenoma TGLS = 4-13]			
* Stomach, Forestomach		Necrosis	Moderate
[Necrosis TGLS = 6-12]			
* Stomach, Glandular		Mineralization	Moderate
		Necrosis	Mild
[Necrosis TGLS = 5-11]			
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 2-7]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 620	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 688 HISTO: 32508
ORGAN AND ACCOUNTABLE SITE STATUS			
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	- Kidney Nephropathy		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 621	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 525 HISTO: 32509
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Trachea	* Urinary Bladder
MISSING			
* Thymus			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Degeneration	Fatty, Minimal
	Bile Duct	Hyperplasia	Mild
	Centrilobular	Leukemia Mononuclear	
		Necrosis	Minimal
[Leukemia Mononuclear TGLS = 2,3-4]			
* Lung		Inflammation	Granulomatous, Minimal
		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Adenoma	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 621	TRT#: 7	SEX: Male	DAY ON TEST: 525
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32509
ORGAN AND ACCOUNTABLE SITE STATUS			
* Prostate		Leukemia Mononuclear	
* Spleen		Hyperplasia	Minimal
[Leukemia Mononuclear TGLS = 1-12]		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 622	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32510
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		
MISSING			
* Lymph Node, Mediastinal	* Mammary Gland		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
		Pheochromocytoma Malignant	
* Heart		Cardiomyopathy	Mild
* Intestine Large, Colon		Parasite Metazoan	
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 2-5]			
* Liver		Basophilic Focus	
		Clear Cell Focus	
		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Spleen		Leukemia Mononuclear	
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-7]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 622	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32510
ORGAN AND ACCOUNTABLE SITE STATUS			
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 623	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32511
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Mammary Gland	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder
OBSERVATIONS			
* Adrenal Cortex		Degeneration	Cystic, Mild
* Adrenal Medulla		Hyperplasia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Marked
[Nephropathy TGLS = 6-5]			
* Liver		Basophilic Focus	
		Clear Cell Focus	
		Cyst	Mild
		Leukemia Mononuclear	
[Cyst TGLS = 5-4+11]			
[Leukemia Mononuclear TGLS = 8-4]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
		Leukemia Mononuclear	
Lymph Node	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-15]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 623	TRT#: 7	SEX: Male	DAY ON TEST: 733
	DOSE: 8000 PPM	DISP: Terminal Sacrifice	HISTO: 32511
ORGAN AND ACCOUNTABLE SITE STATUS			
* Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
[Fibrosis TGLS = 4-13]			
[Leukemia Mononuclear TGLS = 3-12+13]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1,2-14+7]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 624	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 689 HISTO: 32512
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Larynx	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Skin	* Stomach, Glandular
* Testes	* Trachea		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2,3-1]			
* Heart		Leukemia Mononuclear	
* Islets, Pancreatic		Adenoma	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
* Liver		Basophilic Focus	
		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-16]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 624	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 689 HISTO: 32512
ORGAN AND ACCOUNTABLE SITE STATUS			
* Mammary Gland [Galactoceles TGLS = 1-15]		Galactoceles	Mild
* Nose	Olfactory Epi	Degeneration Leukemia Mononuclear	Hyaline, Mild
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland [Adenoma TGLS = 4-8]	Pars Distalis	Adenoma Leukemia Mononuclear	
* Seminal Vesicle [Leukemia Mononuclear TGLS = 10-8]		Leukemia Mononuclear	
* Spleen [Accessory Spleen TGLS = 9-13] [Fibrosis TGLS = 7-12] [Leukemia Mononuclear TGLS = 6-11]		Accessory Spleen Fibrosis Leukemia Mononuclear	Mild
* Stomach, Forestomach [Necrosis TGLS = 11-14]		Necrosis	Moderate
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Adenoma	
* Urinary Bladder		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 625	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32513
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Mammary Gland	* Pancreas	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder
MISSING			
* Thymus			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Moderate
		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Moderate
* Kidney		Leukemia Mononuclear	
		Nephropathy	Marked
[Nephropathy TGLS = 6-5]			
* Liver		Basophilic Focus	
		Eosinophilic Focus	
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Parathyroid Gland		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 625	TRT#: 7	SEX: Male	DAY ON TEST: 733
	DOSE: 8000 PPM	DISP: Terminal Sacrifice	HISTO: 32513
ORGAN AND ACCOUNTABLE SITE STATUS			
[Leukemia Mononuclear TGLS = 3-4]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 4-7]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 626	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 560 HISTO: 32514
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Trachea
* Urinary Bladder			
MISSING			
* Lymph Node, Bronchial	* Thymus		
OBSERVATIONS			
* Adrenal Medulla		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Moderate
[Nephropathy TGLS = 2-5]			
* Liver		Degeneration	Fatty, Minimal
* Lung		Inflammation	Granulomatous, Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Prostate		Hyperplasia	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 627	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 540 HISTO: 32515
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Testes	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
Note: "Focus, 7mm dia, pale" noted at necropsy was not apparent microscopically.			
* Lung		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Preputial Gland		Carcinoma	
[Carcinoma TGLS = 1,2-11+13]			
* Spleen		Hematopoietic Cell Proliferation	Moderate
[Leukemia Mononuclear TGLS = 5-12]			
PRIMARY CAUSE OF DEATH	- Preputial Gland Carcinoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 628	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 608 HISTO: 32516
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
* Intestine Large, Cecum		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 12-18]			
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
Lymph Node	Iliac	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-16]			
[Leukemia Mononuclear TGLS = 6-15]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-2+12]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 628	TRT#: 7	SEX: Male	DAY ON TEST: 608
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32516
ORGAN AND ACCOUNTABLE SITE STATUS			
[Leukemia Mononuclear TGLS = 8-6+14]			
Mesentery	Artery	Inflammation	Chronic Active, Moderate
[Inflammation TGLS = 7-14]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Skin		Inflammation	Chronic Active, Mild
[Inflammation TGLS = 10-17]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2,3,4-13]			
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 629	TRT#: 7	SEX: Male	DAY ON TEST: 678
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32517

ORGAN AND ACCOUNTABLE SITE STATUS

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

MISSING			
* Thymus			

OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Hypertrophy	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
* Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
[Leukemia Mononuclear TGLS = 2-4]			
* Lung		Inflammation	Granulomatous, Mild
		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Minimal
* Pituitary Gland		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 629	TRT#: 7	SEX: Male	DAY ON TEST: 678
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32517
ORGAN AND ACCOUNTABLE SITE STATUS			
* Spleen	Leukemia Mononuclear		
[Leukemia Mononuclear TGLS = 1-11]			
* Testes	Atrophy		Moderate
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 630	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 664 HISTO: 32518
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone Marrow	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Preputial Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Spleen	* Thymus	* Trachea	* Urinary Bladder
MISSING			
* Lymph Node, Bronchial	* Lymph Node, Mediastinal		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Moderate
* Bone		Fibrous Osteodystrophy	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 3-4]			
* Liver		Degeneration	Fatty, Minimal
		Degeneration	Cystic, Mild
Note: "Pale" liver noted at necropsy was due to anemia secondary to chronic renal disease.			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Hyperplasia	Mild
* Parathyroid Gland		Hyperplasia	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-8]			
* Prostate		Adenoma	
* Stomach, Forestomach		Necrosis	Marked
[Necrosis TGLS = 5-11]			
* Stomach, Glandular		Necrosis	Moderate
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-7]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 630	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 664 HISTO: 32518
ORGAN AND ACCOUNTABLE SITE STATUS			
PRIMARY CAUSE OF DEATH	- Kidney Nephropathy		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 631	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 610 HISTO: 32519
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Testes
* Thymus	* Trachea	* Urinary Bladder	
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Mild
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney	Renal Tubule	Adenoma	
		Nephropathy	Moderate
[Nephropathy TGLS = 4-5]			
* Liver		Angiectasis	Mild
		Basophilic Focus	
		Degeneration	Fatty, Minimal
[Angiectasis TGLS = 3-12]			
* Lung		Inflammation	Granulomatous, Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Spleen		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 632	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 658 HISTO: 32520
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Parathyroid Gland
* Preputial Gland	* Prostate	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Moderate
* Liver		Basophilic Focus	
		Degeneration	Cystic, Mild
		Eosinophilic Focus	
		Hepatodiaphragmatic Nodule	
[Hepatodiaphragmatic Nodule TGLS = 6-13]			
* Lung		Hemorrhage	Minimal
	Alveolar Epith	Hyperplasia	Minimal
[Hemorrhage TGLS = 3-12]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 2,7-16+15]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 4,5-7]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
Tongue		Hemangiosarcoma	
[Hemangiosarcoma TGLS = 1-11]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 632	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 658 HISTO: 32520
ORGAN AND ACCOUNTABLE SITE STATUS			
PRIMARY CAUSE OF DEATH	- Tongue Hemangiosarcoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 633	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32521
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
	Bilateral	Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Islets, Pancreatic		Hyperplasia	Moderate
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
[Nephropathy TGLS = 5-5]			
* Liver		Basophilic Focus	
		Degeneration	Cystic, Mild
		Eosinophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-4+14]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-3+3A+15]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 633	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32521
ORGAN AND ACCOUNTABLE SITE STATUS			
* Seminal Vesicle		Leukemia Mononuclear	
* Skin		Keratoacanthoma	
[Keratoacanthoma TGLS = 1-13]			
* Spleen		Fibrosis	Moderate
		Leukemia Mononuclear	
[Fibrosis TGLS = 4-12]			
[Leukemia Mononuclear TGLS = 3-11]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 2-7]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Urinary Bladder		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 634	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32522
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Salivary Glands
* Seminal Vesicle	* Stomach, Forestomach	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder		
MISSING			
* Mammary Gland			
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
	Bilateral	Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
	Artery	Mineralization	Mild
	Atrium	Thrombosis	Moderate
[Thrombosis TGLS = 2-12]			
* Kidney		Leukemia Mononuclear	
		Mineralization	Mild
		Nephropathy	Marked
[Nephropathy TGLS = 9-5]			
* Liver		Degeneration	Cystic, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Moderate
[Leukemia Mononuclear TGLS = 8-4]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 12-3+3A+11]			
* Lymph Node, Bronchial		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 634	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32522
ORGAN AND ACCOUNTABLE SITE STATUS			
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Thrombosis	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Prostate		Inflammation	Chronic Active, Moderate
* Skin		Inflammation	Chronic Active, Marked
		Squamous Cell Papilloma	
[Inflammation TGLS = 10-14]			
[Squamous Cell Papilloma TGLS = 11-15]			
* Spleen		Fibrosis	Moderate
		Leukemia Mononuclear	
[Fibrosis TGLS = 7-4]			
[Leukemia Mononuclear TGLS = 6-13+4]			
* Stomach, Glandular		Necrosis	Mild
* Testes		Atrophy	Marked
		Necrosis	Marked
[Atrophy TGLS = 5-7]			
[Necrosis TGLS = 4-7]			
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 635	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 631 HISTO: 32523
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
		Pheochromocytoma Benign	
		Pheochromocytoma Malignant	
[Pheochromocytoma Malignant TGLS = 8-5]			
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Degeneration	Cystic, Minimal
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-12]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 635	TRT#: 7	SEX: Male	DAY ON TEST: 631
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32523
ORGAN AND ACCOUNTABLE SITE STATUS			
[Hyperplasia TGLS = 4-8]			
* Spleen		Leukemia Mononuclear Necrosis	Marked
[Leukemia Mononuclear TGLS = 6-11]			
[Necrosis TGLS = 7-11]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 5-7]			
* Thymus		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-2]			
* Thyroid Gland	Follicular Cel	Hyperplasia	Marked
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 636	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 690 HISTO: 32524
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Pancreas	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach	* Testes
* Trachea	* Urinary Bladder		
OBSERVATIONS			
* Adrenal Medulla	Bilateral	Pheochromocytoma Malignant	
[Pheochromocytoma Malignant TGLS = 10,11-5+19]			
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
[Nephropathy TGLS = 9-5+19]			
* Liver		Eosinophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-4]			
* Lung		Necrosis	Minimal
[Leukemia Mononuclear TGLS = 3,4,5,6-14+15+16+17]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Galactoceles	Mild
[Galactoceles TGLS = 2-12]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 13-13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 636	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 690 HISTO: 32524
ORGAN AND ACCOUNTABLE SITE STATUS			
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma Leukemia Mononuclear	
[Adenoma TGLS = 7-8]			
* Skin		Basal Cell Adenoma	
[Basal Cell Adenoma TGLS = 1-11]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 12-18]			
* Stomach, Glandular		Mineralization	Mild
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	
CONTRIBUTORY CAUSE OF DEATH	- Kidney	Nephropathy	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 637

TRT#: 7

SEX: Male

DAY ON TEST: 701

DOSE: 8000 PPM

DISP: Moribund Sacrifice

HISTO: 32525

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Testes	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder			

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla	Bilateral	Hyperplasia	Moderate
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
[Nephropathy TGLS = 6-5]			
* Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
		Leukemia Mononuclear	
Note: Lymph node with no site listed was axillary.			
[Leukemia Mononuclear TGLS = 7-13]			
[Leukemia Mononuclear TGLS = 4-12]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-7]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 637	TRT#: 7	SEX: Male	DAY ON TEST: 701
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32525
ORGAN AND ACCOUNTABLE SITE STATUS			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 2-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-11]			
* Stomach, Glandular		Necrosis	Moderate
[Necrosis TGLS = 8-14]			
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 638	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 636 HISTO: 32526
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Lymph Node, Mediastinal	* Mammary Gland	* Parathyroid Gland	* Preputial Gland
* Prostate	* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
OBSERVATIONS			
* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Mild
* Intestine Large, Cecum		Parasite Metazoan	
* Islets, Pancreatic		Hyperplasia	Moderate
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 4-5]			
* Liver		Degeneration	Fatty, Minimal
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Hemorrhage	Minimal
[Hemorrhage TGLS = 7-14]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Skin		Inflammation	Chronic Active, Moderate
[Inflammation TGLS = 1-15]			
* Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
[Fibrosis TGLS = 5-12]			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 638	TRT#: 7	SEX: Male	DAY ON TEST: 636
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32526
ORGAN AND ACCOUNTABLE SITE STATUS			
[Leukemia Mononuclear TGLS = 3-11]			
* Stom Gland			
Note: "Focus (2), 1 mm dia, dark" noted at trim was not apparent microscopically and most likely was blood in normal vasculature.			
* Testes	Interstit Cell	Hyperplasia	Mild
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		
CONTRIBUTORY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 639

TRT#: 7

SEX: Male

DAY ON TEST: 490

DOSE: 8000 PPM

DISP: Moribund Sacrifice

HISTO: 32527

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Cortex
* Brain
* Intestine Large, Colon
* Intestine Small, Jejunum
* Lymph Node, Mandibular
* Pancreas
* Salivary Glands
* Stomach, Glandular

* Adrenal Medulla
* Epididymis
* Intestine Large, Rectum
* Islets, Pancreatic
* Lymph Node, Mediastinal
* Parathyroid Gland
* Seminal Vesicle
* Thymus

* Bone
* Esophagus
* Intestine Small, Duodenum
* Larynx
* Lymph Node, Mesenteric
* Preputial Gland
* Skin
* Trachea

* Bone Marrow
* Intestine Large, Cecum
* Intestine Small, Ileum
* Lung
* Mammary Gland
* Prostate
* Spleen
* Urinary Bladder

MISSING

* Lymph Node, Bronchial

OBSERVATIONS

* Heart
* Kidney
* Liver

Cardiomyopathy
Nephropathy
Basophilic Focus
Degeneration

Mild
Moderate
Fatty, Minimal

* Lung

Note: "Focus, 3mm dia, pale" noted at necropsy was not apparent microscopically.

* Nose
* Pituitary Gland

Olfactory Epi
Pars Distalis

Degeneration
Adenoma

Hyaline, Mild

[Adenoma TGLS = 1-8]

* Stomach, Forestomach
* Testes

Inflammation
Atrophy
Hyperplasia

Chronic, Mild
Moderate
Minimal

* Thyroid Gland

C Cell

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 640	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32528
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Parathyroid Gland
* Preputial Gland	* Salivary Glands	* Seminal Vesicle	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Thyroid Gland
* Trachea	* Urinary Bladder		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Leukemia Mononuclear	
* Adrenal Medulla	Bilateral	Hyperplasia	Moderate
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Minimal
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
[Nephropathy TGLS = 11-5+13]			
* Liver		Basophilic Focus	
		Eosinophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
		Regeneration	Marked
[Leukemia Mononuclear TGLS = 10-4]			
[Regeneration TGLS = 14-12]			
* Lung		Alveolar/Bronchiolar Carcinoma	
		Leukemia Mononuclear	
[Alveolar/Bronchiolar Carcinoma TGLS = 4-3A]			
[Leukemia Mononuclear TGLS = 5-11]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 640	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32528
ORGAN AND ACCOUNTABLE SITE STATUS			
* Lymph Node, Mediastinal [Leukemia Mononuclear TGLS = 13-2]		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland [Inflammation TGLS = 1,2,3-17+18+19]		Inflammation	Chronic, Moderate
Mesentery [Necrosis TGLS = 7-15]	Fat	Necrosis	Mild
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas [Inflammation TGLS = 12-16]	Artery	Basophilic Focus Inflammation	Marked
* Pituitary Gland [Adenoma TGLS = 6-8]	Pars Distalis	Adenoma Leukemia Mononuclear	
* Prostate		Hyperplasia	Minimal
* Spleen [Fibrosis TGLS = 9-14] [Leukemia Mononuclear TGLS = 8-14]		Fibrosis Leukemia Mononuclear	Mild
* Thymus		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 641	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 702 HISTO: 32529
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Trachea	* Urinary Bladder	
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Moderate
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
[Nephropathy TGLS = 2-5]			
* Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Minimal
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 1-8]			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 641	TRT#: 7	SEX: Male	DAY ON TEST: 702
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32529
ORGAN AND ACCOUNTABLE SITE STATUS			
* Skin		Keratoacanthoma	
[Keratoacanthoma TGLS = 6,7-12]			
* Spleen		Hemorrhage	Mild
		Leukemia Mononuclear	
[Hemorrhage TGLS = 5-11]			
[Leukemia Mononuclear TGLS = 4-11]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
Tooth		Developmental Malformation	
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 642	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 618 HISTO: 32530
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			
MISSING			
* Parathyroid Gland			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Islets, Pancreatic		Adenoma	
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 6-5]			
* Larynx	Epiglottis	Metaplasia	Squamous, Mild
* Liver	Bile Duct	Hyperplasia	Minimal
* Lung		Inflammation	Suppurative, Marked
[Inflammation TGLS = 5-3+3A]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Inflammation	Suppurative, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen			
Note: "Focus, 5x3mm, dark" noted at necropsy was not apparent microscopically.			
* Testes	Interstit Cell	Adenoma	
* Thyroid Gland	Follicular Cel	Carcinoma	
[Carcinoma TGLS = 3-2]			
PRIMARY CAUSE OF DEATH	- Thyroid Gland Follicular Cel Carcinoma		
CONTRIBUTORY CAUSE OF DEATH	- Lung Inflammation		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 642	TRT#: 7	SEX: Male	DAY ON TEST: 618
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32530

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 643	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 720 HISTO: 32531
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Epididymis	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Pancreas	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			
MISSING			
* Mammary Gland			
OBSERVATIONS			
* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Minimal
* Intestine Small, Ileum		Leiomyosarcoma	
[Leiomyosarcoma TGLS = 7-11+12]			
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 6-5]			
* Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Minimal
* Lung	Alveolar Epith	Hyperplasia	Minimal
[Hyperplasia TGLS = 8-13]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 5-14]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Parathyroid Gland		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 3,4-7]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 643	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 720 HISTO: 32531
ORGAN AND ACCOUNTABLE SITE STATUS			
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 644	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 650 HISTO: 32532
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Preputial Gland
* Salivary Glands	* Seminal Vesicle	* Skin	* Spleen
* Stomach, Forestomach	* Trachea	* Urinary Bladder	
MISSING			
* Thymus			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 3-5]			
* Liver		Basophilic Focus	
		Degeneration	Fatty, Minimal
	Bile Duct	Hyperplasia	Minimal
* Lung		Carcinoma	Metastatic (Thyroid Gland)
* Lymph Node, Mediastinal		Carcinoma	Metastatic (Thyroid Gland)
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Prostate		Hyperplasia	Minimal
* Stomach, Glandular		Necrosis	Mild
* Testes	Artery	Inflammation	Chronic Active, Mild
* Thyroid Gland	Follicular Cel	Carcinoma	
	C Cell	Hyperplasia	Minimal
[Carcinoma TGLS = 1-2+2A]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 644

TRT#: 7

SEX: Male

DAY ON TEST: 650

DOSE: 8000 PPM

DISP: Moribund Sacrifice

HISTO: 32532

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

CONTRIBUTORY CAUSE OF DEATH

- Thyroid Gland Follicular Cel Carcinoma

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 645	TRT#: 7	SEX: Male	DAY ON TEST: 505
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32533

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL			
* Bone	* Epididymis	* Esophagus	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Parathyroid Gland	* Prostate	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Testes	* Trachea
MISSING			
* Thymus			

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Minimal
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
		Necrosis	Mild
* Brain		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Minimal
		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Intestine Large, Colon		Leukemia Mononuclear	
* Intestine Small, Ileum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Iliac	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-14]			
[Leukemia Mononuclear TGLS = 10-16]			
[Leukemia Mononuclear TGLS = 9-15]			
* Lymph Node, Bronchial		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 645	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 505 HISTO: 32533
ORGAN AND ACCOUNTABLE SITE STATUS			
* Lymph Node, Mandibular [Leukemia Mononuclear TGLS = 2-7]		Leukemia Mononuclear	
* Lymph Node, Mediastinal [Leukemia Mononuclear TGLS = 3-2]		Leukemia Mononuclear	
* Lymph Node, Mesenteric [Leukemia Mononuclear TGLS = 8-6]		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration Leukemia Mononuclear Thrombosis	Hyaline, Moderate Minimal
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma Leukemia Mononuclear	
* Preputial Gland		Leukemia Mononuclear	
* Salivary Glands		Leukemia Mononuclear	
* Seminal Vesicle		Leukemia Mononuclear	
* Spleen [Leukemia Mononuclear TGLS = 4,6-11+12]		Leukemia Mononuclear	
* Thyroid Gland		Leukemia Mononuclear	
* Urinary Bladder		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 646	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 607 HISTO: 32534
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lymph Node, Bronchial	* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
MISSING			
* Lymph Node, Mediastinal			
OBSERVATIONS			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 3-5]			
* Lung	Alveolar Epith	Hyperplasia	Mild
[Hyperplasia TGLS = 4-11]			
* Lymph Node, Mandibular		Infiltration Cellular	Plasma Cell, Moderate
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Testes	Interstit Cell	Hyperplasia	Minimal
	Artery	Inflammation	Chronic Active, Moderate
* Thyroid Gland	C Cell	Carcinoma	
[Carcinoma TGLS = 1-2]			
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 647	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 692 HISTO: 32535
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Epididymis	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Mammary Gland
* Parathyroid Gland	* Preputial Gland	* Prostate	* Salivary Glands
* Seminal Vesicle	* Skin	* Stomach, Glandular	* Trachea
* Urinary Bladder			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Leukemia Mononuclear	
* Adrenal Medulla	Bilateral	Hyperplasia	Moderate
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
* Islets, Pancreatic		Hyperplasia	Moderate
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
* Liver		Degeneration	Fatty, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 2-14]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 647	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 692 HISTO: 32535
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pancreas		Thrombosis	Moderate
* Pituitary Gland	Pars Distalis	Atrophy	Mild
[Adenoma TGLS = 1-8]		Adenoma	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-11]			
* Stomach, Forestomach		Necrosis	Moderate
[Necrosis TGLS = 6,7-12+13]			
* Testes	Interstit Cell	Adenoma	
[Adenoma TGLS = 4-7]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 648	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 604 HISTO: 32536
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Epididymis	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Preputial Gland	* Prostate
* Salivary Glands	* Seminal Vesicle	* Skin	* Stomach, Forestomach
* Trachea			
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Mild
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-12]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Thrombosis	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-8]			
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 648	TRT#: 7	SEX: Male	DAY ON TEST: 604
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32536
ORGAN AND ACCOUNTABLE SITE STATUS			
[Leukemia Mononuclear TGLS = 2-13]			
* Stomach, Glandular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-14]			
* Testes	Bilateral, Interstit Cell	Adenoma	
[Adenoma TGLS = 1-7]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Urinary Bladder		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 649	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 636 HISTO: 32537
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Preputial Gland	* Salivary Glands	* Seminal Vesicle
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Testes	* Thymus	* Trachea	* Urinary Bladder
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Moderate
* Brain			
Note: "Dilatation" noted at trim was secondary to pituitary mass.			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 5-5+12]			
* Liver		Degeneration	Cystic, Mild
		Degeneration	Fatty, Minimal
	Bile Duct	Hyperplasia	Minimal
[Degeneration TGLS = 4-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Prostate		Inflammation	Chronic Active, Marked
[Inflammation TGLS = 6-13]			
* Thyroid Gland	C Cell	Adenoma	
	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 650	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 700 HISTO: 32538
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone Marrow	* Brain	* Epididymis
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Salivary Glands	* Thymus	* Trachea	
OBSERVATIONS			
* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
Blood Vessel	Aorta	Mineralization	Marked
[Mineralization TGLS = 10-4]			
* Bone		Fibrous Osteodystrophy	Marked
* Heart		Cardiomyopathy	Moderate
	Artery	Mineralization	Marked
[Mineralization TGLS = 9-11]			
* Intestine Large, Colon		Mineralization	Mild
* Islets, Pancreatic		Carcinoma	
* Kidney	Transit Epithe	Hyperplasia	Mild
		Mineralization	Marked
		Nephropathy	Marked
[Nephropathy TGLS = 6-5]			
* Liver		Basophilic Focus	
		Degeneration	Cystic, Mild
		Mineralization	Moderate
		Necrosis	Mild
* Lung	Artery, Mediastinum	Mineralization	Marked
		Mineralization	Marked
Mesentery	Artery	Mineralization	Mild
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Inflammation	Suppurative, Mild
* Pancreas	Artery	Mineralization	Moderate
* Parathyroid Gland		Hyperplasia	Marked

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 650	TRT#: 7 DOSE: 8000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: 700 HISTO: 32538
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pituitary Gland [Adenoma TGLS = 1-8]	Pars Distalis	Adenoma	
* Preputial Gland [Adenoma TGLS = 2-14]		Adenoma	
* Prostate		Inflammation	Chronic Active, Moderate
* Seminal Vesicle		Mineralization	Moderate
Skeletal Muscle		Mineralization	Moderate
* Skin [Keratoacanthoma TGLS = 7-13] [Rhabdomyosarcoma TGLS = 8-12]	Subcut Tiss	Keratoacanthoma Rhabdomyosarcoma	
* Spleen [Fibrosis TGLS = 5-4]		Fibrosis	Mild
* Stomach, Forestomach		Mineralization	Marked
* Stomach, Glandular		Mineralization	Marked
* Testes [Adenoma TGLS = 4-7] [Atrophy TGLS = 3-7]	Interstit Cell Artery	Adenoma Atrophy Mineralization	Moderate Moderate
* Thyroid Gland	Follicular Cel	Carcinoma	
* Urinary Bladder	Transit Epithe	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Kidney Nephropathy		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 101	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32439
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Brain	* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
MISSING			
* Lymph Node, Mediastinal			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone		Osteosarcoma	
* Bone Marrow		Leukemia Mononuclear	
* Clitoral Gland		Adenoma	
[Adenoma TGLS = 2-12]			
* Heart		Cardiomyopathy	Minimal
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
[Mixed Cell Focus TGLS = 5-11]		Mixed Cell Focus	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 101	TRT#: 2	SEX: Female	DAY ON TEST: 733
	DOSE: CONTROL	DISP: Terminal Sacrifice	HISTO: 32439
ORGAN AND ACCOUNTABLE SITE STATUS			
* Ovary		Cyst	Mild
[Cyst TGLS = 4-7]			
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Spleen		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 102	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32440
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Nose	* Ovary	* Pancreas	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus
MISSING			
* Lymph Node, Bronchial	* Parathyroid Gland		
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Infarct	Mild
		Nephropathy	Mild
[Infarct TGLS = 3-5]			
* Liver		Mixed Cell Focus	
[Mixed Cell Focus TGLS = 6-11]			
* Lung		Alveolar/Bronchiolar Adenoma	
[Alveolar/Bronchiolar Adenoma TGLS = 5-3A]			
* Mammary Gland		Adenoma	
		Fibroadenoma	Multiple
[Adenoma TGLS = 2-12]			
[Fibroadenoma TGLS = 1,2-14+12]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 4-13]			
* Pituitary Gland	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 103	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32441
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
		Inflammation	Suppurative, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 104	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 720 HISTO: 32442
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Mammary Gland	* Parathyroid Gland
* Salivary Glands	* Skin	* Trachea	* Urinary Bladder
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Mild
		Leukemia Mononuclear	
		Necrosis	Mild
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Atrophy	Marked
		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Colon		Leukemia Mononuclear	
		Parasite Metazoan	
* Intestine Small, Ileum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Degeneration	Fatty, Moderate
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
		Thrombosis	Mild
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-3+3A]			
Lymph Node	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-11]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 104	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 720 HISTO: 32442
ORGAN AND ACCOUNTABLE SITE STATUS			
* Lymph Node, Mesenteric [Leukemia Mononuclear TGLS = 8-6]		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Ovary		Leukemia Mononuclear	
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland [Adenoma TGLS = 1-8]	Pars Distalis	Adenoma Leukemia Mononuclear	
* Spleen [Hemorrhage TGLS = 3-11] [Leukemia Mononuclear TGLS = 2-11]		Hemorrhage Leukemia Mononuclear	Mild
* Stomach, Forestomach [Necrosis TGLS = 9-8]		Necrosis	Marked
* Stomach, Glandular		Necrosis	Minimal
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Uterus Vagina [Polyp TGLS = 7-12]		Leukemia Mononuclear Polyp	
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 105

TRT#: 2

SEX: Female

DAY ON TEST: 573

DOSE: CONTROL

DISP: Natural Death

HISTO: 32443

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Clitoral Gland	* Esophagus	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Trachea			

MISSING

* Lymph Node, Bronchial	* Lymph Node, Mediastinal
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OBSERVATIONS

* Adrenal Cortex	Leukemia Mononuclear	
* Adrenal Medulla	Leukemia Mononuclear	
* Bone Marrow	Leukemia Mononuclear	
* Brain	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7,9-1+16]		
Eye	Cataract	Mild
[Cataract TGLS = 1-14]		
* Heart	Cardiomyopathy	Mild
	Leukemia Mononuclear	
* Intestine Large, Cecum	Parasite Metazoan	
* Intestine Small, Ileum	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-6]		
* Kidney	Leukemia Mononuclear	
* Liver	Degeneration	Fatty, Mild
	Hepatodiaphragmatic Nodule	
Bile Duct	Hyperplasia	Mild
	Leukemia Mononuclear	
[Hepatodiaphragmatic Nodule TGLS = 8-11]		
[Leukemia Mononuclear TGLS = 5-4]		
* Lung	Leukemia Mononuclear	
Lymph Node	Leukemia Mononuclear	
* Lymph Node, Mandibular	Leukemia Mononuclear	
Pancreatic		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 105	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Natural Death	DAY ON TEST: 573 HISTO: 32443
ORGAN AND ACCOUNTABLE SITE STATUS			
* Lymph Node, Mesenteric Mesentery [Necrosis TGLS = 2-13]	Fat	Leukemia Mononuclear Necrosis	Mild
* Nose	Olfactory Epi	Degeneration Inflammation Leukemia Mononuclear Cyst Leukemia Mononuclear	Hyaline, Minimal Suppurative, Minimal Moderate
* Ovary [Cyst TGLS = 4-7]			
* Pituitary Gland	Pars Distalis	Adenoma Leukemia Mononuclear Leukemia Mononuclear	
* Spleen [Leukemia Mononuclear TGLS = 3-12]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Urinary Bladder		Leukemia Mononuclear	
* Uterus		Polyp Stromal	
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 106	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 714 HISTO: 32444
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Glandular	* Trachea	* Urinary Bladder	* Uterus
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Moderate
		Leukemia Mononuclear	
* Bone		Hyperostosis	Minimal
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Minimal
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Degeneration	Fatty, Moderate
	Bile Duct	Hyperplasia	Mild
	Centrilobular	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1,2-11+4]	Necrosis	Mild
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
		Thrombosis	Moderate
* Ovary		Cyst	Mild
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 106	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 714 HISTO: 32444
ORGAN AND ACCOUNTABLE SITE STATUS			
[Cyst TGLS = 4-7]			
* Pituitary Gland	Pars Distalis	Adenoma Leukemia Mononuclear Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-12]			
* Stomach, Forestomach		Necrosis	Moderate
[Necrosis TGLS = 5-8+13]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 107	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 663 HISTO: BR
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Thymus	* Trachea	* Urinary Bladder
* Uterus			
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Degeneration	Fatty, Mild
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
[Leukemia Mononuclear TGLS = 4-4]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-12]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Thrombosis	Mild
* Ovary		Cyst	Mild
[Cyst TGLS = 1-7]			
* Pituitary Gland		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 107	TRT#: 2	SEX: Female	DAY ON TEST: 663
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: BR
ORGAN AND ACCOUNTABLE SITE STATUS			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-11]			
* Stomach, Forestomach		Necrosis	Moderate
[Necrosis TGLS = 5-13]			
* Stomach, Glandular		Necrosis	Minimal
[Necrosis TGLS = 6-14]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 108	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 642 HISTO: 32446
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Minimal
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
[Leukemia Mononuclear TGLS = 6-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Ovary		Cyst	Moderate
[Cyst TGLS = 5-12]			
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 3-8]			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 108	TRT#: 2	SEX: Female	DAY ON TEST: 642
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 32446
ORGAN AND ACCOUNTABLE SITE STATUS			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-11]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Uterus		Polyp Stromal	
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 109	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32447
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Hypertrophy	Minimal
* Adrenal Medulla		Pheochromocytoma Benign	
[Pheochromocytoma Benign TGLS = 7-5]			
* Bone		Hyperostosis	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Eosinophilic Focus	
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 3,4,5-12+11+14+13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 6-8]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 110	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 488 HISTO: 32448
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Kidney	* Larynx	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Parathyroid Gland	* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Intestine Large, Cecum		Parasite Metazoan	
* Intestine Large, Colon		Parasite Metazoan	
* Liver		Eosinophilic Focus	
* Lung		Inflammation	Granulomatous, Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pancreas		Atrophy	Mild
		Basophilic Focus	
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Skin	Subcut Tiss	Fibrous Histiocytoma	
[Fibrous Histiocytoma TGLS = 2-11+12]			
* Spleen		Hematopoietic Cell Proliferation	Moderate
[Hematopoietic Cell Proliferation TGLS = 3-4]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Skin Subcut Tiss Fibrous Histiocytoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 111	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 496 HISTO: 32449
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		
MISSING			
* Lymph Node, Mediastinal	* Thymus		
OBSERVATIONS			
* Heart		Cardiomyopathy	Minimal
* Intestine Large, Rectum		Polyp Adenomatous	
* Kidney		Nephropathy	Moderate
* Liver		Degeneration	Fatty, Minimal
[Degeneration TGLS = 4,5-4]			
* Mammary Gland		Galactoceles	Moderate
[Galactoceles TGLS = 3-11]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 2-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 112	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 440 HISTO: 32450
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus
MISSING			
* Lymph Node, Bronchial	* Lymph Node, Mandibular		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
Eye	Retina	Atrophy	Moderate
[Cataract TGLS = 2-13]		Cataract	Moderate
* Heart		Cardiomyopathy	Minimal
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Lung			
Note: "Focus, 1mm dia, pale" noted at necropsy was not apparent microscopically.			
Lymph Node	Renal	Sarcoma	
[Sarcoma TGLS = 3-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Lymph Node Renal Sarcoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 113	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32451
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone Marrow	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Minimal
* Bone		Hyperostosis	Mild
* Clitoral Gland		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 2-11+12]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Skin	Subcut Tiss	Sarcoma	
[Sarcoma TGLS = 1-13+14+15]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 114	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32452
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Mediastinal
* Mammary Gland	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone		Hyperostosis	Mild
* Heart		Cardiomyopathy	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 5-8]			
* Skin		Inflammation	Chronic Active, Mild
		Keratoacanthoma	
[Inflammation TGLS = 1-13]			
[Keratoacanthoma TGLS = 4-11]			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 114	TRT#: 2	SEX: Female	DAY ON TEST: 734
	DOSE: CONTROL	DISP: Terminal Sacrifice	HISTO: 32452
ORGAN AND ACCOUNTABLE SITE STATUS			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-12]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 115	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 581 HISTO: 32453
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			
OBSERVATIONS			
* Heart		Cardiomyopathy	Minimal
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Lung		Inflammation	Granulomatous, Mild
[Inflammation TGLS = 4-3+3A]			
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,2-12+13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 116	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 552 HISTO: 32454
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Nose	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			
MISSING			
* Lymph Node, Bronchial	* Lymph Node, Mandibular		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
Eye	Retina	Atrophy	Moderate
[Cataract TGLS = 2-14]		Cataract	Moderate
* Kidney	Renal Tubule	Carcinoma	
[Carcinoma TGLS = 5-11+12+13]		Nephropathy	Minimal
* Liver		Basophilic Focus	
Note: "Pale" liver noted at necropsy was due to anemia secondary to large renal neoplasm.		Necrosis	Mild
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Ovary		Cyst	Moderate
[Cyst TGLS = 3-7]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Spleen		Hematopoietic Cell Proliferation	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Kidney Renal Tubule Carcinoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 117	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 529 HISTO: 32455
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Necrosis	Minimal
* Intestine Large, Cecum		Inflammation	Acute, Marked
* Kidney		Nephropathy	Mild
* Liver		Degeneration	Fatty, Moderate
[Degeneration TGLS = 4,5-4]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 3-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
		Inflammation	Suppurative, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Stomach, Forestomach		Necrosis	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Uterus		Polyp Stromal	
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 118	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32456
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus
MISSING			
* Lymph Node, Mandibular			
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Mild
* Bone		Hyperostosis	Minimal
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Moderate
* Liver		Basophilic Focus	
		Clear Cell Focus	
		Leukemia Mononuclear	
		Necrosis	Mild
[Leukemia Mononuclear TGLS = 2-4]			
* Lung		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Spleen		Leukemia Mononuclear	
* Thyroid Gland	Follicular Cel	Carcinoma	
	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 119	TRT#: 2	SEX: Female	DAY ON TEST: 705
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 32457
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			
MISSING			
* Lymph Node, Mediastinal			
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Degeneration	Fatty, Mild
		Mixed Cell Focus	
[Mixed Cell Focus TGLS = 2-4]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 3-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Stomach, Forestomach		Inflammation	Acute, Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 120	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32458
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Uterus			
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
		Leukemia Mononuclear	
		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Leukemia Mononuclear	
* Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
		Leukemia Mononuclear	
[Hyperplasia TGLS = 2-3A]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11+12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 120	TRT#: 2	SEX: Female	DAY ON TEST: 734
	DOSE: CONTROL	DISP: Terminal Sacrifice	HISTO: 32458
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 3-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-13]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate
* Urinary Bladder		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 121	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32459
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus
OBSERVATIONS			
* Adrenal Cortex		Adenoma	
		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Mild
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
		Mixed Cell Focus	
[Mixed Cell Focus TGLS = 3-4]			
* Lung		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 2-11]			
Mesentery	Fat	Hemorrhage	Minimal
	Fat	Necrosis	Mild
[Hemorrhage TGLS = 5-13]			
[Necrosis TGLS = 4-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
		Inflammation	Suppurative, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 121	TRT#: 2	SEX: Female	DAY ON TEST: 734
	DOSE: CONTROL	DISP: Terminal Sacrifice	HISTO: 32459
ORGAN AND ACCOUNTABLE SITE STATUS			
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 122	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Natural Death	DAY ON TEST: 421 HISTO: 32460
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Islets, Pancreatic
* Larynx	* Mammary Gland	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus
MISSING			
* Lymph Node, Bronchial			
AUTO PRECLUDES DIAG.			
* Intestine Small, Ileum * Intestine Small, Jejunum			
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2,5-1]			
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-3+3A]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-11]			
* Nose		Inflammation	Suppurative, Mild
* Ovary		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 122	TRT#: 2	SEX: Female	DAY ON TEST: 421
	DOSE: CONTROL	DISP: Natural Death	HISTO: 32460
ORGAN AND ACCOUNTABLE SITE STATUS			
[Leukemia Mononuclear TGLS = 1-4]			
* Stom Gland			
Note: "Lesion, 1mm dia, dark, multiple" noted at trim was not apparent microscopically.			
* Thymus		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 123	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32461
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
OBSERVATIONS			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Moderate
* Liver		Angiectasis	Mild
		Basophilic Focus	
		Clear Cell Focus	
* Lung		Alveolar/Bronchiolar Adenoma	
[Alveolar/Bronchiolar Adenoma TGLS = 4-3A]			
* Mammary Gland		Fibroadenoma	
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Skin	Subcut Tiss	Hemangioma	
[Hemangioma TGLS = 3-11]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 124	TRT#: 2	SEX: Female	DAY ON TEST: 488
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 32462
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Kidney
* Larynx	* Liver	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Ovary	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Lung		Carcinoma	Metastatic (Mammary Gland)
[Carcinoma TGLS = 4-3+3A]			
* Mammary Gland		Carcinoma	
[Carcinoma TGLS = 1-11+12+13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pancreas		Atrophy	Minimal
* Spleen		Hematopoietic Cell Proliferation	Marked
[Hematopoietic Cell Proliferation TGLS = 2-4]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Mammary Gland Carcinoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 125	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32463
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			
OBSERVATIONS			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
[Basophilic Focus TGLS = 2-4+11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 126	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 691 HISTO: 32464
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus
OBSERVATIONS			
* Heart		Cardiomyopathy	Mild
* Intestine Large, Colon		Parasite Metazoan	
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Lung		Inflammation	Granulomatous, Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 3-11+12+13+14]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Metaplasia	Hepatocyte, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Hematopoietic Cell Proliferation	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Mammary Gland Fibroadenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 127	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32465
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Uterus			
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Eosinophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-4]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-3+3A]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Ovary		Cyst	Mild
		Leukemia Mononuclear	
[Cyst TGLS = 5-7]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 127	TRT#: 2	SEX: Female	DAY ON TEST: 734
	DOSE: CONTROL	DISP: Terminal Sacrifice	HISTO: 32465
ORGAN AND ACCOUNTABLE SITE STATUS			
[Leukemia Mononuclear TGLS = 2-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-11]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Urinary Bladder		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 128	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Natural Death	DAY ON TEST: 642 HISTO: 32466
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Small, Duodenum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	
AUTO PRECLUDES DIAG.			
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Ileum
* Intestine Small, Jejunum			
OBSERVATIONS			
* Bone		Hyperostosis	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Mixed Cell Focus	
[Mixed Cell Focus TGLS = 3-11]			
* Lung			
Note: "Focus, 2x3mm, pale" noted at necropsy was not apparent at trim or microscopically.			
* Mammary Gland		Fibroadenoma	
		Galactoceles	Mild
[Fibroadenoma TGLS = 4-12]			
[Galactoceles TGLS = 5-13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 129	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Natural Death	DAY ON TEST: 715 HISTO: 32467
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Islets, Pancreatic
* Larynx	* Liver	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Nose	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		
AUTO PRECLUDES DIAG.			
* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum			
OBSERVATIONS			
* Adrenal Cortex		Degeneration	Cystic, Mild
* Intestine Large, Colon		Parasite Metazoan	
* Kidney		Nephropathy	Mild
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 2-11]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 130	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32468
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			
MISSING			
* Lymph Node, Mandibular			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Moderate
[Nephropathy TGLS = 4-5]			
* Liver		Basophilic Focus	
		Clear Cell Focus	
[Hepatodiaphragmatic Nodule TGLS = 3-12]		Hepatodiaphragmatic Nodule	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11+13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 131	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 722 HISTO: 32469
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Mammary Gland	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Moderate
* Liver		Basophilic Focus	
		Degeneration	Fatty, Moderate
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-4]			
* Lung	Alveolar Epith	Hyperplasia	Mild
		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Spleen		Leukemia Mononuclear	
* Stomach, Forestomach		Necrosis	Mild
[Necrosis TGLS = 5-12]			
* Thyroid Gland	C Cell	Carcinoma	
[Carcinoma TGLS = 4-2]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 131

TRT#: 2

SEX: Female

DAY ON TEST: 722

DOSE: CONTROL

DISP: Moribund Sacrifice

HISTO: 32469

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 132	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 726 HISTO: 32470
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Minimal
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Minimal
* Islets, Pancreatic		Adenoma	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Basophilic Focus	
		Degeneration	Fatty, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4,5-4+11]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Ovary		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 132	TRT#: 2	SEX: Female	DAY ON TEST: 726
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 32470
ORGAN AND ACCOUNTABLE SITE STATUS			
[Adenoma TGLS = 2-8]			
* Skin		Hyperkeratosis	Moderate
[Hyperkeratosis TGLS = 1-13]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-12]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Uterus		Polyp Stromal	
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 133	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32471
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
MISSING			
* Lymph Node, Mandibular	* Parathyroid Gland		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Brain		Hemorrhage	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Moderate
[Nephropathy TGLS = 4-5]			
* Liver		Basophilic Focus	
* Lung		Inflammation	Granulomatous, Mild
[Inflammation TGLS = 3-3A]			
* Mammary Gland		Fibroadenoma	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Thyroid Gland	C Cell	Adenoma	
	C Cell	Hyperplasia	Moderate
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 134	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32472
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Ovary	* Parathyroid Gland	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Degeneration Hypertrophy Pheochromocytoma Complex	Cystic, Mild Mild
* Adrenal Medulla		Cardiomyopathy	Mild
* Heart		Nephropathy	Mild
* Kidney		Basophilic Focus Hepatodiaphragmatic Nodule	
* Liver			
[Hepatodiaphragmatic Nodule TGLS = 9-4]			
* Lung	Alveolar Epith	Hyperplasia	Mild
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 2-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 6-8]			
* Skin	Subcut Tiss	Fibroma	
[Fibroma TGLS = 1-11]			
* Spleen			
Note: The "granular" spleen noted at necropsy was within normal limits microscopically.			
* Thyroid Gland	C Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 134	TRT#: 2	SEX: Female	DAY ON TEST: 734
	DOSE: CONTROL	DISP: Terminal Sacrifice	HISTO: 32472
ORGAN AND ACCOUNTABLE SITE STATUS			
[Adenoma TGLS = 3-2]			
* Uterus		Polyp Stromal	Multiple
[Polyp Stromal TGLS = 8-8]			
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 135	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32473
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Clear Cell Focus	
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,2-11+12+13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 136	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32474
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Clitoral Gland		Adenoma	
[Adenoma TGLS = 1-7]			
* Heart		Cardiomyopathy	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Lung		Inflammation	Granulomatous, Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Stomach, Forestomach		Mineralization	Minimal
[Mineralization TGLS = 3-11]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:02

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 137	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 664 HISTO: 32475
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
OBSERVATIONS			
* Clitoral Gland [Carcinoma TGLS = 1,2-12+7+11]	Bilateral	Carcinoma	
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Clear Cell Focus	
		Inflammation	Granulomatous, Minimal
[Inflammation TGLS = 6-4]			
* Lung		Inflammation	Granulomatous, Minimal
[Inflammation TGLS = 7-3A]			
* Mammary Gland [Fibroadenoma TGLS = 3-13]		Fibroadenoma	
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 4-14]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
		Inflammation	Suppurative, Minimal
* Pituitary Gland [Adenoma TGLS = 5-8]	Pars Distalis	Adenoma	
* Spleen		Hematopoietic Cell Proliferation	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Clitoral Gland Bilateral Carcinoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 138	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 678 HISTO: 32476
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Mild
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney		Nephropathy	Minimal
* Liver		Degeneration	Fatty, Mild
* Mammary Gland [Fibroadenoma TGLS = 1-11+12]		Fibroadenoma	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland [Adenoma TGLS = 2-8]	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 139	TRT#: 2	SEX: Female	DAY ON TEST: 735
	DOSE: CONTROL	DISP: Terminal Sacrifice	HISTO: 32477
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
MISSING			
* Lymph Node, Mediastinal			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Bone		Sarcoma	
[Sarcoma TGLS = 1-11]			
* Kidney		Nephropathy	Moderate
* Liver		Basophilic Focus	
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 140	TRT#: 2	SEX: Female	DAY ON TEST: 735
	DOSE: CONTROL	DISP: Terminal Sacrifice	HISTO: 32478
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			
MISSING			
* Lymph Node, Mediastinal			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Mixed Cell Focus	
[Mixed Cell Focus TGLS = 4,5,7-4+12]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11+14]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Ovary		Cyst	Mild
[Cyst TGLS = 3-7]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Skin	Pinna, Subcut Tiss	Melanoma Malignant	
[Melanoma Malignant TGLS = 6-13]			
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:02
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 141	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32479
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Bone		Hyperostosis	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11+12+13+14+15]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 142	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Natural Death	DAY ON TEST: 720 HISTO: 32480
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Trachea	* Urinary Bladder		
MISSING			
* Lymph Node, Mediastinal	* Thymus		
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Minimal
* Heart		Cardiomyopathy	Mild
* Intestine Large, Colon		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Mixed Cell Focus	
[Mixed Cell Focus TGLS = 5,6,8-4+11]			
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,3-13+14]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 7-15]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Stomach, Glandular		Necrosis	Mild
* Thyroid Gland	C Cell	Carcinoma	
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 4-12]			
PRIMARY CAUSE OF DEATH	- Mammary Gland Fibroadenoma		
CONTRIBUTORY CAUSE OF DEATH	- Uterus Polyp Stromal		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 142	TRT#: 2	SEX: Female	DAY ON TEST: 720
	DOSE: CONTROL	DISP: Natural Death	HISTO: 32480

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 143	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 390 HISTO: 32481
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Mild
* Kidney		Nephropathy	Minimal
* Lung	Mediastinum	Plasma Cell Tumor Malignant	Metastatic (Lymph Node, Mediastinal)
		Plasma Cell Tumor Malignant	Metastatic (Lymph Node, Mediastinal)
[Plasma Cell Tumor Malignant TGLS = 3-3+12]			
[Plasma Cell Tumor Malignant TGLS = 4-2+11]			
* Lymph Node, Mediastinal		Plasma Cell Tumor Malignant	
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Stomach, Forestomach		Necrosis	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Lung Plasma Cell Tumor Malignant Lymph Node, Mediastinal		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 144	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32482
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
OBSERVATIONS			
* Bone		Hyperostosis	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Eosinophilic Focus	
[Basophilic Focus TGLS = 1-4]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 145	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 552 HISTO: 32483
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Moderate
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-13]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-6+14]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Ovary		Cyst	Mild
[Cyst TGLS = 3-7]			
* Pancreas		Atrophy	Mild
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 145	TRT#: 2	SEX: Female	DAY ON TEST: 552
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 32483
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-11]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Urinary Bladder		Leukemia Mononuclear	
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 4-8]			
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 146	TRT#: 2	SEX: Female	DAY ON TEST: 705
	DOSE: CONTROL	DISP: Natural Death	HISTO: 32484
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Liver	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			
AUTO PRECLUDES DIAG.			
* Intestine Small, Ileum			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
Note: "Granular" appearance noted at necropsy was artifact of post mortem autolysis.			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 2-11+12]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 147	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 608 HISTO: 32485
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Parathyroid Gland	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Uterus		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Hypertrophy	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
		Leukemia Mononuclear	
* Bone		Hyperostosis	Moderate
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Degeneration	Fatty, Mild
		Eosinophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Mild
		Regeneration	Marked
	[Leukemia Mononuclear TGLS = 5-4+12]		
* Lung		Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 1-3+3A+11]		
Lymph Node	Pancreatic	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
	[Leukemia Mononuclear TGLS = 6-15]		
	[Leukemia Mononuclear TGLS = 4-14]		
* Lymph Node, Bronchial		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 147	TRT#: 2	SEX: Female	DAY ON TEST: 608
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 32485
ORGAN AND ACCOUNTABLE SITE STATUS			
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Ovary		Leukemia Mononuclear	
* Pancreas		Atrophy	Mild
		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 2-8]			
* Salivary Glands		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-13]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Urinary Bladder		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 148	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32486
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mesenteric	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
MISSING			
* Lymph Node, Mandibular	* Lymph Node, Mediastinal		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Basophilic Focus	
		Clear Cell Focus	
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-4]			
* Lung		Leukemia Mononuclear	
* Mammary Gland		Inflammation	Chronic, Mild
[Inflammation TGLS = 1-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-4]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 149	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32487
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus
INSUFFICIENT TISSUE			
* Intestine Large, Rectum			
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Mild
* Clitoral Gland		Adenoma	
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Eosinophilic Focus	
		Hepatodiaphragmatic Nodule	
[Eosinophilic Focus TGLS = 5-4]			
[Hepatodiaphragmatic Nodule TGLS = 4-11]			
* Lung		Inflammation	Granulomatous, Minimal
* Mammary Gland		Carcinoma	
		Fibroadenoma	
[Carcinoma TGLS = 3-13]			
[Fibroadenoma TGLS = 1-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 150	TRT#: 2 DOSE: CONTROL	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 648 HISTO: 32488
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Glandular	* Trachea	* Urinary Bladder	
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
Eye	Retina	Atrophy	Marked
[Cataract TGLS = 1-12]		Cataract	Marked
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Degeneration	Fatty, Mild
	Bile Duct	Hyperplasia	Minimal
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6,7-6+13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Ovary		Leukemia Mononuclear	
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 150	TRT#: 2	SEX: Female	DAY ON TEST: 648
	DOSE: CONTROL	DISP: Moribund Sacrifice	HISTO: 32488
ORGAN AND ACCOUNTABLE SITE STATUS			
[Hyperplasia TGLS = 2-8]			
* Spleen		Leukemia Mononuclear Necrosis	Mild
[Leukemia Mononuclear TGLS = 3-11]			
[Necrosis TGLS = 4-11]			
* Stomach, Forestomach		Necrosis	Moderate
[Necrosis TGLS = 9-8+14]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Uterus		Leukemia Mononuclear Polyp Stromal	
[Polyp Stromal TGLS = 8-8]			
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 301	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 496 HISTO: 32739
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	* Uterus
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-1]			
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12+13+14]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Ovary		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 2-8]			
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 301	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 496 HISTO: 32739
ORGAN AND ACCOUNTABLE SITE STATUS			
[Leukemia Mononuclear TGLS = 3-11]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 302	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 548 HISTO: 32740
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Kidney	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Thrombosis	Mild
* Bone Marrow			
Note: "Pale" bone marrow was due to anemia secondary to large subcutaneous neoplasm.			
* Liver		Basophilic Focus	
	Centrilobular	Necrosis	Moderate
[Necrosis TGLS = 3-4]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Thrombosis	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-8]			
* Skin	Subcut Tiss	Sarcoma	
[Sarcoma TGLS = 1-11]			
* Spleen		Hematopoietic Cell Proliferation	Mild
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Skin Subcut Tiss Sarcoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 303	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 722 HISTO: 32741
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder
* Uterus			
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Minimal
		Leukemia Mononuclear	
		Mixed Cell Focus	
		Regeneration	Moderate
[Leukemia Mononuclear TGLS = 4-4]			
[Mixed Cell Focus TGLS = 9-4]			
[Regeneration TGLS = 5,6-4+11]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 7-13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Ovary		Cyst	Marked

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 303	TRT#: 4	SEX: Female	DAY ON TEST: 722
	DOSE: 500 PPM	DISP: Moribund Sacrifice	HISTO: 32741
ORGAN AND ACCOUNTABLE SITE STATUS			
[Cyst TGLS = 2-7]			
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-12]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		
CONTRIBUTORY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 304	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 708 HISTO: 32742
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Lymph Node, Mandibular		Infiltration Cellular	Plasma Cell, Mild
[Infiltration Cellular TGLS = 1-7]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 3-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Skin	Subcut Tiss	Sarcoma	
[Sarcoma TGLS = 2-11]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate
PRIMARY CAUSE OF DEATH	- Skin Subcut Tiss Sarcoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 305	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Accidentally Killed	DAY ON TEST: 13 HISTO: 32743
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Kidney
* Larynx	* Liver	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus
MISSING			
* Lymph Node, Bronchial	* Lymph Node, Mandibular		
OBSERVATIONS			
* Lung	Alveolus	Infiltration Cellular	Histiocyte, Mild
* Nose			
Note: There were no microscopic findings to account for the "lesion, 4mm dia, red" and "deformity" noted at necropsy.			
PRIMARY CAUSE OF DEATH	- UNCERTAIN		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 306	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32744
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder
* Uterus			
OBSERVATIONS			
Eye	Retina	Atrophy Cataract	Moderate Moderate
[Cataract TGLS = 1-13]			
* Kidney		Leukemia Mononuclear Nephropathy	Mild
* Liver		Basophilic Focus Clear Cell Focus Hepatodiaphragmatic Nodule Leukemia Mononuclear	
[Hepatodiaphragmatic Nodule TGLS = 5-11]			
[Leukemia Mononuclear TGLS = 4-4+11]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 3-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Basophilic Focus	
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 306	TRT#: 4	SEX: Female	DAY ON TEST: 733
	DOSE: 500 PPM	DISP: Terminal Sacrifice	HISTO: 32744
ORGAN AND ACCOUNTABLE SITE STATUS			
* Spleen		Leukemia Mononuclear	
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 307	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32745
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Larynx
* Ovary	* Pancreas	* Parathyroid Gland	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Moderate
		Hypertrophy	Minimal
* Clitoral Gland		Adenoma	
* Heart		Cardiomyopathy	Mild
* Islets, Pancreatic		Hyperplasia	Mild
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Clear Cell Focus	
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 4-13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
* Salivary Glands		Atrophy	Mild
* Spleen		Fibrosis	Minimal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 307	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32745
ORGAN AND ACCOUNTABLE SITE STATUS			
[Fibrosis TGLS = 3-11] [Leukemia Mononuclear TGLS = 2-11]		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 308	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Natural Death	DAY ON TEST: 719 HISTO: 32746
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Islets, Pancreatic	* Larynx	* Liver	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		
MISSING			
* Lymph Node, Mediastinal			
AUTO PRECLUDES DIAG.			
* Intestine Small, Ileum	* Intestine Small, Jejunum		
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Mild
* Adrenal Medulla		Hyperplasia	Minimal
* Bone		Hyperostosis	Minimal
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Lung	Alveolar Epith	Hyperplasia	Minimal
[Hyperplasia TGLS = 6-3A]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 3-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Hyperplasia	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2,5-8+1]			
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 309	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 662 HISTO: 32747
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Clitoral Gland
Ear	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Small, Ileum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Degeneration	Fatty, Mild
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Mild
[Leukemia Mononuclear TGLS = 4-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-14]			
Mesentery	Fat	Necrosis	Moderate
[Necrosis TGLS = 5-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 309	TRT#: 4	SEX: Female	DAY ON TEST: 662
	DOSE: 500 PPM	DISP: Moribund Sacrifice	HISTO: 32747
ORGAN AND ACCOUNTABLE SITE STATUS			
		Thrombosis	Minimal
* Ovary		Leukemia Mononuclear	
* Pancreas		Atrophy	Mild
		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Urinary Bladder		Leukemia Mononuclear	
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 3-13]			
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 310	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32748
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Liver
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Parathyroid Gland	* Salivary Glands	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Mild
* Kidney		Nephropathy	Mild
* Lung		Fibrosarcoma	Metastatic (Skin)
	Alveolar Epith	Hyperplasia	Minimal
* Mammary Gland		Carcinoma	
[Carcinoma TGLS = 2-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Ovary		Cyst	Marked
[Cyst TGLS = 3-7]			
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Skin	Subcut Tiss	Fibrosarcoma	
[Fibrosarcoma TGLS = 4-11]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 311	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 440 HISTO: 32749
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Kidney
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
Eye	Retina	Atrophy	Moderate
		Cataract	Moderate
[Cataract TGLS = 4-15]			
* Liver		Basophilic Focus	
		Clear Cell Focus	
		Hepatodiaphragmatic Nodule	
[Hepatodiaphragmatic Nodule TGLS = 3-14]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11+12+13]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 2-16]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Mammary Gland Fibroadenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 312	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32750
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	
MISSING			
* Lymph Node, Bronchial	* Lymph Node, Mandibular		
INSUFFICIENT TISSUE			
* Intestine Large, Rectum			
OBSERVATIONS			
* Adrenal Cortex		Degeneration Hyperplasia	Cystic, Mild Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus Clear Cell Focus Eosinophilic Focus	
[Eosinophilic Focus TGLS = 3-11]			
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,2-12+13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Uterus		Polyp Stromal	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 313

TRT#: 4

SEX: Female

DAY ON TEST: 608

DOSE: 500 PPM

DISP: Natural Death

HISTO: 32751

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	

MISSING

* Lymph Node, Bronchial

INSUFFICIENT TISSUE

* Intestine Large, Rectum

OBSERVATIONS

* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Mild
		Leukemia Mononuclear	
* Lung			
	[Leukemia Mononuclear TGLS = 2,3-3]		
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
	[Fibroadenoma TGLS = 1-11]		
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Thrombosis	Marked
* Ovary		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 313	TRT#: 4	SEX: Female	DAY ON TEST: 608
	DOSE: 500 PPM	DISP: Natural Death	HISTO: 32751
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pancreas		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-12]			
* Pituitary Gland	Pars Distalis	Hyperplasia	Marked
		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-12]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 314	TRT#: 4	SEX: Female	DAY ON TEST: 734
	DOSE: 500 PPM	DISP: Terminal Sacrifice	HISTO: 32752
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			
MISSING			
* Lymph Node, Bronchial			
INSUFFICIENT TISSUE			
* Clitoral Gland			
OBSERVATIONS			
* Bone		Hyperostosis	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Moderate
* Liver		Basophilic Focus	
		Clear Cell Focus	
* Lung	Alveolar Epith	Hyperplasia	Mild
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 2-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 315

TRT#: 4

SEX: Female

DAY ON TEST: 734

DOSE: 500 PPM

DISP: Terminal Sacrifice

HISTO: 32753

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Uterus	

OBSERVATIONS

* Adrenal Cortex		Adenoma	
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone		Hyperostosis	Minimal
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Basophilic Focus	
		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Mild
	[Hepatodiaphragmatic Nodule TGLS = 8-4]		
	[Leukemia Mononuclear TGLS = 7-4]		
* Lung		Leukemia Mononuclear	
Lymph Node	Iliac	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
		Leukemia Mononuclear	
Note: Lymph node with no site listed was axillary node.			
* Lymph Node, Bronchial		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 315	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32753
ORGAN AND ACCOUNTABLE SITE STATUS			
* Lymph Node, Mandibular [Leukemia Mononuclear TGLS = 6-7]		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric [Leukemia Mononuclear TGLS = 10-6]		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Ovary		Leukemia Mononuclear	
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
* Spleen [Fibrosis TGLS = 2-11] [Leukemia Mononuclear TGLS = 1-11]		Fibrosis Leukemia Mononuclear	Mild
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Urinary Bladder		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 316	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 565 HISTO: 32754
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Small, Duodenum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Mammary Gland	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Glandular	* Trachea	
INSUFFICIENT TISSUE			
* Intestine Large, Rectum			
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Minimal
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Colon		Leukemia Mononuclear	
* Intestine Small, Ileum		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
[Leukemia Mononuclear TGLS = 9-15]			
* Liver		Degeneration	Fatty, Mild
		Hepatodiaphragmatic Nodule	
		Leukemia Mononuclear	
[Hepatodiaphragmatic Nodule TGLS = 5-11]			
[Leukemia Mononuclear TGLS = 6-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Iliac	Leukemia Mononuclear	
	Pancreatic	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
		Leukemia Mononuclear	
Note: Lymph node with no site listed was axillary node.			
[Leukemia Mononuclear TGLS = 8-19]			
[Leukemia Mononuclear TGLS = 7-18]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 316	TRT#: 4	SEX: Female	DAY ON TEST: 565
	DOSE: 500 PPM	DISP: Moribund Sacrifice	HISTO: 32754
ORGAN AND ACCOUNTABLE SITE STATUS			
[Leukemia Mononuclear TGLS = 14-20]			
[Leukemia Mononuclear TGLS = 10-14]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-7]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 12-16]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Inflammation	Suppurative, Minimal
	Respirat Epith	Metaplasia	Squamous, Minimal
* Ovary		Leukemia Mononuclear	
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 11,13-12+13]			
* Stomach, Forestomach		Necrosis	Mild
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Urinary Bladder		Leukemia Mononuclear	
* Uterus		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 317	TRT#: 4	SEX: Female	DAY ON TEST: 603
	DOSE: 500 PPM	DISP: Natural Death	HISTO: 32755
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	Eye
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Islets, Pancreatic	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
MISSING			
* Lymph Node, Bronchial			
AUTO PRECLUDES DIAG.			
* Intestine Small, Ileum	* Intestine Small, Jejunum		
OBSERVATIONS			
Eye			
Note: "Cornea, focus, 1mm dia, white" was not apparent microscopically.			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Degeneration	Fatty, Minimal
		Mixed Cell Focus	
[Mixed Cell Focus TGLS = 3-11]			
* Lung		Inflammation	Granulomatous, Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Thyroid Gland	C Cell	Carcinoma	
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 318	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 494 HISTO: 32756
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Thymus	* Trachea	* Urinary Bladder	* Uterus
OBSERVATIONS			
* Kidney		Nephropathy	Mild
* Liver		Degeneration	Fatty, Moderate
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Stomach, Forestomach		Necrosis	Marked
[Necrosis TGLS = 4-11]			
* Stomach, Glandular		Necrosis	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 319	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 688 HISTO: 32757
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Mammary Gland	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Glandular
* Trachea	* Urinary Bladder	* Uterus	
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
		Stromal Nephroma	
[Stromal Nephroma TGLS = 4-5]			
* Liver		Degeneration	Fatty, Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Basophilic Focus	
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8+1]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]			
* Stomach, Forestomach		Necrosis	Mild
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 319

TRT#: 4

SEX: Female

DAY ON TEST: 688

DOSE: 500 PPM

DISP: Moribund Sacrifice

HISTO: 32757

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH

- Pituitary Gland Pars Distalis Adenoma

CONTRIBUTORY CAUSE OF DEATH

- Spleen Leukemia Mononuclear

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 320	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32758
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Adenoma	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Ovary		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
		Leukemia Mononuclear	
[Hyperplasia TGLS = 2-8]			
* Skin			
Note: NO CORRELATING LESION FOR TGL 1-12.			
* Spleen		Accessory Spleen	
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 320	TRT#: 4	SEX: Female	DAY ON TEST: 734
	DOSE: 500 PPM	DISP: Terminal Sacrifice	HISTO: 32758
ORGAN AND ACCOUNTABLE SITE STATUS			
[Accessory Spleen TGLS = 4-11]			
[Leukemia Mononuclear TGLS = 3-11]			
* Thyroid Gland	Follicular Cel	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 321

TRT#: 4

SEX: Female

DAY ON TEST: 692

DOSE: 500 PPM

DISP: Moribund Sacrifice

HISTO: 32759

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla
* Clitoral Gland
* Intestine Large, Rectum
* Islets, Pancreatic
* Lymph Node, Mesenteric
* Pituitary Gland
* Stomach, Glandular

* Bone
* Esophagus
* Intestine Small, Duodenum
* Larynx
* Mammary Gland
* Salivary Glands
* Thymus

* Bone Marrow
* Intestine Large, Cecum
* Intestine Small, Ileum
* Lymph Node, Mandibular
* Ovary
* Skin
* Trachea

* Brain
* Intestine Large, Colon
* Intestine Small, Jejunum
* Lymph Node, Mediastinal
* Pancreas
* Spleen
* Urinary Bladder

MISSING

* Lymph Node, Bronchial

* Parathyroid Gland

OBSERVATIONS

* Adrenal Cortex
* Heart
* Kidney
* Liver

[Carcinoma TGLS = 6-4]
[Mixed Cell Focus TGLS = 5-4]

* Lung
[Inflammation TGLS = 4-3+3A]

* Nose
* Stomach, Forestomach
[Necrosis TGLS = 7-11]

* Thyroid Gland
Note: Carcinoma also invaded larynx & trachea and adjacent muscle.
[Carcinoma TGLS = 3-2]

* Uterus

Olfactory Epi

C Cell

Hyperplasia
Cardiomyopathy
Nephropathy
Carcinoma
Mixed Cell Focus

Inflammation

Degeneration
Necrosis

Carcinoma

Polyp Stromal

Mild
Minimal
Minimal
Metastatic (Thyroid Gland)

Suppurative, Moderate

Hyaline, Mild
Moderate

PRIMARY CAUSE OF DEATH

- Thyroid Gland C Cell Carcinoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 322	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 688 HISTO: 32760
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Uterus		
MISSING			
* Lymph Node, Bronchial	* Urinary Bladder		
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone		Hyperostosis	Minimal
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Basophilic Focus	
		Degeneration	Fatty, Mild
		Eosinophilic Focus	
		Hepatodiaphragmatic Nodule	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Basophilic Focus TGLS = 4-13]			
[Eosinophilic Focus TGLS = 3-13]			
[Hepatodiaphragmatic Nodule TGLS = 5-12]			
[Leukemia Mononuclear TGLS = 2-4]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 322	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 688 HISTO: 32760
ORGAN AND ACCOUNTABLE SITE STATUS			
* Mammary Gland [Fibroadenoma TGLS = 9-11]		Fibroadenoma	
Mesentery [Necrosis TGLS = 7-15]	Fat	Necrosis	Mild
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Ovary [Cyst TGLS = 8-7]		Cyst	Minimal
* Pancreas		Atrophy	Minimal
* Pituitary Gland [Adenoma TGLS = 1-8]	Pars Distalis	Adenoma Leukemia Mononuclear	
* Spleen [Leukemia Mononuclear TGLS = 6-14]		Leukemia Mononuclear	
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 323	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 664 HISTO: 32761
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Mammary Gland	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
MISSING			
* Lymph Node, Bronchial	* Lymph Node, Mediastinal		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Moderate
* Liver		Mixed Cell Focus	
[Mixed Cell Focus TGLS = 3-4]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 324	TRT#: 4	SEX: Female	DAY ON TEST: 734
	DOSE: 500 PPM	DISP: Terminal Sacrifice	HISTO: 32762
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	Tongue	* Trachea
* Urinary Bladder	* Uterus		
MISSING			
* Lymph Node, Mandibular	* Lymph Node, Mediastinal		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Minimal
		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Clear Cell Focus	
		Eosinophilic Focus	
[Eosinophilic Focus TGLS = 3-13]			
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,2-11+12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Mild
Tongue			
Note: "Focus, 1mm dia, pale" noted at necropsy was not apparent microscopically.			
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 325	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32763
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Bone Marrow		Atrophy	Minimal
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Hepatodiaphragmatic Nodule	
[Hepatodiaphragmatic Nodule TGLS = 1-4]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Stomach, Forestomach		Hyperplasia	Basal Cell, Mild
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 326	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 534 HISTO: 32764
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11+12+13+14]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Mammary Gland Fibroadenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 327	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 716 HISTO: 32765
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
OBSERVATIONS			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Clear Cell Focus	
		Eosinophilic Focus	
[Eosinophilic Focus TGLS = 3-11]			
* Lung		Inflammation	Granulomatous, Minimal
[Inflammation TGLS = 1-3A]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8+1]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 328	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32766
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Hypertrophy	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone		Hyperostosis	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Basophilic Focus	
		Hepatodiaphragmatic Nodule	
		Leukemia Mononuclear	
[Hepatodiaphragmatic Nodule TGLS = 1-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Galactoceles	Moderate
[Galactoceles TGLS = 2-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 328	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32766
ORGAN AND ACCOUNTABLE SITE STATUS			
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 329	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 580 HISTO: 32767
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Glandular
* Trachea	* Urinary Bladder	* Uterus	
MISSING			
* Thymus			
OBSERVATIONS			
* Bone		Hyperostosis	Moderate
* Kidney		Nephropathy	Mild
* Liver		Degeneration	Fatty, Moderate
[Degeneration TGLS = 3,4-11+12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Stomach, Forestomach		Necrosis	Mild
[Necrosis TGLS = 5-13+8]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 330	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32768
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
OBSERVATIONS			
* Clitoral Gland		Adenoma	
[Adenoma TGLS = 2-11]			
* Heart		Cardiomyopathy	Minimal
* Kidney	Renal Tubule	Hyperplasia	Moderate
		Nephropathy	Moderate
* Liver		Basophilic Focus	
[Mixed Cell Focus TGLS = 3-4]		Mixed Cell Focus	
* Lung		Inflammation	Granulomatous, Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 6-8]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 331

TRT#: 4

SEX: Female

DAY ON TEST: 734

DOSE: 500 PPM

DISP: Terminal Sacrifice

HISTO: 32769

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Bone Marrow	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Clitoral Gland		Adenoma	
[Adenoma TGLS = 1-11]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Liver		Angiectasis	Minimal
		Basophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Mixed Cell Focus	
* Lung	Alveolar Epith	Hyperplasia	Mild
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Mild
		Basophilic Focus	
* Pituitary Gland	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Adenoma	
[Adenoma TGLS = 2-2]			

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 332	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Natural Death	DAY ON TEST: 718 HISTO: 32770
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 3-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Thyroid Gland	Follicular Cel	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 333

TRT#: 4

SEX: Female

DAY ON TEST: 573

DOSE: 500 PPM

DISP: Moribund Sacrifice

HISTO: 32771

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

Eye	Retina	Atrophy	Marked
		Cataract	Marked
[Cataract TGLS = 1-15]			
* Kidney		Nephropathy	Minimal
* Liver		Angiectasis	Mild
		Basophilic Focus	
		Degeneration	Fatty, Minimal
[Angiectasis TGLS = 2-12]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 4-16+17+18+19+20+21]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 3-13]			

PRIMARY CAUSE OF DEATH

- Mammary Gland Fibroadenoma

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 334	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32772
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			
OBSERVATIONS			
* Bone		Hyperostosis	Mild
* Heart		Cardiomyopathy	Minimal
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Eosinophilic Focus	
* Lung		Adenoma	
		Inflammation	Granulomatous, Minimal
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 1-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Uterus		Polyp Stromal	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 335	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Natural Death	DAY ON TEST: 630 HISTO: 32773
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
AUTO PRECLUDES DIAG.			
* Intestine Large, Cecum	* Intestine Small, Ileum	* Intestine Small, Jejunum	
OBSERVATIONS			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Lung	Alveolar Epith	Hyperplasia	Moderate
* Mammary Gland [Fibroadenoma TGLS = 1-7+11]		Fibroadenoma	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Mild
* Pituitary Gland [Adenoma TGLS = 2-8]	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Carcinoma	
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 336	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 534 HISTO: 32774
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
MISSING			
* Lymph Node, Bronchial	* Lymph Node, Mediastinal		
OBSERVATIONS			
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Atrophy	Mild
		Basophilic Focus	
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 337	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 701 HISTO: 32775
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Mixed Cell Focus	
[Mixed Cell Focus TGLS = 3-11]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 2-13+14]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 338	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 714 HISTO: 32776
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Mixed Cell Focus	
[Basophilic Focus TGLS = 6-4]			
[Mixed Cell Focus TGLS = 5-4]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 4-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 339	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32777
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Parathyroid Gland	* Salivary Glands	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Hypertrophy	Mild
* Adrenal Medulla		Hyperplasia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Skin		Cyst Epithelial Inclusion	
[Cyst Epithelial Inclusion TGLS = 1-11]			
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 340	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 621 HISTO: 32778
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Glandular	* Trachea	* Urinary Bladder
* Uterus			
MISSING			
* Lymph Node, Bronchial	* Thymus		
OBSERVATIONS			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Liver		Mixed Cell Focus	
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Stomach, Forestomach		Necrosis	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 341	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 635 HISTO: 32779
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder	* Uterus	
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Atrophy Leukemia Mononuclear	Marked
[Atrophy TGLS = 3-5]			
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Inflammation	Acute, Marked
[Inflammation TGLS = 5-6]			
* Intestine Large, Colon		Inflammation	Acute, Moderate
* Intestine Small, Ileum		Inflammation	Acute, Mild
* Intestine Small, Jejunum		Inflammation	Acute, Moderate
[Inflammation TGLS = 4-6]			
* Kidney		Leukemia Mononuclear Nephropathy	Minimal
* Liver	Bile Duct	Angiectasis Hyperplasia Leukemia Mononuclear	Minimal Minimal Minimal
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-3+3A]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 341	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 635 HISTO: 32779
ORGAN AND ACCOUNTABLE SITE STATUS			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen [Leukemia Mononuclear TGLS = 6-11]		Leukemia Mononuclear	
		Leukemia Mononuclear	
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 342	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 216 HISTO: 32780
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Kidney
* Larynx	* Lung	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Nose	* Ovary	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		
MISSING			
* Lymph Node, Bronchial	* Lymph Node, Mandibular		
OBSERVATIONS			
* Liver		Mitotic Alteration	Marked
* Skin	Subcut Tiss	Schwannoma Malignant	
[Schwannoma Malignant TGLS = 1-11+12+13+14]			
* Spleen		Hematopoietic Cell Proliferation	Marked
[Hematopoietic Cell Proliferation TGLS = 2-4]			
PRIMARY CAUSE OF DEATH	- Skin Subcut Tiss Schwannoma Malignant		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 343	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32781
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Trachea			
MISSING			
* Thymus			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Minimal
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Degeneration	Fatty, Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-2]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 8-6]			
* Mammary Gland		Fibroadenoma	Multiple
		Galactoceles	Mild
[Fibroadenoma TGLS = 1,5-11+15+13+17]			
[Galactocoele TGLS = 2-16]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 343	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32781
ORGAN AND ACCOUNTABLE SITE STATUS			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Atrophy	Mild
		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Angiectasis	Moderate
		Leukemia Mononuclear	
[Angiectasis TGLS = 3-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-14]			
* Stomach, Forestomach		Necrosis	Marked
* Stomach, Glandular		Necrosis	Moderate
[Necrosis TGLS = 9-8]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Urinary Bladder		Leukemia Mononuclear	
* Uterus		Polyp Stromal	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 344	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32782
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
OBSERVATIONS			
* Adrenal Cortex		Degeneration	Cystic, Mild
		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Lung	Alveolar Epith	Hyperplasia	Minimal
Lymph Node	Pancreatic	Ectasia	Mild
[Ectasia TGLS = 4-4]			
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,3-13+12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Uterus	Cervix	Hypertrophy	Mild
		Polyp Stromal	
[Hypertrophy TGLS = 5-11]			
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 345	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 420 HISTO: 32783
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Nose	* Pancreas	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	Vagina		
MISSING			
* Lymph Node, Bronchial	* Parathyroid Gland		
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Brain		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7,8-1]			
* Clitoral Gl			
Note: "Focus, 1mm dia, dark" noted at trim was not apparent microscopically.			
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
* Liver		Degeneration	Fatty, Moderate
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Ovary		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
		Leukemia Mononuclear	
[Hyperplasia TGLS = 2-8]			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 345	TRT#: 4	SEX: Female	DAY ON TEST: 420
	DOSE: 500 PPM	DISP: Moribund Sacrifice	HISTO: 32783
ORGAN AND ACCOUNTABLE SITE STATUS			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-4]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 5-8]			
Vagina			
Note: There was no microscopic finding to account for the "dilatation, 5mm dia" noted at trim.			
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 346	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 479 HISTO: 32784
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Mammary Gland
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
MISSING			
* Lymph Node, Mediastinal			
OBSERVATIONS			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
[Basophilic Focus TGLS = 2-4]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 3-8]			
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 347	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32785
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-4]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 348	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 455 HISTO: 32786
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Minimal
* Liver		Mixed Cell Focus	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland [Adenoma TGLS = 2-8]	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 349	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32787
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
MISSING			
* Pituitary Gland			
OBSERVATIONS			
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Clear Cell Focus	
* Mammary Gland		Carcinoma	
		Fibroadenoma	Multiple
[Carcinoma TGLS = 1-12]			
[Fibroadenoma TGLS = 2,3-13+11+14]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Ovary		Cyst	Mild
[Cyst TGLS = 5-7]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 350	TRT#: 4 DOSE: 500 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32788
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Hypertrophy	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Clear Cell Focus	
		Eosinophilic Focus	
		Mixed Cell Focus	
[Eosinophilic Focus TGLS = 1,2-11+12]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
		Inflammation	Granulomatous, Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 501	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32639
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Nose	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
		Regeneration	Mild
[Leukemia Mononuclear TGLS = 5-4]			
[Regeneration TGLS = 6-11]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-14]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 4-15]			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 501	TRT#: 6	SEX: Female	DAY ON TEST: 733
	DOSE: 2000 PPM	DISP: Terminal Sacrifice	HISTO: 32639
ORGAN AND ACCOUNTABLE SITE STATUS			
* Ovary		Leukemia Mononuclear	
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-12]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Uterus		Polyp Stromal	Multiple
[Polyp Stromal TGLS = 3-13]			
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 502	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 701 HISTO: 32640
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Angiectasis	Minimal
		Basophilic Focus	
		Degeneration	Fatty, Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Carcinoma	
[Carcinoma TGLS = 5-13]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 4-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Ovary		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 502	TRT#: 6	SEX: Female	DAY ON TEST: 701
	DOSE: 2000 PPM	DISP: Moribund Sacrifice	HISTO: 32640
ORGAN AND ACCOUNTABLE SITE STATUS			
		Leukemia Mononuclear	
[Adenoma TGLS = 1-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-11]			
* Stomach, Forestomach		Necrosis	Minimal
[Necrosis TGLS = 7-14]			
* Thyroid Gland	C Cell	Carcinoma	
[Carcinoma TGLS = 6-2]			
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		
CONTRIBUTORY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 503	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 522 HISTO: 32641
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Degeneration	Fatty, Moderate
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 1-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Ovary		Cyst	Mild
[Cyst TGLS = 3-7]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-8]			
* Stomach, Forestomach		Necrosis	Moderate
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 504	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32642
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Thymus	* Thyroid Gland	* Trachea
* Urinary Bladder	* Uterus		
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Clitoral Gland		Carcinoma	
[Carcinoma TGLS = 1-12]			
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Ovary		Cyst	Mild
		Leukemia Mononuclear	
[Cyst TGLS = 5-7]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-11]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 504	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32642
ORGAN AND ACCOUNTABLE SITE STATUS			
* Stomach, Glandular		Mineralization	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 505	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32943
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Mixed Cell Focus	
[Mixed Cell Focus TGLS = 5,6-13+12]			
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,2,7-11+16+17+15+14]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 4-8]			
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 506	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32644
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	* Uterus
MISSING			
* Thymus			
OBSERVATIONS			
* Adrenal Medulla		Pheochromocytoma Benign	
* Clitoral Gland		Adenoma	
[Adenoma TGLS = 2-14+7]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Clear Cell Focus	
Note: "Nodule, 3mm dia" noted at trim was normal variation in hepatic lobar morphology.			
* Lung		Inflammation	Granulomatous, Minimal
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,4-11+13+15]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Marked
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 507	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 706 HISTO: 32645
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Necrosis	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Liver		Angiectasis	Mild
		Basophilic Focus	
		Fibroadenoma	
* Mammary Gland [Fibroadenoma TGLS = 1-11+12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Atrophy	Minimal
		Basophilic Focus	
* Pituitary Gland [Adenoma TGLS = 3-8]	Pars Distalis	Adenoma	
* Spleen		Hematopoietic Cell Proliferation	Mild
* Stomach, Forestomach		Necrosis	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 508		TRT#: 6 DOSE: 2000 PPM		SEX: Female DISP: Terminal Sacrifice		DAY ON TEST: 733 HISTO: 32646	
ORGAN AND ACCOUNTABLE SITE STATUS							
NORMAL							
* Adrenal Cortex		* Bone Marrow		* Brain		* Clitoral Gland	
* Esophagus		* Intestine Large, Colon		* Intestine Large, Rectum		* Intestine Small, Duodenum	
* Intestine Small, Ileum		* Intestine Small, Jejunum		* Islets, Pancreatic		* Larynx	
* Lymph Node, Mediastinal		* Mammary Gland		* Ovary		* Pancreas	
* Parathyroid Gland		* Salivary Glands		* Stomach, Forestomach		* Stomach, Glandular	
* Thymus		* Trachea		* Urinary Bladder			
OBSERVATIONS							
* Adrenal Medulla				Pheochromocytoma Benign			
* Bone				Hyperostosis		Mild	
Eye		Retina		Atrophy		Marked	
[Cataract TGLS = 2-12]				Cataract		Moderate	
* Heart				Cardiomyopathy		Minimal	
				Leukemia Mononuclear			
* Intestine Large, Cecum				Parasite Metazoan			
* Kidney				Leukemia Mononuclear			
				Nephropathy		Mild	
* Liver				Basophilic Focus			
				Leukemia Mononuclear			
* Lung		Alveolar Epith		Hyperplasia		Mild	
		Bronchiole		Hyperplasia		Mild	
[Hyperplasia TGLS = 4-3A]				Leukemia Mononuclear			
* Lymph Node, Bronchial				Leukemia Mononuclear			
* Lymph Node, Mandibular				Leukemia Mononuclear			
* Lymph Node, Mesenteric				Leukemia Mononuclear			
* Nose		Olfactory Epi		Degeneration		Hyaline, Moderate	
* Pituitary Gland		Pars Distalis		Hyperplasia		Mild	
* Skin				Squamous Cell Papilloma			
[Squamous Cell Papilloma TGLS = 1-11]							

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 508	TRT#: 6	SEX: Female	DAY ON TEST: 733
	DOSE: 2000 PPM	DISP: Terminal Sacrifice	HISTO: 32646
ORGAN AND ACCOUNTABLE SITE STATUS			
* Spleen		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 3-8]			
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 509	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32647
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Minimal
* Bone		Hyperostosis	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
[Basophilic Focus TGLS = 4-4+15]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
		Inflammation	Granulomatous, Minimal
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,2-11+12+13+14]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Inflammation	Suppurative, Minimal
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 3-17]			
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 510	TRT#: 6	SEX: Female	DAY ON TEST: 734
	DOSE: 2000 PPM	DISP: Terminal Sacrifice	HISTO: 32648

ORGAN AND ACCOUNTABLE SITE STATUS

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

MISSING			
* Lymph Node, Mediastinal			

OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Hypertrophy	Mild
* Bone		Hyperostosis	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Clear Cell Focus	
		Eosinophilic Focus	
		Mixed Cell Focus	Moderate
[Basophilic Focus TGLS = 6-13]			
[Eosinophilic Focus TGLS = 5-12]			
[Mixed Cell Focus TGLS = 4-11]			
* Lung		Inflammation	Granulomatous, Minimal
* Mammary Gland		Adenoma	
[Adenoma TGLS = 2-14]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Atrophy	Minimal
		Hyperplasia	Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 510	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32648
ORGAN AND ACCOUNTABLE SITE STATUS			
* Thyroid Gland * Uterus [Polyp Stromal TGLS = 3-8]	C Cell	Adenoma Polyp Stromal	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 511	TRT#: 6	SEX: Female	DAY ON TEST: 734
	DOSE: 2000 PPM	DISP: Terminal Sacrifice	HISTO: 32649

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL			
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Mediastinal	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder	* Uterus		

MISSING			
* Thymus			

OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone		Hyperostosis	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
* Lung		Inflammation	Granulomatous, Minimal
		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11+12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Spleen		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 511	TRT#: 6	SEX: Female	DAY ON TEST: 734
	DOSE: 2000 PPM	DISP: Terminal Sacrifice	HISTO: 32649
ORGAN AND ACCOUNTABLE SITE STATUS			
[Leukemia Mononuclear TGLS = 3-13]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 512	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32650
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Angiectasis	Mild
		Basophilic Focus	
		Leukemia Mononuclear	
		Necrosis	Mild
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Carcinoma	
		Fibroadenoma	
[Fibroadenoma TGLS = 1-11+12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-13]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 513	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32651
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
OBSERVATIONS			
* Adrenal Cortex		Degeneration Hyperplasia	Cystic, Mild Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Moderate
* Liver		Basophilic Focus	
Note: "Focus, 2mm dia, dark" noted at necropsy was blood pooled in normal hepatic vasculature.			
* Lung		Carcinoma	Metastatic (Thyroid Gland)
* Nose	Olfactory Epi	Degeneration Inflammation	Hyaline, Moderate Suppurative, Mild
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Thyroid Gland	C Cell	Carcinoma	
[Carcinoma TGLS = 1-2]			
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 514	TRT#: 6	SEX: Female	DAY ON TEST: 734
	DOSE: 2000 PPM	DISP: Terminal Sacrifice	HISTO: 32652
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus
MISSING			
* Lymph Node, Mediastinal			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 4-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 515	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32653
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Clitoral Gland		Adenoma	
[Adenoma TGLS = 1-14]			
Eye	Retina	Atrophy	Marked
[Cataract TGLS = 3-17]		Cataract	Marked
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Basophilic Focus	
		Eosinophilic Focus	
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-4]		Regeneration	Moderate
[Regeneration TGLS = 8-12]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 2-11+15+16]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 515	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32653
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pituitary Gland [Adenoma TGLS = 4-8]	Pars Distalis	Adenoma	
* Spleen [Fibrosis TGLS = 6-13] [Leukemia Mononuclear TGLS = 5-4]		Fibrosis Leukemia Mononuclear	Mild
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 516

TRT#: 6

SEX: Female

DAY ON TEST: 734

DOSE: 2000 PPM

DISP: Terminal Sacrifice

HISTO: 32654

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Adrenal Medulla
* Esophagus
* Intestine Small, Ileum
* Lung
* Lymph Node, Mesenteric
* Skin
* Thymus
* Uterus

* Bone
* Intestine Large, Cecum
* Intestine Small, Jejunum
* Lymph Node, Bronchial
* Ovary
* Spleen
* Thyroid Gland

* Bone Marrow
* Intestine Large, Colon
* Islets, Pancreatic
* Lymph Node, Mandibular
* Parathyroid Gland
* Stomach, Forestomach
* Trachea

* Brain
* Intestine Small, Duodenum
* Larynx
* Lymph Node, Mediastinal
* Salivary Glands
* Stomach, Glandular
* Urinary Bladder

INSUFFICIENT TISSUE

* Intestine Large, Rectum

OBSERVATIONS

* Adrenal Cortex
* Clitoral Gland
[Adenoma TGLS = 3-11]
* Heart
* Kidney
* Liver

* Mammary Gland
[Fibroadenoma TGLS = 1,2-12+13+14]

* Nose
* Pancreas
* Pituitary Gland
[Adenoma TGLS = 4-8]
Olfactory Epi
Pars Distalis

Hypertrophy
Adenoma

Cardiomyopathy
Nephropathy
Basophilic Focus
Clear Cell Focus
Fibroadenoma

Degeneration
Atrophy
Adenoma

Mild

Mild
Mild

Multiple

Hyaline, Mild
Minimal

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 517	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32655
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			
OBSERVATIONS			
* Adrenal Cortex [Adenoma TGLS = 5-5]		Adenoma	
* Adrenal Medulla		Hyperplasia Pheochromocytoma Benign	Mild
* Clitoral Gland		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Intestine Small, Jejunum [Leiomyosarcoma TGLS = 6-11+15]		Leiomyosarcoma	
* Kidney		Nephropathy	Minimal
* Liver		Angiectasis Basophilic Focus Hematopoietic Cell Proliferation	Minimal Minimal
	Bile Duct Centrilobular	Hyperplasia Necrosis Inflammation Infiltration Cellular	Minimal Minimal Granulomatous, Minimal Plasma Cell, Marked
* Lung			
* Lymph Node, Mesenteric [Infiltration Cellular TGLS = 7-13]			
* Mammary Gland [Fibroadenoma TGLS = 1-14]		Fibroadenoma	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland [Hyperplasia TGLS = 4-8]	Pars Distalis	Hyperplasia	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 517	TRT#: 6	SEX: Female	DAY ON TEST: 734
	DOSE: 2000 PPM	DISP: Terminal Sacrifice	HISTO: 32655
ORGAN AND ACCOUNTABLE SITE STATUS			
* Spleen		Hematopoietic Cell Proliferation	Marked
[Hematopoietic Cell Proliferation TGLS = 2,3-12]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 518	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32656
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			
MISSING			
* Lymph Node, Mediastinal			
OBSERVATIONS			
* Adrenal Cortex		Degeneration	Cystic, Mild
* Adrenal Medulla		Hyperplasia	Minimal
* Clitoral Gland		Carcinoma	
[Carcinoma TGLS = 1-11+7]			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Spleen		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Carcinoma	
	C Cell	Hyperplasia	Moderate
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 519	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32657
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Parathyroid Gland	* Salivary Glands	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder			
MISSING			
* Lymph Node, Bronchial	* Lymph Node, Mediastinal		
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Mild
Eye	Retina	Atrophy	Marked
[Cataract TGLS = 2-13]		Cataract	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Moderate
* Liver		Basophilic Focus	
		Clear Cell Focus	
* Lung			
Note: "Focus, 4x2mm, pale" noted at necropsy was not apparent microscopically.			
* Mammary Gland		Fibroadenoma	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Inflammation	Suppurative, Minimal
* Ovary		Cyst	Moderate
[Cyst TGLS = 4-12]			
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Minimal
* Skin	Subcut Tiss	Fibroma	
		Inflammation	Chronic Active, Mild
[Fibroma TGLS = 1-11+15]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 519	TRT#: 6	SEX: Female	DAY ON TEST: 734
	DOSE: 2000 PPM	DISP: Terminal Sacrifice	HISTO: 32657
ORGAN AND ACCOUNTABLE SITE STATUS			
[Inflammation TGLS = 5-14]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Uterus		Polyp Stromal	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 520	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32658
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	* Uterus
MISSING			
* Lymph Node, Bronchial	* Thymus		
INSUFFICIENT TISSUE			
* Intestine Large, Rectum			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Clitoral Gland		Adenoma	
[Adenoma TGLS = 7-7]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Basophilic Focus	
		Degeneration	Fatty, Moderate
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 520	TRT#: 6	SEX: Female	DAY ON TEST: 735
	DOSE: 2000 PPM	DISP: Terminal Sacrifice	HISTO: 32658
ORGAN AND ACCOUNTABLE SITE STATUS			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 6-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Ovary		Cyst	Moderate
[Cyst TGLS = 4-7]			
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
[Adenoma TGLS = 1-8]			
* Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
[Fibrosis TGLS = 3-11]			
[Leukemia Mononuclear TGLS = 2-11]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 521	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 607 HISTO: 32659
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder	* Uterus		
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Moderate
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
* Liver		Degeneration	Fatty, Moderate
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 2-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Thrombosis	Mild
* Ovary		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 521	TRT#: 6	SEX: Female	DAY ON TEST: 607
	DOSE: 2000 PPM	DISP: Moribund Sacrifice	HISTO: 32659
ORGAN AND ACCOUNTABLE SITE STATUS			
* Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
[Fibrosis TGLS = 4-11]			
[Leukemia Mononuclear TGLS = 3-11]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 522	TRT#: 6	SEX: Female	DAY ON TEST: 735
	DOSE: 2000 PPM	DISP: Terminal Sacrifice	HISTO: 32660
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			
MISSING			
* Clitoral Gland	* Lymph Node, Bronchial		
OBSERVATIONS			
* Adrenal Cortex		Degeneration	Cystic, Moderate
		Hypertrophy	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Hepatodiaphragmatic Nodule	
		Mixed Cell Focus	
[Hepatodiaphragmatic Nodule TGLS = 5-12]			
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,2-16+11+13+14+15]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 4-17]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Inflammation	Suppurative, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Thyroid Gland	C Cell	Carcinoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 523	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Natural Death	DAY ON TEST: 620 HISTO: 32661
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Colon	* Intestine Large, Rectum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	
MISSING			
* Intestine Small, Jejunum			
AUTO PRECLUDES DIAG.			
* Intestine Large, Cecum	* Intestine Small, Duodenum	* Intestine Small, Ileum	
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Minimal
* Clitoral Gland		Adenoma	
* Heart		Cardiomyopathy	Minimal
* Int Sm Ileum			
Note: "Focus, 3x4mm, red, multiple" was probably normal Peyer's patches.			
* Kidney		Nephropathy	Mild
* Liver		Degeneration	Fatty, Minimal
		Hepatodiaphragmatic Nodule	
[Hepatodiaphragmatic Nodule TGLS = 7-11]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 3-13]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 5-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Inflammation	Suppurative, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-8]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 523	TRT#: 6	SEX: Female	DAY ON TEST: 620
	DOSE: 2000 PPM	DISP: Natural Death	HISTO: 32661

ORGAN AND ACCOUNTABLE SITE STATUS

PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma
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* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 524	TRT#: 6	SEX: Female	DAY ON TEST: 705
	DOSE: 2000 PPM	DISP: Natural Death	HISTO: 32662
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Brain	* Clitoral Gland	* Esophagus	* Larynx
* Lung	* Lymph Node, Bronchial	* Nose	* Ovary
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Uterus	
MISSING			
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric		
AUTO PRECLUDES DIAG.			
* Adrenal Cortex	* Adrenal Medulla	* Bone Marrow	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Kidney	* Lymph Node, Mandibular
* Pancreas	* Parathyroid Gland	* Spleen	* Thyroid Gland
* Urinary Bladder			
OBSERVATIONS			
* Bone		Hyperostosis	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Liver		Basophilic Focus	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 525	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32663
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder	* Uterus		
MISSING			
* Lymph Node, Mediastinal	* Thymus		
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Mild
* Clitoral Gland		Carcinoma	
[Carcinoma TGLS = 3-11]			
Eye	Retina	Atrophy	Moderate
		Cataract	Marked
[Cataract TGLS = 4-12]			
* Heart		Cardiomyopathy	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Mixed Cell Focus	
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,2-13+14]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
* Spleen		Hematopoietic Cell Proliferation	Marked
[Hematopoietic Cell Proliferation TGLS = 5-4]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 526	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 626 HISTO: 32664
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Ovary	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Skin	* Thymus	* Trachea
* Urinary Bladder			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Moderate
		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
		Leukemia Mononuclear	
		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
	Atrium	Thrombosis	Moderate
[Thrombosis TGLS = 3-14]			
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Degeneration	Fatty, Moderate
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
[Leukemia Mononuclear TGLS = 6-4]			
* Lung		Leukemia Mononuclear	
Lymph Node	Iliac	Leukemia Mononuclear	
	Renal	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-11]			
[Leukemia Mononuclear TGLS = 8-12]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 526	TRT#: 6	SEX: Female	DAY ON TEST: 626
	DOSE: 2000 PPM	DISP: Moribund Sacrifice	HISTO: 32664
ORGAN AND ACCOUNTABLE SITE STATUS			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Thrombosis	Marked
* Pancreas		Atrophy	Minimal
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-13]			
* Stomach, Forestomach		Necrosis	Moderate
* Stomach, Glandular		Necrosis	Moderate
[Necrosis TGLS = 9-15]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 4-8]			
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 527	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32665
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Uterus		
OBSERVATIONS			
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Minimal
* Mammary Gland [Fibroadenoma TGLS = 1-11]		Fibroadenoma	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Ovary		Inflammation	Granulomatous, Minimal
* Pancreas		Basophilic Focus	
* Pituitary Gland	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Urinary Bladder	Transit Epithe	Papilloma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 528	TRT#: 6	SEX: Female	DAY ON TEST: 735
	DOSE: 2000 PPM	DISP: Terminal Sacrifice	HISTO: 32666
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
MISSING			
* Lymph Node, Mediastinal			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Clitoral Gland		Hyperplasia	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
		Basophilic Focus	
		Eosinophilic Focus	
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Carcinoma	
		Fibroadenoma	
[Carcinoma TGLS = 2-12]			
[Fibroadenoma TGLS = 1-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Atrophy	Marked
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 528	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32666
ORGAN AND ACCOUNTABLE SITE STATUS			
* Spleen		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 529	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32667
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus
MISSING			
* Lymph Node, Bronchial	* Lymph Node, Mandibular		
INSUFFICIENT TISSUE			
* Intestine Large, Rectum			

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Clitoral Gland		Hyperplasia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Clear Cell Focus	
		Hepatodiaphragmatic Nodule	
Note: "Focus, 2mm dia, dark" noted at necropsy was blood in normal hepatic vasculature.			
[Clear Cell Focus TGLS = 6-4]			
[Hepatodiaphragmatic Nodule TGLS = 4-4]			
* Lung		Carcinoma	Metastatic (Thyroid Gland)
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Inflammation	Suppurative, Minimal
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Moderate
[Hyperplasia TGLS = 3-8]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 529	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32667
ORGAN AND ACCOUNTABLE SITE STATUS			
* Thyroid Gland [Carcinoma TGLS = 2-2]	C Cell	Carcinoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 530	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32668
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
OBSERVATIONS			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Clear Cell Focus	
		Eosinophilic Focus	
[Eosinophilic Focus TGLS = 1,2-4+11+12]			
* Lung		Inflammation	Granulomatous, Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Marked
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 531	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32669
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Hypertrophy	Mild
* Adrenal Medulla		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Clear Cell Focus	
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-4]			
* Lung	Alveolar Epith	Hyperplasia	Moderate
[Hyperplasia TGLS = 3-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Spleen		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 532	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32670
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Mixed Cell Focus	
[Mixed Cell Focus TGLS = 4-12]			
* Mammary Gland		Carcinoma	
		Fibroadenoma	
[Carcinoma TGLS = 1-14]			
[Fibroadenoma TGLS = 2-11+13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pancreas		Basophilic Focus	
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 533	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32671
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
MISSING			
* Lymph Node, Bronchial	* Lymph Node, Mandibular		
OBSERVATIONS			
* Clitoral Gland [Carcinoma TGLS = 2-14]		Carcinoma	
* Heart		Cardiomyopathy	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver [Mixed Cell Focus TGLS = 4,5-13+12]		Basophilic Focus Clear Cell Focus Mixed Cell Focus	
* Lung		Inflammation	Granulomatous, Minimal
* Mammary Gland [Fibroadenoma TGLS = 1-11+15]		Fibroadenoma	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland [Adenoma TGLS = 3-8]	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 534	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32672
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
MISSING			
* Lymph Node, Bronchial	* Lymph Node, Mediastinal		
OBSERVATIONS			
* Adrenal Cortex		Degeneration	Cystic, Mild
		Hyperplasia	Mild
		Hypertrophy	Minimal
Eye	Retina	Atrophy	Moderate
[Cataract TGLS = 3-13]		Cataract	Moderate
* Heart		Cardiomyopathy	Moderate
* Intestine Large, Cecum		Parasite Metazoan	
* Intestine Large, Colon		Parasite Metazoan	
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Clear Cell Focus	
[Mixed Cell Focus TGLS = 2-11]		Mixed Cell Focus	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 534	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32672
ORGAN AND ACCOUNTABLE SITE STATUS			
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 535	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 684 HISTO: 32673
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Bone Marrow			
Note: "Pale" appearance noted at necropsy was secondary to anemia and leukemia.			
* Kidney		Nephropathy	Moderate
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 6-13]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 8-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5-8]			
* Spleen		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		
CONTRIBUTORY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 536	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 680 HISTO: 32674
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus
MISSING			
* Lymph Node, Mediastinal			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Bone Marrow		Hyperplasia	Reticulum Cell, Mild
Eye	Retina	Atrophy	Marked
[Cataract TGLS = 2-11]		Cataract	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Degeneration	Fatty, Minimal
		Degeneration	Cystic, Marked
[Hepatodiaphragmatic Nodule TGLS = 5-15]		Hepatodiaphragmatic Nodule	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-7+16]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Stomach, Forestomach		Necrosis	Minimal
* Thyroid Gland	C Cell	Hyperplasia	Minimal
Zymbal's Gland		Carcinoma	
[Carcinoma TGLS = 4-12+13+14]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 536	TRT#: 6	SEX: Female	DAY ON TEST: 680
	DOSE: 2000 PPM	DISP: Moribund Sacrifice	HISTO: 32674
ORGAN AND ACCOUNTABLE SITE STATUS			
PRIMARY CAUSE OF DEATH	- Zymbal's Gland Carcinoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 537	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 399 HISTO: 32675
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
MISSING			
* Lymph Node, Mediastinal			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Kidney		Nephropathy	Mild
* Liver		Mixed Cell Focus	
[Mixed Cell Focus TGLS = 3-4]			
* Mammary Gland		Galactoceles	Mild
[Galactoceles TGLS = 4-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8+1]			
* Stomach, Forestomach		Necrosis	Mild
[Necrosis TGLS = 5-8]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 538	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 644 HISTO: 32676
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder	* Uterus	
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Clitoral Gland		Hyperplasia	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Basophilic Focus	
		Degeneration	Fatty, Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-4]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 538	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 644 HISTO: 32676
ORGAN AND ACCOUNTABLE SITE STATUS			
CONTRIBUTORY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 539	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32677
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Bone Marrow			
Note: "Pale" bone marrow in sternum noted at necropsy was within normal limits microscopically.			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Clear Cell Focus	
		Mixed Cell Focus	
[Mixed Cell Focus TGLS = 2-4]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 3-12]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 4-13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Hyperplasia	Marked
[Hyperplasia TGLS = 5-8]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 539	TRT#: 6	SEX: Female	DAY ON TEST: 735
	DOSE: 2000 PPM	DISP: Terminal Sacrifice	HISTO: 32677

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 540	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32678
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder	* Uterus	
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone		Hyperostosis	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Clear Cell Focus	
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
[Fibrosis TGLS = 2-11]			
[Leukemia Mononuclear TGLS = 1-11]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 541	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32679
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Clear Cell Focus	
		Degeneration	Cystic, Mild
		Leukemia Mononuclear	
[Degeneration TGLS = 5-11]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Skin		Inflammation	Acute, Mild
[Inflammation TGLS = 2-13]			
* Spleen		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 4-8]			
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 542	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 686 HISTO: 32680
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone Marrow	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Urinary Bladder	* Uterus		
MISSING			
* Lymph Node, Bronchial	* Thymus		
OBSERVATIONS			
* Adrenal Cortex		Necrosis	Moderate
* Adrenal Medulla		Pheochromocytoma Benign	
* Bone		Hyperostosis	Moderate
* Clitoral Gland		Adenoma	
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Hepatodiaphragmatic Nodule	
		Necrosis	Minimal
[Hepatodiaphragmatic Nodule TGLS = 7-12]			
* Mammary Gland		Fibroadenoma	
		Inflammation	Acute, Marked
[Fibroadenoma TGLS = 5-14]			
[Inflammation TGLS = 4-13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Inflammation	Suppurative, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Spleen		Fibrosis	Minimal
[Fibrosis TGLS = 6-11]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 542	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 686 HISTO: 32680
ORGAN AND ACCOUNTABLE SITE STATUS			
PRIMARY CAUSE OF DEATH	- Mammary Gland Inflammation		
CONTRIBUTORY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 543	TRT#: 6	SEX: Female	DAY ON TEST: 560
	DOSE: 2000 PPM	DISP: Moribund Sacrifice	HISTO: 32681
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Kidney
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Liver		Basophilic Focus	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-13+14+15+16+17]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 4-12]			
* Nose	Olfactory Epi	Degeneration	
* Pituitary Gland	Pars Distalis	Adenoma	Hyaline, Moderate
[Adenoma TGLS = 3-8]			
* Thyroid Gland	C Cell	Hyperplasia	Moderate
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 544	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 720 HISTO: 32682
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	* Uterus
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Minimal
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Clitoral Gland		Carcinoma	
[Carcinoma TGLS = 3-12]			
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
* Liver		Basophilic Focus	
		Degeneration	Fatty, Mild
	Centrilobular	Leukemia Mononuclear	
		Necrosis	Minimal
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-3+3A]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Ovary		Leukemia Mononuclear	
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
[Hyperplasia TGLS = 1-8]			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 544	TRT#: 6	SEX: Female	DAY ON TEST: 720
	DOSE: 2000 PPM	DISP: Moribund Sacrifice	HISTO: 32682
ORGAN AND ACCOUNTABLE SITE STATUS			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-11]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 545	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32683
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Uterus
MISSING			
* Clitoral Gland			
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11+13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
* Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-12]			
* Thymus		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 545	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32683
ORGAN AND ACCOUNTABLE SITE STATUS			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Urinary Bladder		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 546	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 651 HISTO: 32684
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Clitoral Gland	* Intestine Large, Rectum
* Islets, Pancreatic	* Larynx	* Mammary Gland	* Parathyroid Gland
* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Esophagus		Inflammation	Suppurative, Marked
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Leukemia Mononuclear	
* Intestine Large, Colon		Leukemia Mononuclear	
* Intestine Small, Duodenum		Leukemia Mononuclear	
* Intestine Small, Ileum		Leukemia Mononuclear	
* Intestine Small, Jejunum		Leukemia Mononuclear	
		Necrosis	Marked
[Necrosis TGLS = 7-14]			
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
* Liver		Degeneration	Fatty, Moderate
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-12]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 546	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 651 HISTO: 32684
ORGAN AND ACCOUNTABLE SITE STATUS			
* Lymph Node, Mesenteric Mesentery	Fat	Leukemia Mononuclear Leukemia Mononuclear Necrosis Thrombosis	Moderate Moderate
[Necrosis TGLS = 6-13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Ovary		Leukemia Mononuclear	
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma Leukemia Mononuclear	
[Adenoma TGLS = 3-8]			
* Skin		Keratoacanthoma	
[Keratoacanthoma TGLS = 4-11]			
* Spleen		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
Tooth		Necrosis	Marked
* Uterus		Fibrosis	Marked
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 547	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 552 HISTO: 32685
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Brain	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial
* Mammary Gland	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
MISSING			
* Clitoral Gland	* Lymph Node, Mediastinal		
OBSERVATIONS			
* Adrenal Cortex		Necrosis	Mild
* Bone		Hyperostosis	Mild
* Bone Marrow		Leukemia Mononuclear	
* Intestine Small, Jejunum		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-6]			
* Kidney		Nephropathy	Mild
* Liver		Degeneration	Fatty, Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-3+3A]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland		Angiectasis	Mild
[Angiectasis TGLS = 3-8]			
* Skin	Subcut Tiss	Melanoma Malignant	
Note: "Melanoma Mal" is neural crest tumor of pinna.			
[Melanoma Malignant TGLS = 1-11]			
* Spleen		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Adenoma	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 547	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 552 HISTO: 32685
ORGAN AND ACCOUNTABLE SITE STATUS			
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 548	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32686
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
OBSERVATIONS			
* Adrenal Medulla	Bilateral	Pheochromocytoma Benign	
* Bone		Hyperostosis	Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Lung		Inflammation	Granulomatous, Minimal
[Inflammation TGLS = 3,4-3A+11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 549	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32687
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone Marrow	* Brain	* Esophagus	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Mild
		Pheochromocytoma Benign	
* Bone		Hyperostosis	Moderate
* Clitoral Gland		Hyperplasia	Moderate
		Inflammation	Chronic Active, Moderate
* Heart		Cardiomyopathy	Mild
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney		Nephropathy	Moderate
[Nephropathy TGLS = 2-5]			
* Liver		Basophilic Focus	
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 550	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 534 HISTO: 32688
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Thymus	* Trachea	* Urinary Bladder	* Uterus
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone		Hyperostosis	Moderate
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Degeneration	Fatty, Mild
	Bile Duct	Eosinophilic Focus	
		Hyperplasia	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3,7-4+16]			
* Lung		Inflammation	Granulomatous, Minimal
		Leukemia Mononuclear	
[Inflammation TGLS = 4-11]			
Lymph Node	Pancreatic	Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-14]			
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Marked
* Ovary		Leukemia Mononuclear	
* Pancreas		Atrophy	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 550	TRT#: 6 DOSE: 2000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 534 HISTO: 32688
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-13]			
* Stomach, Glandular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-8+15]			
* Thyroid Gland	C Cell	Carcinoma	
[Carcinoma TGLS = 1-2]			
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 701	TRT#: 8	SEX: Female	DAY ON TEST: 664
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32539
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Ovary	* Pancreas
* Parathyroid Gland	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Bone		Hyperostosis	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Mixed Cell Focus	
[Mixed Cell Focus TGLS = 4-12]			
* Lung		Inflammation	Granulomatous, Minimal
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 3-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Salivary Glands		Atrophy	Mild
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 702	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 706 HISTO: 32540
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Mammary Gland
* Ovary	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
		Pheochromocytoma Benign	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Eosinophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
		Regeneration	Marked
[Eosinophilic Focus TGLS = 3-12]			
[Regeneration TGLS = 2-11]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Atrophy	Mild
* Skin		Inflammation	Chronic Active, Mild
[Inflammation TGLS = 1-14]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 702	TRT#: 8	SEX: Female	DAY ON TEST: 706
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32540
ORGAN AND ACCOUNTABLE SITE STATUS			
* Spleen		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 703	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 650 HISTO: 32541
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Medulla		Pheochromocytoma Benign	
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
		Degeneration	Fatty, Mild
		Mixed Cell Focus	
[Mixed Cell Focus TGLS = 3,4-11+12]			
* Lung		Inflammation	Granulomatous, Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 5-14]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Inflammation	Suppurative, Moderate
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Stomach, Forestomach		Necrosis	Moderate
[Necrosis TGLS = 6-13]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 704	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32542
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Mesenteric	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
MISSING			
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Mild
* Heart		Cardiomyopathy	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Clear Cell Focus	
		Eosinophilic Focus	
Note: "Focus, 2mm dia, dark" noted at trim was blood in normal hepatic vasculature.			
[Eosinophilic Focus TGLS = 3-12]			
* Mammary Gland		Carcinoma	
[Carcinoma TGLS = 1-13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 705	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 628 HISTO: 32543
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Kidney	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Liver		Degeneration	Fatty, Moderate
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
Oral Mucosa	Pharyngeal	Squamous Cell Papilloma	
[Squamous Cell Papilloma TGLS = 2-11]			
* Pituitary Gland	Pars Distalis	Angiectasis	Marked
	Pars Distalis	Hyperplasia	Mild
[Angiectasis TGLS = 3-8]			
* Stomach, Forestomach		Necrosis	Mild
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Oral Mucosa Pharyngeal Squamous Cell Papilloma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 706	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32544
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder
* Uterus			
MISSING			
* Thymus			
OBSERVATIONS			
* Bone		Hyperostosis	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Moderate
* Liver		Clear Cell Focus	
		Mixed Cell Focus	
		Fibroadenoma	
* Mammary Gland [Fibroadenoma TGLS = 1-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Basophilic Focus	
* Pituitary Gland [Adenoma TGLS = 2-8]	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 707	TRT#: 8	SEX: Female	DAY ON TEST: 729
	DOSE: 8000 PPM	DISP: Natural Death	HISTO: 32545
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Nose
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Intestine Large, Cecum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Hepatodiaphragmatic Nodule	
[Hepatodiaphragmatic Nodule TGLS = 3-11]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-13+14+12]			
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-8]			
* Thyroid Gland	C Cell	Carcinoma	
[Carcinoma TGLS = 5-2]			
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 708	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 597 HISTO: 32546
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Ovary	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus
OBSERVATIONS			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Liver		Angiectasis	Moderate
		Basophilic Focus	
		Mixed Cell Focus	
[Angiectasis TGLS = 3-4]			
[Mixed Cell Focus TGLS = 4-4]			
* Mammary Gland		Carcinoma	
[Carcinoma TGLS = 1-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 709	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32547
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
MISSING			
* Lymph Node, Mediastinal			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Moderate
* Adrenal Medulla		Pheochromocytoma Benign	
* Heart		Cardiomyopathy	Mild
* Intestine Large, Colon		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Lung	Alveolar Epith	Hyperplasia	Minimal
		Inflammation	Granulomatous, Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11+12+13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 710	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 663 HISTO: 32548
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Mild
* Kidney		Nephropathy	Moderate
* Liver		Basophilic Focus	
		Degeneration	Fatty, Moderate
[Degeneration TGLS = 4-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Stomach, Forestomach		Necrosis	Mild
* Thyroid Gland	C Cell	Adenoma	
Vagina		Inflammation	Suppurative, Moderate
[Inflammation TGLS = 5-12]			
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 711	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 547 HISTO: 32549
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Ovary	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Skin	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder	* Uterus	
MISSING			
* Lymph Node, Bronchial	* Thymus		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Bone		Hyperostosis	Minimal
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Minimal
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
* Liver		Degeneration	Fatty, Moderate
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Thrombosis	Marked
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-4]			
* Stomach, Forestomach		Necrosis	Moderate

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 711	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 547 HISTO: 32549
ORGAN AND ACCOUNTABLE SITE STATUS			
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 712	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 733 HISTO: 32550
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Clitoral Gland		Carcinoma	
[Carcinoma TGLS = 2-11]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Eosinophilic Focus	
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Hemangiosarcoma	
[Hemangiosarcoma TGLS = 3-4]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 713	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 630 HISTO: 32551
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Pancreas
* Parathyroid Gland	* Skin	* Stomach, Forestomach	* Trachea
* Uterus			
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Moderate
		Leukemia Mononuclear	
* Bone		Hyperostosis	Moderate
* Bone Marrow		Leukemia Mononuclear	
Eye	Retina	Atrophy	Moderate
		Cataract	Moderate
[Cataract TGLS = 2-15]			
* Heart		Cardiomyopathy	Minimal
		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
* Liver		Degeneration	Fatty, Minimal
	Bile Duct	Hyperplasia	Moderate
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Mild
		Regeneration	Moderate
[Leukemia Mononuclear TGLS = 6-4]			
[Regeneration TGLS = 5-12]			
* Lung		Leukemia Mononuclear	
Lymph Node	Pancreatic	Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 10-3]			
* Lymph Node, Mandibular		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 713	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 630 HISTO: 32551
ORGAN AND ACCOUNTABLE SITE STATUS			
* Lymph Node, Mediastinal [Leukemia Mononuclear TGLS = 8-2]		Leukemia Mononuclear	
* Lymph Node, Mesenteric [Leukemia Mononuclear TGLS = 11-6]		Leukemia Mononuclear	
* Mammary Gland [Carcinoma TGLS = 1-14]		Carcinoma	
Mesentery [Necrosis TGLS = 7-11]	Fat	Necrosis	Mild
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Ovary		Leukemia Mononuclear	
* Pituitary Gland [Leukemia Mononuclear TGLS = 3-8]		Leukemia Mononuclear	
* Salivary Glands		Leukemia Mononuclear	
* Spleen [Leukemia Mononuclear TGLS = 4-13]		Leukemia Mononuclear	
* Stomach, Glandular [Leukemia Mononuclear TGLS = 12-16]		Leukemia Mononuclear Necrosis	Mild
* Thymus [Leukemia Mononuclear TGLS = 9-2]		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Urinary Bladder		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 714	TRT#: 8	SEX: Female	DAY ON TEST: 674
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32552

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL			
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Parathyroid Gland
* Salivary Glands	* Skin	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder		

MISSING	
* Lymph Node, Bronchial	

OBSERVATIONS			
* Adrenal Cortex		Atrophy	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone		Hyperostosis	Moderate
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Minimal
		Leukemia Mononuclear	
* Lung		Inflammation	Granulomatous, Moderate
[Inflammation TGLS = 1-3+3A+11]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 2-7+12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Ovary		Leukemia Mononuclear	
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 714	TRT#: 8	SEX: Female	DAY ON TEST: 674
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32552
ORGAN AND ACCOUNTABLE SITE STATUS			
* Spleen		Inflammation	Granulomatous, Moderate
[Inflammation TGLS = 3-11]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Adenoma	
* Uterus		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen	Inflammation	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 715	TRT#: 8	SEX: Female	DAY ON TEST: 734
	DOSE: 8000 PPM	DISP: Terminal Sacrifice	HISTO: 32553
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Hypertrophy	Mild
* Bone Marrow		Atrophy	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Eosinophilic Focus	
		Mixed Cell Focus	
[Basophilic Focus TGLS = 5-13]			
[Mixed Cell Focus TGLS = 4-12]			
* Lung		Inflammation	Granulomatous, Minimal
* Mammary Gland		Fibroadenoma	
		Hyperplasia	Atypical, Moderate
[Fibroadenoma TGLS = 1-11+14]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Thyroid Gland	C Cell	Adenoma	
* Uterus		Polyp Stromal	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 715	TRT#: 8	SEX: Female	DAY ON TEST: 734
	DOSE: 8000 PPM	DISP: Terminal Sacrifice	HISTO: 32553

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 716	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32554
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Intestine Small, Ileum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Clear Cell Focus	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11+12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 717	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32555
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus
INSUFFICIENT TISSUE			
* Intestine Large, Rectum			
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Mild
* Bone		Hyperostosis	Moderate
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Clear Cell Focus	
		Eosinophilic Focus	
[Eosinophilic Focus TGLS = 4-4]			
* Lung		Inflammation	Granulomatous, Minimal
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,2-11+12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 718	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32556
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Minimal
* Bone		Hyperostosis	Moderate
Eye	Retina	Atrophy	Marked
[Cataract TGLS = 1-11]		Cataract	Marked
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pancreas		Basophilic Focus	
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:03

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 719	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 500 HISTO: 32557
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Brain	* Clitoral Gland
* Esophagus	* Heart	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Mammary Gland	* Ovary
* Salivary Glands	* Skin	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus
MISSING			
* Lymph Node, Bronchial	* Lymph Node, Mediastinal	* Parathyroid Gland	
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Moderate
* Bone Marrow		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-4]			
* Lung		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-3]			
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Marked
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-11]			
* Stomach, Forestomach		Necrosis	Mild
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 720	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32558
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Minimal
* Larynx	Epiglottis	Metaplasia	Squamous, Marked
* Liver		Basophilic Focus	
		Eosinophilic Focus	
[Eosinophilic Focus TGLS = 2-4]			
* Lung		Inflammation	Granulomatous, Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11+12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 721	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32559
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
MISSING			
* Lymph Node, Bronchial	* Lymph Node, Mandibular		
OBSERVATIONS			
* Bone		Hyperostosis	Minimal
* Heart		Cardiomyopathy	Minimal
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Lung	Alveolar Epith	Hyperplasia	Minimal
* Mammary Gland [Fibroadenoma TGLS = 1-11+12]		Fibroadenoma	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland [Adenoma TGLS = 2-8]	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 722	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 702 HISTO: 32560
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Moderate
* Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Minimal
Mesentery	Artery	Inflammation	Chronic Active, Moderate
	Fat	Necrosis	Mild
[Necrosis TGLS = 2-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:03
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 723	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Natural Death	DAY ON TEST: 668 HISTO: 32561
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Mammary Gland	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			
MISSING			
* Lymph Node, Bronchial			
AUTO PRECLUDES DIAG.			
* Intestine Small, Ileum	* Intestine Small, Jejunum		
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Moderate
* Liver		Basophilic Focus	
		Eosinophilic Focus	
	Centrilobular	Necrosis	Marked
[Eosinophilic Focus TGLS = 1-4]			
[Necrosis TGLS = 2-4]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 5,6-8+1]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 724	TRT#: 8	SEX: Female	DAY ON TEST: 407
	DOSE: 8000 PPM	DISP: Natural Death	HISTO: 32562
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Rectum	* Islets, Pancreatic	* Larynx
* Lymph Node, Mandibular	* Mammary Gland	* Parathyroid Gland	* Pituitary Gland
* Salivary Glands	* Stomach, Forestomach	* Stomach, Glandular	* Thyroid Gland
* Trachea	* Urinary Bladder		
MISSING			
* Lymph Node, Bronchial	* Thymus		
AUTO PRECLUDES DIAG.			
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Intestine Large, Cecum		Parasite Metazoan	
* Intestine Large, Colon		Leukemia Mononuclear	
* Kidney		Nephropathy	Minimal
* Liver		Hepatodiaphragmatic Nodule	
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Mild
[Hepatodiaphragmatic Nodule TGLS = 9-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 7-12]			
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Inflammation	Suppurative, Minimal
* Ovary		Cyst	Mild
		Leukemia Mononuclear	
[Cyst TGLS = 3-7]			
[Leukemia Mononuclear TGLS = 4-7]			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 724	TRT#: 8	SEX: Female	DAY ON TEST: 407
	DOSE: 8000 PPM	DISP: Natural Death	HISTO: 32562
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pancreas		Leukemia Mononuclear	
* Pituitary Gl			
Note: "Focus, 1mm dia, dark" noted at necropsy was blood in normal vasculature.			
* Skin		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2,6-11+13+14]			
* Spleen		Hematopoietic Cell Proliferation	Mild
		Leukemia Mononuclear	
* Uterus		Leukemia Mononuclear	
		Polyp Stromal	
[Polyp Stromal TGLS = 5-8]			
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:04
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 725	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 580 HISTO: 32563
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Liver		Degeneration	Fatty, Minimal
Note: "Pale" liver noted at necropsy was due to anemia secondary to uterine stromal polyps and necrosis.			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Cyst	Marked
	Pars Distalis	Hyperplasia	Moderate
* Spleen		Hematopoietic Cell Proliferation	Marked
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Uterus		Necrosis	Marked
		Polyp Stromal	Multiple
[Polyp Stromal TGLS = 2-11]			
PRIMARY CAUSE OF DEATH	- Uterus Polyp Stromal		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:04
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 726	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 720 HISTO: 32564
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Trachea	* Urinary Bladder		
MISSING			
* Clitoral Gland	* Lymph Node, Bronchial	* Thymus	
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Moderate
[Nephropathy TGLS = 5-5]			
* Liver		Basophilic Focus	
		Cytomegaly	Moderate
		Degeneration	Fatty, Mild
	Bile Duct	Hyperplasia	Minimal
[Cytomegaly TGLS = 4-4]			
* Lung	Alveolar Epith	Hyperplasia	Mild
		Inflammation	Granulomatous, Minimal
[Hyperplasia TGLS = 2-3]			
* Mammary Gland		Galactoceles	Marked
[Galactoceles TGLS = 1-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Uterus		Inflammation	Chronic Active, Moderate
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:04
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 726	TRT#: 8	SEX: Female	DAY ON TEST: 720
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32564

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:04
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 727	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32565
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone Marrow	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Hypertrophy	Minimal
* Adrenal Medulla		Hyperplasia	Moderate
* Bone		Hyperostosis	Mild
* Brain	Artery	Inflammation	Chronic, Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Hepatodiaphragmatic Nodule	
		Mixed Cell Focus	
[Hepatodiaphragmatic Nodule TGLS = 2-12]			
Mesentery	Artery	Inflammation	Chronic Active, Marked
[Inflammation TGLS = 3-13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
Skeletal Muscle	Artery	Inflammation	Chronic, Moderate
[Inflammation TGLS = 4-11]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:04
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 727	TRT#: 8	SEX: Female	DAY ON TEST: 734
	DOSE: 8000 PPM	DISP: Terminal Sacrifice	HISTO: 32565

ORGAN AND ACCOUNTABLE SITE STATUS

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:04

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 728	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 642 HISTO: 32566
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	* Uterus
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear Vacuolization Cytoplasmic	Mild
* Adrenal Medulla		Leukemia Mononuclear	
* Bone		Hyperostosis	Moderate
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Infarct	Moderate
		Leukemia Mononuclear	
[Infarct TGLS = 4-5+12]			
* Liver		Degeneration	Fatty, Minimal
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
[Leukemia Mononuclear TGLS = 3-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-7]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-7+13+14]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Ovary		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 728	TRT#: 8	SEX: Female	DAY ON TEST: 642
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32566
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pituitary Gland		Leukemia Mononuclear	
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-11]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:04
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 729	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32567
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus
MISSING			
* Thymus			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Clear Cell Focus	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
	Lateral Wall	Metaplasia	Squamous, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:04
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 730	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 559 HISTO: 32568
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Degeneration	Fatty, Mild
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
[Leukemia Mononuclear TGLS = 2-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 3-13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Leukemia Mononuclear	
* Ovary		Leukemia Mononuclear	
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 730	TRT#: 8	SEX: Female	DAY ON TEST: 559
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32568
ORGAN AND ACCOUNTABLE SITE STATUS			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-11]		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:04
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 731	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32569
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	* Uterus
MISSING			
* Thymus			
OBSERVATIONS			
* Adrenal Medulla		Hyperplasia	Mild
		Pheochromocytoma Benign	
* Bone		Hyperostosis	Minimal
* Heart		Cardiomyopathy	Mild
* Intestine Large, Rectum		Parasite Metazoan	
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 3,4,5-12+14+11]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 6-13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:04
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 732	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32570
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone Marrow	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Pancreas	* Parathyroid Gland	* Salivary Glands	* Skin
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Mild
		Leukemia Mononuclear	
* Bone		Hyperostosis	Moderate
Eye	Retina	Atrophy	Marked
		Cataract	Marked
[Cataract TGLS = 5-15]			
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Basophilic Focus	
		Eosinophilic Focus	
	Bile Duct	Hyperplasia	Minimal
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 9-4+17]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,2,3-11+12+13+14]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 732	TRT#: 8	SEX: Female	DAY ON TEST: 734
	DOSE: 8000 PPM	DISP: Terminal Sacrifice	HISTO: 32570
ORGAN AND ACCOUNTABLE SITE STATUS			
* Ovary		Cyst	Moderate
[Cyst TGLS = 6-7]			
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
* Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
[Fibrosis TGLS = 8-16]			
[Leukemia Mononuclear TGLS = 7-4]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 733	TRT#: 8	SEX: Female	DAY ON TEST: 512
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32571
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	* Uterus
MISSING			
* Thymus			
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Degeneration	Fatty, Minimal
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
[Leukemia Mononuclear TGLS = 4-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 2-13]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Thrombosis	Marked
* Ovary		Leukemia Mononuclear	
* Pancreas		Atrophy	Mild
* Pituitary Gland	Pars Distalis	Hyperplasia	Mild

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:04

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 733	TRT#: 8	SEX: Female	DAY ON TEST: 512
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32571
ORGAN AND ACCOUNTABLE SITE STATUS			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-11]		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:04

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 734	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 734 HISTO: 32572
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Salivary Glands	* Skin	* Spleen	* Stomach, Forestomach
* Stomach, Glandular	* Thymus	* Trachea	* Urinary Bladder
* Uterus			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Minimal
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Marked
[Nephropathy TGLS = 5-5]			
* Liver		Basophilic Focus	
		Mixed Cell Focus	
[Mixed Cell Focus TGLS = 6-11]			
* Lung		Inflammation	Granulomatous, Mild
[Inflammation TGLS = 4-3A]			
* Mammary Gland		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,2-12+13+14+15+16]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:04

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 735	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 469 HISTO: 32573
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear Necrosis	Mild
* Adrenal Medulla		Leukemia Mononuclear	
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Infarct	Mild
		Leukemia Mononuclear	
		Nephropathy	Minimal
[Infarct TGLS = 4-12]			
* Liver		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 6-6]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Ovary		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
* Spleen		Hemorrhage	Mild

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 735	TRT#: 8	SEX: Female	DAY ON TEST: 469
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32573
ORGAN AND ACCOUNTABLE SITE STATUS			
[Hemorrhage TGLS = 2-11]		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-11]			
* Uterus		Polyp Stromal	
[Polyp Stromal TGLS = 7-8]			
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:04
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 736	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 681 HISTO: 32574
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Heart	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Lung
* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
OBSERVATIONS			
* Adrenal Cortex		Adenoma	
		Hypertrophy	Mild
* Kidney		Nephropathy	Mild
* Liver		Angiectasis	Minimal
		Basophilic Focus	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 5-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Skin		Inflammation	Chronic Active, Moderate
[Inflammation TGLS = 4-12]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Pituitary Gland Pars Distalis Adenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:04
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 737	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 692 HISTO: 32575
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Trachea	* Urinary Bladder
* Uterus			
MISSING			
* Thymus			
OBSERVATIONS			
* Bone Marrow		Atrophy	Minimal
Eye	Retina	Atrophy	Marked
		Cataract	Moderate
[Cataract TGLS = 3-12]			
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Lung		Inflammation	Granulomatous, Minimal
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 2-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Inflammation	Suppurative, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-8]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Mammary Gland Fibroadenoma		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:04
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 738	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 671 HISTO: 32576
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Brain	* Clitoral Gland	* Esophagus
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Mammary Gland	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Trachea
* Uterus			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Bone		Hyperostosis	Mild
* Bone Marrow		Leukemia Mononuclear	
* Heart		Leukemia Mononuclear	
* Kidney		Leukemia Mononuclear	
		Nephropathy	Minimal
		Angiectasis	Minimal
		Basophilic Focus	
		Eosinophilic Focus	
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
		Regeneration	Mild
[Eosinophilic Focus TGLS = 3,8-4+11]			
[Leukemia Mononuclear TGLS = 5-4]			
[Regeneration TGLS = 4-4]			
* Lung	Alveolar Epith	Hyperplasia	Minimal
		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 1-13]			
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 738	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 671 HISTO: 32576
ORGAN AND ACCOUNTABLE SITE STATUS			
* Nose	Olfactory Epi	Degeneration Thrombosis	Hyaline, Moderate Mild
* Ovary		Leukemia Mononuclear	
* Pituitary Gland [Adenoma TGLS = 2-8]	Pars Distalis	Adenoma	
* Spleen		Leukemia Mononuclear	
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Urinary Bladder		Leukemia Mononuclear	
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 739	TRT#: 8	SEX: Female	DAY ON TEST: 5
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32577
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Kidney
* Larynx	* Liver	* Lung	* Lymph Node, Bronchial
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Ovary
* Pancreas	* Parathyroid Gland	* Pituitary Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Thyroid Gland	* Trachea	* Urinary Bladder
* Uterus			
OBSERVATIONS			
* Lung			
Note: "Focus, 1mm dia, dark" noted at necropsy was not apparent microscopically.			
* Lymph Node, Mandibular		Infiltration Cellular	Polymorphnuclr, Mild
* Nose		Inflammation	Suppurative, Minimal
	Lateral Wall	Metaplasia	Squamous, Minimal
* Skin			
Note: "Lesion, 3x2mm, dark" noted at necropsy was not apparent microscopically. There were some normal tactile hair follicles with associated blood-filled sinusoids.			
PRIMARY CAUSE OF DEATH	- UNCERTAIN		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 740	TRT#: 8	SEX: Female	DAY ON TEST: 734
	DOSE: 8000 PPM	DISP: Terminal Sacrifice	HISTO: 32578
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lymph Node, Mandibular	* Lymph Node, Mesenteric	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
MISSING			
* Lymph Node, Bronchial	* Lymph Node, Mediastinal		
INSUFFICIENT TISSUE			
* Intestine Large, Rectum			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Adrenal Medulla		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Lipoma	
		Nephropathy	Moderate
[Lipoma TGLS = 4-5]			
* Liver		Basophilic Focus	
* Lung	Alveolar Epith	Hyperplasia	Mild
* Mammary Gland		Carcinoma	
		Fibroadenoma	Multiple
[Fibroadenoma TGLS = 1,2-13+14+11+12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Thyroid Gland	C Cell	Adenoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 741	TRT#: 8	SEX: Female	DAY ON TEST: 735
	DOSE: 8000 PPM	DISP: Terminal Sacrifice	HISTO: 32579
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Degeneration	Cystic, Mild
		Hyperplasia	Mild
* Bone Marrow		Hyperplasia	Histiocytic, Moderate
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Mixed Cell Focus	
[Mixed Cell Focus TGLS = 2-4]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 742	TRT#: 8	SEX: Female	DAY ON TEST: 720
	DOSE: 8000 PPM	DISP: Moribund Sacrifice	HISTO: 32580
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Brain	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
MISSING			
* Clitoral Gland	* Lymph Node, Mediastinal		
OBSERVATIONS			
* Adrenal Cortex		Degeneration	Cystic, Moderate
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone		Hyperostosis	Moderate
* Bone Marrow		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Basophilic Focus	
		Degeneration	Fatty, Mild
	Bile Duct	Hyperplasia	Mild
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 5-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Ovary		Leukemia Mononuclear	
* Pancreas		Atrophy	Mild

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 742	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 720 HISTO: 32580
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pituitary Gland	Pars Distalis	Adenoma Leukemia Mononuclear	
[Adenoma TGLS = 2-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 4-11]			
* Thyroid Gland	C Cell	Hyperplasia	Mild
* Uterus			
Note: "Dilation, 2x1.4cm" noted at trim was within normal limits microscopically.			
PRIMARY CAUSE OF DEATH	- Spleen	Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:04
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 743	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Natural Death	DAY ON TEST: 592 HISTO: 32581
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Cortex	* Adrenal Medulla	* Bone	* Bone Marrow
* Brain	* Clitoral Gland	* Esophagus	* Heart
* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum
* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx
* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Ovary	* Pancreas	* Parathyroid Gland
* Pituitary Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Uterus			
OBSERVATIONS			
* Kidney		Nephropathy	Minimal
* Liver		Basophilic Focus	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Urinary Bladder		Hemorrhage	Moderate
[Hemorrhage TGLS = 2-12]			
PRIMARY CAUSE OF DEATH	- UNCERTAIN		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 744	TRT#: 8	SEX: Female	DAY ON TEST: 511
	DOSE: 8000 PPM	DISP: Natural Death	HISTO: 32582
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Brain	* Clitoral Gland	* Esophagus
* Heart	* Intestine Large, Rectum	Lacrimal Gland	* Larynx
* Lymph Node, Mediastinal	* Ovary	* Salivary Glands	* Skin
* Stomach, Forestomach	* Trachea	* Uterus	
MISSING			
* Lymph Node, Bronchial	* Lymph Node, Mandibular		
AUTO PRECLUDES DIAG.			
* Adrenal Cortex	* Adrenal Medulla	* Bone Marrow	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Kidney	* Liver	* Lymph Node, Mesenteric
* Nose	* Pancreas	* Parathyroid Gland	* Pituitary Gland
* Stomach, Glandular	* Thymus	* Thyroid Gland	* Urinary Bladder
OBSERVATIONS			
* Liver			
Note: "Nodule, 8mm dia" was most likely a hepatodiaphragmatic nodule but the degree of post mortem autolysis obscured any diagnosis.			
* Lung		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 3-12]			
* Spleen		Hemorrhage	Mild
[Hemorrhage TGLS = 4-11]			
[Leukemia Mononuclear TGLS = 1-11]			
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:04
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 745	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32583
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Larynx	* Lung	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Mammary Gland	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Hypertrophy	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Ovary		Granulosa Cell Tumor Malignant	
* Pituitary Gland	Pars Distalis	Adenoma	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:04
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 746	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32584
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lung	* Lymph Node, Bronchial	* Lymph Node, Mandibular
* Lymph Node, Mediastinal	* Lymph Node, Mesenteric	* Ovary	* Pancreas
* Parathyroid Gland	* Salivary Glands	* Skin	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Thymus	* Trachea
* Urinary Bladder	* Uterus		
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Hypertrophy	Mild
* Clitoral Gland		Hyperplasia	Mild
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Moderate
* Liver		Basophilic Focus	
		Hepatocellular Carcinoma	
[Hepatocellular Carcinoma TGLS = 2-11+15]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 4-14]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 3-8]			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
Tongue		Hyperplasia	Squamous, Marked
[Hyperplasia TGLS = 1-12]			
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 747	TRT#: 8	SEX: Female	DAY ON TEST: 735
	DOSE: 8000 PPM	DISP: Terminal Sacrifice	HISTO: 32585

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL			
* Bone	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder		

MISSING			
* Lymph Node, Bronchial			

OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Hypertrophy	Minimal
		Leukemia Mononuclear	
* Adrenal Medulla		Hyperplasia	Minimal
		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Mild
* Kidney		Nephropathy	Mild
* Liver		Basophilic Focus	
		Leukemia Mononuclear	
* Lung		Inflammation	Granulomatous, Minimal
		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11+12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
	Lateral Wall	Metaplasia	Squamous, Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 2-8]			
* Spleen		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
* Uterus		Polyp Stromal	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:04

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 747	TRT#: 8	SEX: Female	DAY ON TEST: 735
	DOSE: 8000 PPM	DISP: Terminal Sacrifice	HISTO: 32585
ORGAN AND ACCOUNTABLE SITE STATUS			
[Polyp Stromal TGLS = 3-8]			
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03

Test Type: CHRONIC

Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Isobutene

CAS Number: 115-11-7

Date Report Requested: 10/20/2014

Time Report Requested: 09:49:04

First Dose M/F: NA / NA

Lab: BNW

ANIMAL ID: 748	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 657 HISTO: 32586
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Brain	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Colon	* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum
* Intestine Small, Jejunum	* Islets, Pancreatic	* Larynx	* Ovary
* Parathyroid Gland	* Salivary Glands	* Skin	* Stomach, Forestomach
* Stomach, Glandular	* Trachea	* Urinary Bladder	* Uterus
OBSERVATIONS			
* Adrenal Cortex		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Bone		Hyperostosis	Moderate
* Bone Marrow		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-14]			
* Heart		Cardiomyopathy	Minimal
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Basophilic Focus	
		Degeneration	Fatty, Minimal
		Leukemia Mononuclear	
	Centrilobular	Necrosis	Minimal
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Galactoceles	Mild
[Galactoceles TGLS = 6-13]			
Mesentery	Fat	Necrosis	Mild
[Necrosis TGLS = 5-12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Moderate
		Inflammation	Suppurative, Minimal
		Leukemia Mononuclear	

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:04
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 748	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Moribund Sacrifice	DAY ON TEST: 657 HISTO: 32586
ORGAN AND ACCOUNTABLE SITE STATUS			
* Pancreas		Leukemia Mononuclear	
* Pituitary Gland	Pars Distalis	Adenoma	
		Leukemia Mononuclear	
* Spleen		Fibrosis	Mild
		Leukemia Mononuclear	
[Fibrosis TGLS = 4-11]			
[Leukemia Mononuclear TGLS = 3-11]			
* Thymus		Leukemia Mononuclear	
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	- Spleen Leukemia Mononuclear		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:04
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 749	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32587
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Adrenal Medulla	* Bone	* Bone Marrow	* Brain
* Clitoral Gland	* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Lymph Node, Mandibular	* Lymph Node, Mediastinal	* Lymph Node, Mesenteric
* Ovary	* Pancreas	* Parathyroid Gland	* Salivary Glands
* Skin	* Spleen	* Stomach, Forestomach	* Stomach, Glandular
* Thymus	* Trachea	* Urinary Bladder	* Uterus
MISSING			
* Lymph Node, Bronchial			
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
* Heart		Cardiomyopathy	Minimal
* Kidney		Nephropathy	Mild
* Larynx	Epiglottis	Metaplasia	Squamous, Marked
* Liver		Basophilic Focus	
* Lung		Carcinoma	Metastatic (Thyroid Gland)
Lymph Node	Deep Cervical	Carcinoma	Metastatic (Thyroid Gland)
[Carcinoma TGLS = 2-13]			
* Mammary Gland		Fibroadenoma	
[Fibroadenoma TGLS = 1-11+12]			
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Inflammation	Suppurative, Mild
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 4-8]			
* Thyroid Gland	C Cell	Carcinoma	
[Carcinoma TGLS = 3-2]			
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:04
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 750	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32588
ORGAN AND ACCOUNTABLE SITE STATUS			
NORMAL			
* Bone	* Bone Marrow	* Brain	* Clitoral Gland
* Esophagus	* Intestine Large, Cecum	* Intestine Large, Colon	* Intestine Large, Rectum
* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum	* Islets, Pancreatic
* Larynx	* Ovary	* Parathyroid Gland	* Salivary Glands
* Skin	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Trachea	* Urinary Bladder	* Uterus	
OBSERVATIONS			
* Adrenal Cortex		Hyperplasia	Mild
		Leukemia Mononuclear	
* Adrenal Medulla		Leukemia Mononuclear	
* Heart		Cardiomyopathy	Minimal
* Kidney		Leukemia Mononuclear	
		Nephropathy	Mild
* Liver		Basophilic Focus	
	Bile Duct	Hyperplasia	Minimal
		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 3-4]			
* Lung		Leukemia Mononuclear	
* Lymph Node, Bronchial		Leukemia Mononuclear	
* Lymph Node, Mandibular		Leukemia Mononuclear	
* Lymph Node, Mediastinal		Leukemia Mononuclear	
* Lymph Node, Mesenteric		Leukemia Mononuclear	
* Mammary Gland		Fibroadenoma	
* Nose	Olfactory Epi	Degeneration	Hyaline, Mild
		Inflammation	Suppurative, Minimal
* Pancreas		Atrophy	Minimal
* Pituitary Gland	Pars Distalis	Adenoma	
[Adenoma TGLS = 1-8]			
* Spleen		Leukemia Mononuclear	
[Leukemia Mononuclear TGLS = 2-11]			

* PROTOCOL REQUIRED TISSUE

Experiment Number: 88070-03
Test Type: CHRONIC
Species/Strain: Rat/F 344/N

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Isobutene
CAS Number: 115-11-7

Date Report Requested: 10/20/2014
Time Report Requested: 09:49:04
First Dose M/F: NA / NA
Lab: BNW

ANIMAL ID: 750	TRT#: 8 DOSE: 8000 PPM	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 735 HISTO: 32588
ORGAN AND ACCOUNTABLE SITE STATUS			
* Thyroid Gland	C Cell	Hyperplasia	Minimal
PRIMARY CAUSE OF DEATH	-		

**** END OF REPORT ****

* PROTOCOL REQUIRED TISSUE