

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:10
First Dose M/F: NA / NA
Lab: NA

C Number:	C04240
Cage Range:	All
Date Range:	All
Reasons For Removal:	All
Removal Date Range:	All
Treatment Groups:	All
Study Gender:	Male

ANIMAL ID: 1_001	TRT#: 1	SEX: Male	DAY ON TEST:
	DOSE: 25000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Lung		Pneumonia, Chronic Murine	
Pituitary gland		Chromophobe Adenoma	
Testis		Interstitial-Cell Tumor	
Urinary bladder		Transitional-Cell Papilloma	
PRIMARY CAUSE OF DEATH			
	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_002	TRT#: 1	SEX: Male	DAY ON TEST:
	DOSE: 25000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
		Pigmentation, Nos	
Liver	Bile Duct	Hyperplasia, Nos	
Lung		Pneumonia, Chronic Murine	
Pancreas		Pigmentation, Nos	
Testis		Atrophy, Nos	
		Interstitial-Cell Tumor	
Unspecified	Multiple Organs Nos	Mesothelioma, Malignant	
Zymbal gland		Squamous Cell Carcinoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_003	TRT#: 1 DOSE: 25000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Lung		Pneumonia, Chronic Murine	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Titanium dioxide

CAS Number: 13463-67-7

Date Report Requested: 10/26/2014

Time Report Requested: 14:21:10

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 1_004

TRT#: 1

SEX: Male

DAY ON TEST:

DOSE: 25000 PPM

DISP: Scheduled Sacrifice

HISTO:

OBSERVATIONS

Heart

Inflammation, Chronic

Kidney

Inflammation, Chronic

Preputial gland

Carcinoma, Nos

Testis

Interstitial-Cell Tumor

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

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Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
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First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 1_005	TRT#: 1 DOSE: 25000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Heart		Inflammation, Chronic	
Kidney		Inflammation, Chronic	
Pancreas		Periarteritis	
Pituitary gland		Chromophobe Adenoma	
Prostate		Inflammation, Suppurative	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Titanium dioxide

CAS Number: 13463-67-7

Date Report Requested: 10/26/2014

Time Report Requested: 14:21:10

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 1_006

TRT#: 1

DOSE: 25000 PPM

SEX: Male

DISP: Scheduled Sacrifice

DAY ON TEST:

HISTO:

OBSERVATIONS

Heart	Inflammation, Chronic
Kidney	Inflammation, Chronic
Pituitary gland	Chromophobe Adenoma
Testis	Interstitial-Cell Tumor

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_007	TRT#: 1	SEX: Male	DAY ON TEST:
	DOSE: 25000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Heart		Inflammation, Chronic	
Kidney		Inflammation, Chronic	
Pancreas		Periarteritis	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_008	TRT#: 1	SEX: Male	DAY ON TEST:
	DOSE: 25000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Testis		Interstitial-Cell Tumor	
Unspecified		Fibroma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_009	TRT#: 1	SEX: Male	DAY ON TEST:
	DOSE: 25000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Liver		Focal Cellular Change	
Preputial gland		Hyperplasia, Nos	
Testis		Interstitial-Cell Tumor	
Thyroid		C-Cell Adenoma	
PRIMARY CAUSE OF DEATH			
	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_010	TRT#: 1 DOSE: 25000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Intestine Large	Colon	Parasitism	
Kidney		Inflammation, Chronic	
Lung		Hemorrhage	
Pancreas		Inflammation, Chronic Focal	
Testis		Interstitial-Cell Tumor	
Thyroid		C-Cell Carcinoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_011	TRT#: 1 DOSE: 25000 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Epididymis		Necrosis, Fat	
Heart		Thrombus, Organized	
Intestine Large	Colon	Parasitism	
Kidney		Inflammation, Chronic	
Testis		Interstitial-Cell Tumor	
Unspecified	Tail	Fibrosarcoma	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_012	TRT#: 1 DOSE: 25000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Heart	Colon	Inflammation, Chronic	
Intestine Large		Parasitism	
Kidney		Inflammation, Chronic	
Liver		Focal Cellular Change	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_013	TRT#: 1	SEX: Male	DAY ON TEST:
	DOSE: 25000 PPM	DISP: Natural Death	HISTO:
OBSERVATIONS			
Bone marrow		Hypoplasia, Hematopoietic	
Brain		Abscess, Nos	
Kidney		Inflammation, Chronic	
Pituitary gland		Chromophobe Adenoma	
Stomach		Acanthosis	
		Hyperkeratosis	
Testis		Interstitial-Cell Tumor	
Unspecified	Diaphragm Nos	Hernia, Nos	
Zymbal gland		Squamous Cell Carcinoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_014	TRT#: 1	SEX: Male	DAY ON TEST:
	DOSE: 25000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Intestine Large	Colon	Parasitism	
Kidney		Inflammation, Chronic	
Liver		Focal Cellular Change	
Preputial gland		Cyst, Epidermal Inclusion	
		Inflammation, Chronic	
Seminal vesicle		Atrophy, Nos	
Spleen		Congestion, Nos	
Testis		Interstitial-Cell Tumor	
Unspecified	Face	Cyst, Epidermal Inclusion	
PRIMARY CAUSE OF DEATH	-		

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Lab: NA

ANIMAL ID: 1_015	TRT#: 1 DOSE: 25000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Lung		Pneumonia, Chronic Murine	
Pancreas	Islets	Islet-Cell Adenoma	
Seminal vesicle		Atrophy, Nos	
Testis		Interstitial-Cell Tumor	
Unspecified		Inflammation, Diffuse	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Titanium dioxide

CAS Number: 13463-67-7

Date Report Requested: 10/26/2014

Time Report Requested: 14:21:10

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 1_016

TRT#: 1

SEX: Male

DAY ON TEST:

DOSE: 25000 PPM

DISP: Scheduled Sacrifice

HISTO:

OBSERVATIONS

Heart		Inflammation, Chronic
Kidney		Inflammation, Chronic
Liver	Bile Duct	Hyperplasia, Nos
Lung		Hemorrhage
Skin	Flank	Squamous Cell Papilloma
Testis		Interstitial-Cell Tumor

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
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Time Report Requested: 14:21:10
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 1_017	TRT#: 1 DOSE: 25000 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: HISTO:
OBSERVATIONS			
Brain		Astrocytoma	
Heart	Myocardium Nos	Inflammation, Chronic	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_018	TRT#: 1 DOSE: 25000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Heart		Inflammation, Chronic	
Kidney		Inflammation, Chronic	
Lung		Pneumonia, Chronic Murine	
Testis		Interstitial-Cell Tumor	
Unspecified	Abdominal Cavity	Necrosis, Fat	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_019	TRT#: 1	SEX: Male	DAY ON TEST:
	DOSE: 25000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Heart		Inflammation, Chronic	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Lung		Pneumonia, Chronic Murine	
Pituitary gland		Chromophobe Adenoma	
Testis		Interstitial-Cell Tumor	
Unspecified	Back	Squamous Cell Papilloma	
PRIMARY CAUSE OF DEATH			
	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_020	TRT#: 1 DOSE: 25000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Lung		Hemorrhage	
Pancreas		Atrophy, Nos	
Preputial gland		Carcinoma, Nos	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_021	TRT#: 1	SEX: Male	DAY ON TEST:
	DOSE: 25000 PPM	DISP: Natural Death	HISTO:
OBSERVATIONS			
Bone marrow	Colon	Hypoplasia, Hematopoietic	
Intestine Large		Parasitism	
Kidney		Inflammation, Chronic	
Mammary gland		Galactocoele	
Pituitary gland		Chromophobe Adenoma	
Spleen		Pigmentation, Nos	
Stomach		Ulcer, Focal	
Testis		Atrophy, Nos	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_022	TRT#: 1 DOSE: 25000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Intestine Large	Colon	Parasitism	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Pancreas		Periarteritis	
Testis		Interstitial-Cell Tumor	
Unspecified		Fibroma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_023	TRT#: 1	SEX: Male	DAY ON TEST:
	DOSE: 25000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Pancreas		Periarteritis	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_024	TRT#: 1	SEX: Male	DAY ON TEST:
	DOSE: 25000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Heart		Inflammation, Chronic	
Intestine Large	Colon	Parasitism	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Testis		Interstitial-Cell Tumor	
Unspecified		Lipoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

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Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:10
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 1_025	TRT#: 1 DOSE: 25000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Heart		Inflammation, Chronic	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_026	TRT#: 1	SEX: Male	DAY ON TEST:
	DOSE: 25000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Epididymis		Necrosis, Fat	
Heart		Fibrosis	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Lung		Hemorrhage	
Testis		Interstitial-Cell Tumor	
Thymus		Embryonal Rest	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_027	TRT#: 1	SEX: Male	DAY ON TEST:
	DOSE: 25000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Lung		Congestion, Nos	
Pancreas	Islets	Islet-Cell Adenoma	
Pituitary gland		Chromophobe Adenoma	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_028	TRT#: 1 DOSE: 25000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Heart		Fibrosis	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Pituitary gland		Chromophobe Adenoma	
Prostate		Inflammation, Suppurative	
Testis		Interstitial-Cell Tumor	
Unspecified	Multiple Organs Nos	Leukemia, Monocytic	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_029	TRT#: 1 DOSE: 25000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Intestine Large	Colon	Parasitism	
Kidney		Inflammation, Chronic	
Testis		Interstitial-Cell Tumor	
Unspecified		Fibroma	
	Abdominal Cavity	Necrosis, Fat	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_030	TRT#: 1	SEX: Male	DAY ON TEST:
	DOSE: 25000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Heart		Inflammation, Chronic	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Preputial gland		Cyst, Epidermal Inclusion	
Testis		Interstitial-Cell Tumor	
Unspecified	Abdominal Cavity	Necrosis, Fat	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_031	TRT#: 1 DOSE: 25000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Intestine Large	Colon	Parasitism	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Testis		Interstitial-Cell Tumor	
Thyroid		C-Cell Adenoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_032	TRT#: 1 DOSE: 25000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Preputial gland		Carcinoma, Nos	
Stomach		Ulcer, Focal	
Testis		Interstitial-Cell Tumor	
Thyroid		C-Cell Adenoma	
Unspecified	Multiple Organs Nos	Leukemia, Monocytic	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_033	TRT#: 1 DOSE: 25000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS Intestine Large Kidney Lung Testis	Colon	Parasitism Inflammation, Chronic Hemorrhage Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_034	TRT#: 1	SEX: Male	DAY ON TEST:
	DOSE: 25000 PPM	DISP: Natural Death	HISTO:
OBSERVATIONS			
Intestine Small	Mesentery Nos	Periarteritis	
Kidney		Inflammation, Chronic	
Liver		Hepatocellular Carcinoma	
Lung		Hepatocellular Carcinoma, Metastatic	
Pancreas		Periarteritis	
Pituitary gland		Chromophobe Adenoma	
Testis		Interstitial-Cell Tumor	
Thymus		Hepatocellular Carcinoma, Metastatic	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_035	TRT#: 1	SEX: Male	DAY ON TEST:
	DOSE: 25000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Lung		Congestion, Nos	
Pancreas		Hyperplasia, Focal	
Pituitary gland		Chromophobe Adenoma	
Testis		Interstitial-Cell Tumor	
Thyroid		Hyperplasia, C Cell	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_036	TRT#: 1	SEX: Male	DAY ON TEST:
	DOSE: 25000 PPM	DISP: Natural Death	HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Heart		Fibrosis	
Kidney		Inflammation, Chronic	
Lung		Congestion, Nos	
Seminal vesicle		Atrophy, Nos	
Stomach		Ulcer, Focal	
Testis		Interstitial-Cell Tumor	
Unspecified	Multiple Organs Nos	Leukemia, Monocytic	
	Abdominal Cavity	Necrosis, Fat	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_037	TRT#: 1	SEX: Male	DAY ON TEST:
	DOSE: 25000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Heart		Fibrosis	
Intestine Large	Colon	Parasitism	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Testis		Interstitial-Cell Tumor	
Thyroid		Follicular-Cell Carcinoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_038	TRT#: 1 DOSE: 25000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS Intestine Large Preputial gland Testis	Colon	Parasitism Carcinoma, Nos Hyperplasia, Interstitial Cell	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

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

ANIMAL ID: 1_039	TRT#: 1 DOSE: 25000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Heart		Fibrosis	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Skin	Flank	Basal-Cell Carcinoma	
Spleen		Hematopoiesis	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_040	TRT#: 1	SEX: Male	DAY ON TEST:
	DOSE: 25000 PPM	DISP: Natural Death	HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Lung		Congestion, Nos	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_041	TRT#: 1	SEX: Male	DAY ON TEST:
	DOSE: 25000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Heart		Fibrosis	
Kidney		Inflammation, Chronic	
Preputial gland		Carcinoma, Nos	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_042	TRT#: 1 DOSE: 25000 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: HISTO:
OBSERVATIONS			
Seminal vesicle		Atrophy, Nos	
Testis		Interstitial-Cell Tumor	
Unspecified	Multiple Organs Nos	Leukemia, Granulocytic	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_043	TRT#: 1	SEX: Male	DAY ON TEST:
	DOSE: 25000 PPM	DISP: Moribund Sacrifice	HISTO:
OBSERVATIONS			
Testis		Hyperplasia, Interstitial Cell	
Unspecified	Groin	Hemangiosarcoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
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First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 1_044	TRT#: 1 DOSE: 25000 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Mammary gland		Fibroadenoma	
Stomach		Ulcer, Focal	
Testis		Atrophy, Nos	
		Interstitial-Cell Tumor	
Unspecified		Fibroma	
	Multiple Organs Nos	Leukemia, Monocytic	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

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Route: Dosed-Feed
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First Dose M/F: NA / NA
Lab: NA

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OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Heart		Fibrosis	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Fibrosis	
Testis		Interstitial-Cell Tumor	
Unspecified	Back	Basal-Cell Carcinoma	
	Multiple Organs Nos	Leukemia, Monocytic	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_046	TRT#: 1 DOSE: 25000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Testis		Atrophy, Nos	
		Interstitial-Cell Tumor	
Unspecified	Multiple Organs Nos	Leukemia, Monocytic	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_047	TRT#: 1	SEX: Male	DAY ON TEST:
	DOSE: 25000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Lung		Congestion, Nos	
Seminal vesicle		Atrophy, Nos	
Testis		Interstitial-Cell Tumor	
Thymus		Carcinoma, Nos	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_048	TRT#: 1	SEX: Male	DAY ON TEST:
	DOSE: 25000 PPM	DISP: Natural Death	HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Intestine Small	Ileum	Ulcer, Focal	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
		Infarct, Nos	
Mammary gland		Galactoceles	
Spleen		Infarct, Nos	
Stomach		Acanthosis	
		Hyperkeratosis	
		Ulcer, Focal	
Testis		Interstitial-Cell Tumor	
Unspecified	Groin	Fibroma	
	Multiple Organs Nos	Leukemia, Granulocytic	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_049	TRT#: 1 DOSE: 25000 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Liver		Congestion, Nos	
Lung		Congestion, Nos	
Spleen		Fibrosis	
Testis		Atrophy, Nos	
		Hyperplasia, Interstitial Cell	
		Interstitial-Cell Tumor	
Unspecified	Neck	Fibrosarcoma	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 1_050	TRT#: 1	SEX: Male	DAY ON TEST:
	DOSE: 25000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Heart		Fibrosis	
Intestine Large	Colon	Parasitism	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
	Centrilobular	Necrosis, Nos	
Lung		Pneumonia, Chronic Murine	
Salivary gland		Inflammation, Chronic	
Seminal vesicle		Atrophy, Nos	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_001	TRT#: 2 DOSE: 50000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Heart		Fibrosis	
Kidney		Inflammation, Chronic	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_002	TRT#: 2 DOSE: 50000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Lymph node	Cervical Lymph Node Nos	Hyperplasia, Lymphoid	
Seminal vesicle		Atrophy, Nos	
Skin	Face	Squamous Cell Carcinoma	
Testis		Hyperplasia, Interstitial Cell	
Unspecified	Abdominal Cavity	Necrosis, Fat	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_003	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Heart		Fibrosis	
Kidney		Inflammation, Chronic	
		Mixed Tumor, Benign	
Liver	Bile Duct	Hyperplasia, Nos	
Lung		Hemorrhage	
Testis		Interstitial-Cell Tumor	
Unspecified	Multiple Organs Nos	Leukemia, Monocytic	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 2_004	TRT#: 2 DOSE: 50000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Heart		Fibrosis	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Prostate		Inflammation, Suppurative	
Testis		Interstitial-Cell Tumor	
Unspecified		Fibroma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_005	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Natural Death	HISTO:
OBSERVATIONS			
Brain		Hydrocephalus, Nos	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Lung		Congestion, Nos	
Pituitary gland		Chromophobe Adenoma	
Prostate		Inflammation, Suppurative	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 2_006	TRT#: 2 DOSE: 50000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Adrenal gland	Medulla	Hyperplasia, Nos Pheochromocytoma	
Kidney		Inflammation, Chronic	
Pancreas		Periarteritis	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_007	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Heart		Fibrosis	
Kidney		Inflammation, Chronic	
Preputial gland		Abscess, Nos	
		Carcinoma, Nos	
Skin	Back	Keratoacanthoma	
Testis		Atrophy, Nos	
		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_008	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Natural Death	HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Liver		Degeneration, Lipoid	
	Bile Duct	Hyperplasia, Nos	
Pancreas	Islets	Islet-Cell Adenoma	
Pituitary gland		Hemorrhage	
Seminal vesicle		Atrophy, Nos	
Skin		Keratoacanthoma	
Stomach		Ulcer, Focal	
Testis		Interstitial-Cell Tumor	
Unspecified	Multiple Organs Nos	Leukemia, Monocytic	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_009	TRT#: 2 DOSE: 50000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Heart		Inflammation, Chronic	
Intestine Large	Colon	Parasitism	
Kidney		Inflammation, Chronic	
Prostate		Inflammation, Suppurative	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_010	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Heart		Fibrosis	
Kidney		Inflammation, Chronic	
Lung		Pneumonia, Chronic Murine	
Pituitary gland		Chromophobe Adenoma	
Prostate		Inflammation, Suppurative	
Spleen		Pigmentation, Nos	
Stomach		Inflammation, Chronic	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 2_011	TRT#: 2 DOSE: 50000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Spleen		Hematopoiesis	
Unspecified		Sarcoma, Nos	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_012	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Heart		Fibrosis	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Mammary gland		Fibroadenoma	
Pancreas	Acinus	Atrophy, Nos	
Testis		Interstitial-Cell Tumor	
Thyroid		Follicular-Cell Adenoma	
Unspecified		Fibroma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_013	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Natural Death	HISTO:
OBSERVATIONS			
Liver	Bile Duct	Hyperplasia, Nos	
Pancreas	Duct Nos	Hyperplasia, Nos	
Testis		Atrophy, Nos	
		Hyperplasia, Interstitial Cell	
		Interstitial-Cell Tumor	
Unspecified	Multiple Organs Nos	Leukemia, Monocytic	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_014	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Lung		Hemorrhage	
Seminal vesicle		Atrophy, Nos	
Spleen		Hemangiosarcoma	
Testis		Interstitial-Cell Tumor	
Thymus		Hyperplasia, Nos	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_015	TRT#: 2 DOSE: 50000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Lung		Congestion, Nos	
Skin		Squamous Cell Carcinoma	
Spleen		Hemangiosarcoma	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_016	TRT#: 2 DOSE: 50000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Lung		Hemorrhage	
Pituitary gland		Chromophobe Adenoma	
Prostate		Inflammation, Suppurative	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 2_017	TRT#: 2 DOSE: 50000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Heart		Fibrosis	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Seminal vesicle		Atrophy, Nos	
Skin	Back	Keratoacanthoma	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_018	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Lung		Hemorrhage	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 2_019	TRT#: 2 DOSE: 50000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Kidney		Inflammation, Chronic	
Lung		Congestion, Nos	
Pancreas		Periarteritis	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Titanium dioxide

CAS Number: 13463-67-7

Date Report Requested: 10/26/2014

Time Report Requested: 14:21:11

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 2_020

TRT#: 2

SEX: Male

DAY ON TEST:

DOSE: 50000 PPM

DISP: Scheduled Sacrifice

HISTO:

OBSERVATIONS

Kidney

Inflammation, Chronic

Liver

Infarct, Nos

Lung

Congestion, Nos

Testis

Interstitial-Cell Tumor

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_021	TRT#: 2 DOSE: 50000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Heart		Fibrosis	
Kidney		Inflammation, Chronic	
Lung		Congestion, Nos	
Spleen		Congestion, Nos	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_022	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Lung		Congestion, Nos	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_023	TRT#: 2 DOSE: 50000 PPM	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Liver		Infarct, Nos	
Lung		Pneumonia, Chronic Murine	
Pituitary gland		Chromophobe Adenoma	
Preputial gland		Carcinoma, Nos	
Prostate		Inflammation, Suppurative	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_024	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_025	TRT#: 2 DOSE: 50000 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Lung		Congestion, Nos	
Pancreas	Islets	Islet-Cell Adenoma	
Prostate		Inflammation, Suppurative	
Testis		Hyperplasia, Interstitial Cell	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_026	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Intestine Large	Colon	Parasitism	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Lung		Hemorrhage	
Seminal vesicle		Atrophy, Nos	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_027	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
		Infarct, Nos	
Seminal vesicle		Atrophy, Nos	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 2_028	TRT#: 2 DOSE: 50000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Lung		Congestion, Nos	
Peritoneum	Peritoneal Cavity Nos	Necrosis, Fat	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 2_029	TRT#: 2 DOSE: 50000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Blood vessel	Aorta Nos	Inflammation, Nos	
Intestine Large	Colon	Parasitism	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_030	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Intestine Large	Cecum, Colon	Fibrosarcoma	
	Colon	Parasitism	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Lung		Congestion, Nos	
Pituitary gland		Angiectasis	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_031	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Adrenal gland		Angiectasis	
Kidney		Cyst, Nos	
		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Seminal vesicle		Atrophy, Nos	
Testis		Interstitial-Cell Tumor	
	Tunica Vaginalis	Mesothelioma, Nos	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_032	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Natural Death	HISTO:
OBSERVATIONS			
Kidney		Congestion, Nos	
Liver		Congestion, Nos	
Lung		Congestion, Nos	
Testis		Atrophy, Nos	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_033	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Natural Death	HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Mammary gland		Fibroadenoma	
Peritoneum	Peritoneal Cavity Nos	Necrosis, Fat	
Pituitary gland		Chromophobe Adenoma	
Prostate		Inflammation, Suppurative	
Stomach		Ulcer, Focal	
Testis		Atrophy, Nos	
		Interstitial-Cell Tumor	
Unspecified	Multiple Organs Nos	Leukemia, Monocytic	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 2_034	TRT#: 2 DOSE: 50000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Heart		Fibrosis	
Intestine Large	Colon	Parasitism	
Kidney		Inflammation, Chronic	
Preputial gland		Carcinoma, Nos	
Testis		Interstitial-Cell Tumor	
Unspecified	Multiple Organs Nos	Leukemia, Monocytic	
	Abdominal Cavity	Necrosis, Fat	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_035	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Kidney		Inflammation, Chronic	
Spleen		Hyperplasia, Stromal	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_036	TRT#: 2 DOSE: 50000 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Liver		Necrosis, Nos	
Stomach		Ulcer, Focal	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_037	TRT#: 2 DOSE: 50000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Intestine Large	Colon	Parasitism	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Testis		Interstitial-Cell Tumor	
Thyroid		Follicular-Cell Carcinoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_038	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Heart		Fibrosis	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Lung		Congestion, Nos	
Seminal vesicle		Atrophy, Nos	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 2_039	TRT#: 2 DOSE: 50000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Mammary gland		Fibroadenoma	
Spleen		Hematopoiesis	
Testis		Interstitial-Cell Tumor	
Thyroid		Cystic Follicles	
Unspecified		Fibroma	
Axilla		Granuloma, Foreign Body	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_040	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Moribund Sacrifice	HISTO:
OBSERVATIONS			
Liver		Focal Cellular Change	
Preputial gland		Carcinoma, Nos	
Spleen		Hematopoiesis	
Stomach		Ulcer, Focal	
Testis		Atrophy, Nos	
Unspecified	Flank	Fibroma	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_041	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Lung		Pneumonia, Chronic Murine	
Seminal vesicle		Atrophy, Nos	
Spleen		Fibrosis	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_042	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Kidney		Cyst, Nos	
		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Lung		Hemorrhage	
Pancreas	Acinus	Atrophy, Nos	
Peritoneum	Peritoneal Cavity Nos	Necrosis, Fat	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_043	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Intestine Small	Ileum, Ileum	Inflammation, Chronic	
	Ileum, Ileum	Meckel'S Diverticulum	
Lymph node	Mesenteric Lymph Node	Lymphangiectasis	
Pancreas	Islets	Islet-Cell Carcinoma	
Testis		Atrophy, Nos	
		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 2_044	TRT#: 2 DOSE: 50000 PPM	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Kidney		Inflammation, Chronic	
Lung		Congestion, Nos	
Pancreas		Periarteritis	
Preputial gland		Carcinoma, Nos	
Spleen		Fibrosis	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 2_045	TRT#: 2 DOSE: 50000 PPM	SEX: Male DISP: Natural Death	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Nephrosis, Hydro Periarteritis	
Lung		Pneumonia, Chronic Murine	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_046	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Natural Death	HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Heart		Fibrosis	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
		Necrosis, Nos	
Lung		Inflammation, Suppurative	
Lymph node	Bronchial Lymph Node	Thrombosis, Nos	
	Mesenteric Lymph Node	Thrombosis, Nos	
Pituitary gland		Cyst, Nos	
Spleen		Infarct, Nos	
Testis		Interstitial-Cell Tumor	
Thymus		Thrombosis, Nos	
PRIMARY CAUSE OF DEATH	-		

ANIMAL ID: 2_047	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
		Necrosis, Focal	
Lymph node		Lymphangiectasis	
Pituitary gland		Chromophobe Adenoma	
Preputial gland		Carcinoma, Nos	
Spleen		Hematopoiesis	
Testis		Hyperplasia, Interstitial Cell	
		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH			
	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_048	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_049	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Scheduled Sacrifice	HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Kidney		Inflammation, Chronic	
Liver		Hemangiosarcoma, Metastatic	
Seminal vesicle		Atrophy, Nos	
Spleen		Hemangiosarcoma	
Testis		Interstitial-Cell Tumor	
Thyroid		C-Cell Carcinoma	
Unspecified	Multiple Organs Nos	Leukemia, Granulocytic	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 2_050	TRT#: 2	SEX: Male	DAY ON TEST:
	DOSE: 50000 PPM	DISP: Natural Death	HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Heart		Fibrosis	
Kidney		Inflammation, Chronic	
Liver	Bile Duct	Hyperplasia, Nos	
Lung		Congestion, Nos	
Mammary gland		Galactoceles	
Pituitary gland		Chromophobe Adenoma	
Prostate		Inflammation, Chronic	
Testis		Atrophy, Nos	
Unspecified	Axilla	Fibroma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 3_001	TRT#: 3 DOSE: 0	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Kidney		Inflammation, Chronic	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 3_002	TRT#: 3 DOSE: 0	SEX: Male DISP: Natural Death	DAY ON TEST: HISTO:
OBSERVATIONS			
Lung		Pneumonia, Chronic Murine	
Testis		Interstitial-Cell Tumor	
Unspecified	Multiple Organs Nos	Leukemia, Monocytic	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 3_003	TRT#: 3 DOSE: 0	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Titanium dioxide

CAS Number: 13463-67-7

Date Report Requested: 10/26/2014

Time Report Requested: 14:21:11

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 3_004	TRT#: 3 DOSE: 0	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Pancreas	Islets	Islet-Cell Adenoma	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 3_006	TRT#: 3 DOSE: 0	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 3_007	TRT#: 3 DOSE: 0	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Kidney		Inflammation, Chronic	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 3_008	TRT#: 3 DOSE: 0	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Spleen		Hemangiosarcoma	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 3_009	TRT#: 3 DOSE: 0	SEX: Male DISP: Natural Death	DAY ON TEST: HISTO:
OBSERVATIONS			
Testis		Interstitial-Cell Tumor	
Unspecified	Multiple Organs Nos	Leukemia, Monocytic	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 3_010	TRT#: 3 DOSE: 0	SEX: Male DISP: Natural Death	DAY ON TEST: HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 3_011	TRT#: 3 DOSE: 0	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Mammary gland		Fibroadenoma	
Thyroid		Hyperplasia, Follicular Cell	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Titanium dioxide

CAS Number: 13463-67-7

Date Report Requested: 10/26/2014

Time Report Requested: 14:21:11

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 3_012

TRT#: 3

DOSE: 0

SEX: Male

DISP: Scheduled Sacrifice

DAY ON TEST:

HISTO:

OBSERVATIONS

Kidney

Lung

Testis

Unspecified

Multiple Organs Nos

Inflammation, Chronic

Pneumonia, Chronic Murine

Interstitial-Cell Tumor

Leukemia, Monocytic

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 3_013	TRT#: 3 DOSE: 0	SEX: Male DISP: Natural Death	DAY ON TEST: HISTO:
OBSERVATIONS			
Testis		Interstitial-Cell Tumor	
Unspecified	Multiple Organs Nos	Leukemia, Monocytic	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Titanium dioxide

CAS Number: 13463-67-7

Date Report Requested: 10/26/2014

Time Report Requested: 14:21:11

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 3_014

TRT#: 3

DOSE: 0

SEX: Male

DISP: Scheduled Sacrifice

DAY ON TEST:

HISTO:

OBSERVATIONS

Kidney

Testis

Inflammation, Chronic

Atrophy, Nos

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Titanium dioxide

CAS Number: 13463-67-7

Date Report Requested: 10/26/2014

Time Report Requested: 14:21:11

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 3_015	TRT#: 3 DOSE: 0	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Pancreas		Periarteritis	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Titanium dioxide

CAS Number: 13463-67-7

Date Report Requested: 10/26/2014

Time Report Requested: 14:21:11

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 3_016

TRT#: 3

DOSE: 0

SEX: Male

DISP: Natural Death

DAY ON TEST:

HISTO:

OBSERVATIONS

Kidney

Amyloidosis

Prostate

Inflammation, Chronic

Testis

Inflammation, Nos

Interstitial-Cell Tumor

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 3_018	TRT#: 3 DOSE: 0	SEX: Male DISP: Natural Death	DAY ON TEST: HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Testis		Interstitial-Cell Tumor	
Thyroid		C-Cell Carcinoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 3_019	TRT#: 3 DOSE: 0	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Kidney		Inflammation, Chronic	
Testis		Interstitial-Cell Tumor	
Unspecified	Tail	Squamous Cell Carcinoma	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Titanium dioxide

CAS Number: 13463-67-7

Date Report Requested: 10/26/2014

Time Report Requested: 14:21:11

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 3_020	TRT#: 3 DOSE: 0	SEX: Male DISP: Natural Death	DAY ON TEST: HISTO:
OBSERVATIONS			
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 3_021	TRT#: 3 DOSE: 0	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Skin		Cyst, Epidermal Inclusion	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 3_022	TRT#: 3 DOSE: 0	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Preputial gland		Carcinoma, Nos	
Skin	Axilla	Metaplasia, Squamous	
Testis		Interstitial-Cell Tumor	
Unspecified	Multiple Organs Nos	Leukemia, Monocytic	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 3_023	TRT#: 3 DOSE: 0	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Lung		Pneumonia, Chronic Murine	
Testis		Interstitial-Cell Tumor	
Unspecified	Flank	Fibrosarcoma	
	Multiple Organs Nos	Leukemia, Monocytic	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 3_024	TRT#: 3 DOSE: 0	SEX: Male DISP: Natural Death	DAY ON TEST: HISTO:
OBSERVATIONS			
Heart	Myocardium Nos	Inflammation, Chronic Thrombosis, Nos	
Liver	Centrilobular	Necrosis, Nos	
Prostate		Inflammation, Suppurative	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 3_025	TRT#: 3 DOSE: 0	SEX: Male DISP: Natural Death	DAY ON TEST: HISTO:
OBSERVATIONS			
Epididymis		Interstitial-Cell Tumor, Invasive	
Lung		Pneumonia, Chronic Murine	
Testis		Interstitial-Cell Tumor, Malignant	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 3_026	TRT#: 3 DOSE: 0	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Pancreas	Islets	Hyperplasia, Nos	
Pituitary gland		Chromophobe Adenoma	
Testis		Atrophy, Nos	
		Interstitial-Cell Tumor	
Thyroid		Follicular-Cell Carcinoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 3_027	TRT#: 3 DOSE: 0	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 3_028	TRT#: 3 DOSE: 0	SEX: Male DISP: Natural Death	DAY ON TEST: HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Testis		Interstitial-Cell Tumor	
Unspecified	Multiple Organs Nos	Leukemia, Monocytic	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 3_029	TRT#: 3 DOSE: 0	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Preputial gland		Carcinoma, Nos	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 3_030	TRT#: 3 DOSE: 0	SEX: Male DISP: Natural Death	DAY ON TEST: HISTO:
OBSERVATIONS			
Lung		Hemangiopericytoma, Metastatic	
Testis		Interstitial-Cell Tumor	
Unspecified	Neck	Hemangiopericytoma, Malignant	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 3_031	TRT#: 3 DOSE: 0	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Adrenal gland		Pheochromocytoma	
Bone		Osteosarcoma	
Pituitary gland		Chromophobe Adenoma	
Skeletal muscle		Osteosarcoma, Invasive	
Testis		Interstitial-Cell Tumor	
Unspecified	Multiple Organs Nos	Mesothelioma, Nos	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 3_032	TRT#: 3 DOSE: 0	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Intestine Large	Colon	Parasitism	
Intestine Small	Mesentery Nos	Necrosis, Fat	
Kidney		Inflammation, Chronic	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 3_033	TRT#: 3 DOSE: 0	SEX: Male DISP: Natural Death	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Pyelonephritis, Nos	
Testis		Atrophy, Nos	
		Interstitial-Cell Tumor	
Unspecified	Multiple Organs Nos	Leukemia, Monocytic	
PRIMARY CAUSE OF DEATH			
-			

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 3_034	TRT#: 3 DOSE: 0	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Pituitary gland		Chromophobe Adenoma	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 3_035	TRT#: 3 DOSE: 0	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 3_036	TRT#: 3 DOSE: 0	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Liver		Neoplastic Nodule	
Testis		Interstitial-Cell Tumor	
Thyroid		C-Cell Carcinoma	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 3_037	TRT#: 3 DOSE: 0	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Intestine Large	Colon	Parasitism	
Kidney		Inflammation, Chronic	
Pancreas		Periarteritis	
Testis		Interstitial-Cell Tumor	
Thyroid		C-Cell Carcinoma	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 3_038	TRT#: 3 DOSE: 0	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 3_039	TRT#: 3 DOSE: 0	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Heart	Myocardium Nos Pericardium Nos Mesentery Nos	Degeneration, Nos Inflammation, Nos Inflammation, Nos Periarteritis Inflammation, Chronic Peliosis Hepatis Chromophobe Adenoma Interstitial-Cell Tumor C-Cell Carcinoma Leukemia, Monocytic	
Intestine Small			
Kidney			
Liver			
Pituitary gland			
Testis			
Thyroid			
Unspecified	Multiple Organs Nos		
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Titanium dioxide

CAS Number: 13463-67-7

Date Report Requested: 10/26/2014

Time Report Requested: 14:21:11

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 3_040	TRT#: 3 DOSE: 0	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Adrenal gland	Cortex Nos	Degeneration, Nos	
Kidney		Inflammation, Chronic	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 3_041	TRT#: 3 DOSE: 0	SEX: Male DISP: Natural Death	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Testis		Interstitial-Cell Tumor	
Unspecified	Multiple Organs Nos	Leukemia, Monocytic	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 3_042	TRT#: 3 DOSE: 0	SEX: Male DISP: Natural Death	DAY ON TEST: HISTO:
OBSERVATIONS			
Pancreas		Atrophy, Nos	
Skin		Squamous Cell Carcinoma	
Testis		Interstitial-Cell Tumor	
Unspecified	Multiple Organs Nos	Leukemia, Monocytic	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240
Test Type: Long-Term
Route: Dosed-Feed
Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA
Test Compound: Titanium dioxide
CAS Number: 13463-67-7

Date Report Requested: 10/26/2014
Time Report Requested: 14:21:11
First Dose M/F: NA / NA
Lab: NA

ANIMAL ID: 3_043	TRT#: 3 DOSE: 0	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Kidney		Inflammation, Chronic	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH		-	

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Titanium dioxide

CAS Number: 13463-67-7

Date Report Requested: 10/26/2014

Time Report Requested: 14:21:11

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 3_044

TRT#: 3

DOSE: 0

SEX: Male

DISP: Scheduled Sacrifice

DAY ON TEST:

HISTO:

OBSERVATIONS

Kidney

Testis

Inflammation, Chronic

Interstitial-Cell Tumor

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 3_045	TRT#: 3 DOSE: 0	SEX: Male DISP: Scheduled Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Heart	Myocardium Nos	Degeneration, Nos Fibrosis	
Kidney		Inflammation, Chronic	
Testis		Interstitial-Cell Tumor	
Unspecified	Multiple Organs Nos	Leukemia, Monocytic	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 3_046	TRT#: 3 DOSE: 0	SEX: Male DISP: Moribund Sacrifice	DAY ON TEST: HISTO:
OBSERVATIONS			
Intestine Large	Colon	Parasitism	
Intestine Small	Mesentery Nos	Necrosis, Fat	
Kidney		Inflammation, Chronic	
Pituitary gland		Chromophobe Adenoma	
Testis		Interstitial-Cell Tumor	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Titanium dioxide

CAS Number: 13463-67-7

Date Report Requested: 10/26/2014

Time Report Requested: 14:21:11

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 3_047

TRT#: 3

DOSE: 0

SEX: Male

DISP: Scheduled Sacrifice

DAY ON TEST:

HISTO:

OBSERVATIONS

Kidney

Testis

Inflammation, Chronic

Interstitial-Cell Tumor

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Titanium dioxide

CAS Number: 13463-67-7

Date Report Requested: 10/26/2014

Time Report Requested: 14:21:11

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 3_048

TRT#: 3

DOSE: 0

SEX: Male

DISP: Natural Death

DAY ON TEST:

HISTO:

OBSERVATIONS

Liver

Lung

Testis

Unspecified

Multiple Organs Nos

Metamorphosis, Fatty

Pneumonia, Chronic Murine

Interstitial-Cell Tumor

Mesothelioma, Nos

PRIMARY CAUSE OF DEATH

-

* PROTOCOL REQUIRED TISSUE

ANIMAL ID: 3_049	TRT#: 3 DOSE: 0	SEX: Male DISP: Natural Death	DAY ON TEST: HISTO:
OBSERVATIONS			
Testis		Interstitial-Cell Tumor	
Unspecified	Groin	Fibroma	
	Multiple Organs Nos	Leukemia, Monocytic	
PRIMARY CAUSE OF DEATH	-		

* PROTOCOL REQUIRED TISSUE

Experiment Number: C04240

Test Type: Long-Term

Route: Dosed-Feed

Species/Strain: Rat/F344

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Test Compound: Titanium dioxide

CAS Number: 13463-67-7

Date Report Requested: 10/26/2014

Time Report Requested: 14:21:11

First Dose M/F: NA / NA

Lab: NA

ANIMAL ID: 3_050

TRT#: 3

DOSE: 0

SEX: Male

DISP: Scheduled Sacrifice

DAY ON TEST:

HISTO:

OBSERVATIONS

Kidney

Testis

Inflammation, Chronic

Interstitial-Cell Tumor

PRIMARY CAUSE OF DEATH

-

**** END OF REPORT ****

* PROTOCOL REQUIRED TISSUE