

Experiment Number: 20403 - 01
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS
Zinc Carbonate, Basic
CAS Number: 5263-02-5

Date Report Requested: 11/22/2015
Time Report Requested: 18:28:06
First Dose M/F: 09/03/09 / 09/04/09
Lab: BAT

Custom Report - Zinc Deficiency

NTP Study Number:	C20403		
Lock Date:	04/05/2013		
Cage Range:	ALL		
Date Range:	ALL		
Reasons For Removal:	25021 TSAC	25020 NATD	25019 MSAC
Removal Date Range:	ALL		
Treatment Groups:	Include 001 Control (38ppm) Include 004 3.5ppm SevZnDef	Include 002 Control (38ppm) Include 005 7ppm ZnDef	Include 003 3.5ppm SevZnDef Include 006 7ppm ZnDef
Study Gender:	Both		
TDMSE Version:	2.5.0.0_sfh		
PWG Approval Date:	09/08/2015		

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**FOR ALL DOSES THE TUMOR RATES IN THE FOLLOWING TISSUES/ORGANS ARE BASED ON NUMBER OF TISSUES EXAMINED.
IN OTHER TISSUES/ORGANS RATES ARE BASED ON THE NUMBER OF ANIMALS NECROPSIED.**

Adrenal Medulla

Brain

Heart

Islets, Pancreatic

Pancreas

Pituitary Gland

Testes

Thyroid Gland

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SUMMARY OF STATISTICALLY SIGNIFICANT ($P \leq .05$) RESULTS IN THE ANALYSIS OF ZINC CARBONATE, BASIC

MALE RATS

Organ

Mammary Gland
Pancreas

Pituitary Gland: Pars Distalis or Unspecified Site

Skin

All Organs

FEMALE RATS

Organ

Mammary Gland

Morphology

Fibroadenoma

Adenoma

Carcinoma or Adenoma

Adenoma

Basal or Sq. Cell Carcinoma, Carcinoma, Basosq. Tumor (M or B), Basal Cell Adenoma, Adenoma, Papilloma, Sq Papilloma, Keratoacanthoma, Trichoepithelioma

Keratoacanthoma

Squamous Cell Papilloma, Papilloma, Squamous Cell Carcinoma or Keratoacanthoma

Squamous Cell Papilloma, Papilloma, or Keratoacanthoma

Benign Tumors

Morphology

Adenoma

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**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Adrenal Medulla			
Pheochromocytoma Benign			
<hr/>			
TUMOR RATES			
OVERALL (a)	5/50 (10%)	10/50 (20%)	3/50 (6%)
POLY-3 RATE (b)	5/39.10	10/42.12	3/43.54
POLY-3 PERCENT (g)	12.8%	23.7%	6.9%
TERMINAL (d)	2/18 (11%)	6/27 (22%)	3/31 (10%)
FIRST INCIDENCE	652	659	734 (T)
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
<hr/>			
STATISTICAL TESTS			
POLY 3	P=0.230N	P=0.160	P=0.298N
POLY 1.5	P=0.269N	P=0.147	P=0.324N
POLY 6	P=0.178N	P=0.187	P=0.260N
COCH-ARM / FISHERS	P=0.322N	P=0.131	P=0.357N
MAX-ISO-POLY-3	P=0.103N	P=0.107	P=0.196N
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

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TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Adrenal Medulla			
Pheochromocytoma: Benign, Complex, Malignant, NOS			
<hr/>			
TUMOR RATES			
OVERALL (a)	6/50 (12%)	11/50 (22%)	5/50 (10%)
POLY-3 RATE (b)	6/39.10	11/42.12	5/43.54
POLY-3 PERCENT (g)	15.4%	26.1%	11.5%
TERMINAL (d)	3/18 (17%)	7/27 (26%)	5/31 (16%)
FIRST INCIDENCE	652	659	734 (T)
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
<hr/>			
STATISTICAL TESTS			
POLY 3	P=0.336N	P=0.177	P=0.424N
POLY 1.5	P=0.383N	P=0.161	P=0.458N
POLY 6	P=0.269N	P=0.208	P=0.373N
COCH-ARM / FISHERS	P=0.444N	P=0.143	P=0.500N
MAX-ISO-POLY-3	P=0.196N	P=0.123	P=0.313N
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

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**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Brain			
Oligodendroglioma, Glioma, or Astrocytoma			
TUMOR RATES			
OVERALL (a)	0/48 (0%)	0/50 (0%)	2/50 (4%)
POLY-3 RATE (b)	0/37.26	0/41.50	2/43.82
POLY-3 PERCENT (g)	0%	0%	4.6%
TERMINAL (d)	0/18 (0%)	0/27 (0%)	0/31 (0%)
FIRST INCIDENCE	---	---	687
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.109	(e)	P=0.275
POLY 1.5	P=0.104	(e)	P=0.262
POLY 6	P=0.118	(e)	P=0.297
COCH-ARM / FISHERS	P=0.099	(e)	P=0.258
MAX-ISO-POLY-3	P=0.088	(e)	P=0.109
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

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**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Heart			
Schwannoma Malignant			
<hr/>			
TUMOR RATES			
OVERALL (a)	0/50 (0%)	2/50 (4%)	1/50 (2%)
POLY-3 RATE (b)	0/38.40	2/42.54	1/43.54
POLY-3 PERCENT (g)	0%	4.7%	2.3%
TERMINAL (d)	0/18 (0%)	0/27 (0%)	1/31 (3%)
FIRST INCIDENCE	---	568	734 (T)
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
<hr/>			
STATISTICAL TESTS			
POLY 3	P=0.421	P=0.260	P=0.525
POLY 1.5	P=0.393	P=0.250	P=0.514
POLY 6	P=0.468	P=0.278	P=0.543
COCH-ARM / FISHERS	P=0.360	P=0.247	P=0.500
MAX-ISO-POLY-3	P=0.237	P=0.098	P=0.189
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

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TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Intestine Small: Site Unspecified Carcinoma			
<hr/>			
TUMOR RATES	#	#	#
OVERALL (a)	2/50 (4%)	1/50 (2%)	0/50 (0%)
POLY-3 RATE (b)	2/38.89	1/41.74	0/43.54
POLY-3 PERCENT (g)	5.1%	2.4%	0%
TERMINAL (d)	1/18 (6%)	0/27 (0%)	0/31 (0%)
FIRST INCIDENCE	586	670	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
<hr/>			
STATISTICAL TESTS			
POLY 3	P=0.129N	P=0.475N	P=0.213N
POLY 1.5	P=0.135N	P=0.486N	P=0.224N
POLY 6	P=0.121N	P=0.456N	P=0.196N
COCH-ARM / FISHERS	P=0.142N	P=0.500N	P=0.247N
MAX-ISO-POLY-3	P=0.104N	P=0.266N	P=0.075N
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

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TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Islets, Pancreatic Adenoma			
TUMOR RATES			
OVERALL (a)	2/50 (4%)	2/50 (4%)	6/50 (12%)
POLY-3 RATE (b)	2/38.40	2/41.83	6/43.80
POLY-3 PERCENT (g)	5.2%	4.8%	13.7%
TERMINAL (d)	2/18 (11%)	1/27 (4%)	5/31 (16%)
FIRST INCIDENCE	734 (T)	641	663
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.103	P=0.663N	P=0.178
POLY 1.5	P=0.092	P=0.677N	P=0.157
POLY 6	P=0.124	P=0.639N	P=0.218
COCH-ARM / FISHERS	P=0.080	P=0.691N	P=0.134
MAX-ISO-POLY-3	P=0.119	P=0.466N	P=0.111
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

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TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Islets, Pancreatic Carcinoma or Adenoma			
TUMOR RATES			
OVERALL (a)	3/50 (6%)	3/50 (6%)	6/50 (12%)
POLY-3 RATE (b)	3/38.69	3/41.83	6/43.80
POLY-3 PERCENT (g)	7.8%	7.2%	13.7%
TERMINAL (d)	2/18 (11%)	2/27 (7%)	5/31 (16%)
FIRST INCIDENCE	656	641	663
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.224	P=0.627N	P=0.306
POLY 1.5	P=0.203	P=0.642N	P=0.276
POLY 6	P=0.261	P=0.599N	P=0.356
COCH-ARM / FISHERS	P=0.178	P=0.661N	P=0.243
MAX-ISO-POLY-3	P=0.257	P=0.461N	P=0.209
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

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TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Mammary Gland Adenoma			
<hr/>			
TUMOR RATES	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/38.40	0/41.50	0/43.54
POLY-3 PERCENT (g)	0%	0%	0%
TERMINAL (d)	0/18 (0%)	0/27 (0%)	0/31 (0%)
FIRST INCIDENCE	---	---	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
<hr/>			
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

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DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Mammary Gland Carcinoma			
TUMOR RATES	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/38.40	0/41.50	0/43.54
POLY-3 PERCENT (g)	0%	0%	0%
TERMINAL (d)	0/18 (0%)	0/27 (0%)	0/31 (0%)
FIRST INCIDENCE	---	---	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

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DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Mammary Gland Carcinoma or Adenoma			
TUMOR RATES	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/38.40	0/41.50	0/43.54
POLY-3 PERCENT (g)	0%	0%	0%
TERMINAL (d)	0/18 (0%)	0/27 (0%)	0/31 (0%)
FIRST INCIDENCE	---	---	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

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TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Mammary Gland Fibroadenoma			
TUMOR RATES	#	#	#
OVERALL (a)	3/50 (6%)	0/50 (0%)	3/50 (6%)
POLY-3 RATE (b)	3/39.17	0/41.50	3/43.75
POLY-3 PERCENT (g)	7.7%	0%	6.9%
TERMINAL (d)	0/18 (0%)	0/27 (0%)	1/31 (3%)
FIRST INCIDENCE	638	---	698
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.585N	P=0.108N	P=0.611N
POLY 1.5	P=0.592N	P=0.112N	P=0.634N
POLY 6	P=0.574N	P=0.101N	P=0.573N
COCH-ARM / FISHERS	P=0.601	P=0.121N	P=0.661N
MAX-ISO-POLY-3	P=0.282N	P=0.037N*	P=0.446N
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

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TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Mammary Gland Fibroma			
TUMOR RATES	#	#	#
OVERALL (a)	0/50 (0%)	2/50 (4%)	0/50 (0%)
POLY-3 RATE (b)	0/38.40	2/41.77	0/43.54
POLY-3 PERCENT (g)	0%	4.8%	0%
TERMINAL (d)	0/18 (0%)	1/27 (4%)	0/31 (0%)
FIRST INCIDENCE	---	660	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.625N	P=0.256	(e)
POLY 1.5	P=0.645N	P=0.248	(e)
POLY 6	P=0.591N	P=0.271	(e)
COCH-ARM / FISHERS	P=0.669	P=0.247	(e)
MAX-ISO-POLY-3	P=0.279N	P=0.094	(e)
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

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DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Mammary Gland			
Fibroma, Fibroadenoma or Adenoma			
TUMOR RATES	#	#	#
OVERALL (a)	3/50 (6%)	2/50 (4%)	3/50 (6%)
POLY-3 RATE (b)	3/39.17	2/41.77	3/43.75
POLY-3 PERCENT (g)	7.7%	4.8%	6.9%
TERMINAL (d)	0/18 (0%)	1/27 (4%)	1/31 (3%)
FIRST INCIDENCE	638	660	698
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.548N	P=0.471N	P=0.611N
POLY 1.5	P=0.566N	P=0.483N	P=0.634N
POLY 6	P=0.521N	P=0.450N	P=0.573N
COCH-ARM / FISHERS	P=0.588	P=0.500N	P=0.661N
MAX-ISO-POLY-3	P=0.515N	P=0.303N	P=0.446N
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Mammary Gland			
Fibroma, Fibroadenoma, Carcinoma, or Adenoma			
TUMOR RATES	#	#	#
OVERALL (a)	3/50 (6%)	2/50 (4%)	3/50 (6%)
POLY-3 RATE (b)	3/39.17	2/41.77	3/43.75
POLY-3 PERCENT (g)	7.7%	4.8%	6.9%
TERMINAL (d)	0/18 (0%)	1/27 (4%)	1/31 (3%)
FIRST INCIDENCE	638	660	698
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.548N	P=0.471N	P=0.611N
POLY 1.5	P=0.566N	P=0.483N	P=0.634N
POLY 6	P=0.521N	P=0.450N	P=0.573N
COCH-ARM / FISHERS	P=0.588	P=0.500N	P=0.661N
MAX-ISO-POLY-3	P=0.515N	P=0.303N	P=0.446N
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Pancreas Adenoma			
TUMOR RATES			
OVERALL (a)	11/49 (22%)	19/48 (40%)	21/50 (42%)
POLY-3 RATE (b)	11/38.72	19/40.89	21/45.16
POLY-3 PERCENT (g)	28.4%	46.5%	46.5%
TERMINAL (d)	8/18 (44%)	16/27 (59%)	14/31 (45%)
FIRST INCIDENCE	652	701	467
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.064	P=0.069	P=0.065
POLY 1.5	P=0.042*	P=0.061	P=0.045*
POLY 6	P=0.119	P=0.089	P=0.112
COCH-ARM / FISHERS	P=0.027*	P=0.054	P=0.031*
MAX-ISO-POLY-3	P=0.071	P=0.047*	P=0.051
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Pancreas			
Carcinoma or Adenoma			
TUMOR RATES			
OVERALL (a)	11/49 (22%)	19/48 (40%)	21/50 (42%)
POLY-3 RATE (b)	11/38.72	19/40.89	21/45.16
POLY-3 PERCENT (g)	28.4%	46.5%	46.5%
TERMINAL (d)	8/18 (44%)	16/27 (59%)	14/31 (45%)
FIRST INCIDENCE	652	701	467
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.064	P=0.069	P=0.065
POLY 1.5	P=0.042*	P=0.061	P=0.045*
POLY 6	P=0.119	P=0.089	P=0.112
COCH-ARM / FISHERS	P=0.027*	P=0.054	P=0.031*
MAX-ISO-POLY-3	P=0.071	P=0.047*	P=0.051
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Pituitary Gland: Pars Distalis or Unspecified Site Adenoma			
TUMOR RATES			
OVERALL (a)	2/50 (4%)	4/50 (8%)	8/50 (16%)
POLY-3 RATE (b)	2/38.63	4/43.30	8/43.72
POLY-3 PERCENT (g)	5.2%	9.2%	18.3%
TERMINAL (d)	1/18 (6%)	1/27 (4%)	7/31 (23%)
FIRST INCIDENCE	673	406	687
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.042*	P=0.391	P=0.067
POLY 1.5	P=0.035*	P=0.368	P=0.057
POLY 6	P=0.054	P=0.425	P=0.089
COCH-ARM / FISHERS	P=0.029*	P=0.339	P=0.046*
MAX-ISO-POLY-3	P=0.049*	P=0.254	P=0.041*
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Pituitary Gland: Pars Distalis or Unspecified Site Carcinoma or Adenoma			
TUMOR RATES			
OVERALL (a)	3/50 (6%)	4/50 (8%)	8/50 (16%)
POLY-3 RATE (b)	3/39.34	4/43.30	8/43.72
POLY-3 PERCENT (g)	7.6%	9.2%	18.3%
TERMINAL (d)	1/18 (6%)	1/27 (4%)	7/31 (23%)
FIRST INCIDENCE	488	406	687
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.087	P=0.552	P=0.133
POLY 1.5	P=0.077	P=0.531	P=0.116
POLY 6	P=0.107	P=0.586	P=0.164
COCH-ARM / FISHERS	P=0.067	P=0.500	P=0.100
MAX-ISO-POLY-3	P=0.105	P=0.399	P=0.085
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Pituitary Gland: Pars Intermedia Adenoma			
TUMOR RATES			
OVERALL (a)	0/50 (0%)	2/50 (4%)	0/50 (0%)
POLY-3 RATE (b)	0/38.40	2/42.46	0/43.54
POLY-3 PERCENT (g)	0%	4.7%	0%
TERMINAL (d)	0/18 (0%)	0/27 (0%)	0/31 (0%)
FIRST INCIDENCE	---	439	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.625N	P=0.260	(e)
POLY 1.5	P=0.645N	P=0.250	(e)
POLY 6	P=0.591N	P=0.276	(e)
COCH-ARM / FISHERS	P=0.669	P=0.247	(e)
MAX-ISO-POLY-3	P=0.282N	P=0.097	(e)
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Pituitary Gland: Pars Intermedia Carcinoma or Adenoma			
TUMOR RATES			
OVERALL (a)	1/50 (2%)	2/50 (4%)	0/50 (0%)
POLY-3 RATE (b)	1/38.59	2/42.46	0/43.54
POLY-3 PERCENT (g)	2.6%	4.7%	0%
TERMINAL (d)	0/18 (0%)	0/27 (0%)	0/31 (0%)
FIRST INCIDENCE	684	439	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.322N	P=0.533	P=0.476N
POLY 1.5	P=0.339N	P=0.519	P=0.487N
POLY 6	P=0.296N	P=0.555	P=0.459N
COCH-ARM / FISHERS	P=0.360N	P=0.500	P=0.500N
MAX-ISO-POLY-3	P=0.214N	P=0.316	P=0.158N
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Skin			
Basal Cell Carcinoma, Basal Cell Adenoma, Basosquamous Tumor (benign, malignant or NOS), or Trichoepithelioma			
TUMOR RATES	#	#	#
OVERALL (a)	2/50 (4%)	1/50 (2%)	0/50 (0%)
POLY-3 RATE (b)	2/38.89	1/41.50	0/43.54
POLY-3 PERCENT (g)	5.1%	2.4%	0%
TERMINAL (d)	1/18 (6%)	1/27 (4%)	0/31 (0%)
FIRST INCIDENCE	586	734 (T)	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.129N	P=0.477N	P=0.213N
POLY 1.5	P=0.135N	P=0.487N	P=0.224N
POLY 6	P=0.121N	P=0.460N	P=0.196N
COCH-ARM / FISHERS	P=0.142N	P=0.500N	P=0.247N
MAX-ISO-POLY-3	P=0.104N	P=0.267N	P=0.075N
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Skin			
Basal or Sq. Cell Carcinoma, Carcinoma, Basosq. Tumor (M or B), Basal Cell Adenoma, Adenoma, Papilloma, Sq Papilloma, Keratoacanthoma, Trichoepithelioma			
TUMOR RATES	#	#	#
OVERALL (a)	5/50 (10%)	3/50 (6%)	0/50 (0%)
POLY-3 RATE (b)	5/39.02	3/41.50	0/43.54
POLY-3 PERCENT (g)	12.8%	7.2%	0%
TERMINAL (d)	3/18 (17%)	3/27 (11%)	0/31 (0%)
FIRST INCIDENCE	586	734 (T)	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.015N*	P=0.321N	P=0.022N*
POLY 1.5	P=0.018N*	P=0.336N	P=0.026N*
POLY 6	P=0.012N*	P=0.296N	P=0.017N*
COCH-ARM / FISHERS	P=0.023N*	P=0.357N	P=0.028N*
MAX-ISO-POLY-3	P=0.015N*	P=0.209N	P=0.009N**
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
<hr/>			
Skin Fibroma			
<hr/>			
TUMOR RATES	#	#	#
OVERALL (a)	2/50 (4%)	3/50 (6%)	4/50 (8%)
POLY-3 RATE (b)	2/38.53	3/41.95	4/44.66
POLY-3 PERCENT (g)	5.2%	7.2%	9%
TERMINAL (d)	1/18 (6%)	1/27 (4%)	1/31 (3%)
FIRST INCIDENCE	701	660	504
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
<hr/>			
STATISTICAL TESTS			
POLY 3	P=0.334	P=0.539	P=0.407
POLY 1.5	P=0.302	P=0.522	P=0.375
POLY 6	P=0.385	P=0.568	P=0.458
COCH-ARM / FISHERS	P=0.264	P=0.500	P=0.339
MAX-ISO-POLY-3	P=0.376	P=0.363	P=0.270
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Skin			
Fibroma, Fibrosarcoma, Sarcoma, Myxoma, Myxosarcoma, or Fibrous Histiocytoma			
TUMOR RATES	#	#	#
OVERALL (a)	3/50 (6%)	3/50 (6%)	6/50 (12%)
POLY-3 RATE (b)	3/39.14	3/41.95	6/45.58
POLY-3 PERCENT (g)	7.7%	7.2%	13.2%
TERMINAL (d)	1/18 (6%)	1/27 (4%)	1/31 (3%)
FIRST INCIDENCE	538	660	504
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.238	P=0.631N	P=0.322
POLY 1.5	P=0.210	P=0.645N	P=0.285
POLY 6	P=0.285	P=0.605N	P=0.383
COCH-ARM / FISHERS	P=0.178	P=0.661N	P=0.243
MAX-ISO-POLY-3	P=0.280	P=0.465N	P=0.225
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Skin			
Fibrosarcoma			
TUMOR RATES	#	#	#
OVERALL (a)	1/50 (2%)	0/50 (0%)	2/50 (4%)
POLY-3 RATE (b)	1/39.01	0/41.50	2/44.45
POLY-3 PERCENT (g)	2.6%	0%	4.5%
TERMINAL (d)	0/18 (0%)	0/27 (0%)	0/31 (0%)
FIRST INCIDENCE	538	---	538
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.387	P=0.488N	P=0.545
POLY 1.5	P=0.375	P=0.493N	P=0.525
POLY 6	P=0.407	P=0.478N	P=0.577
COCH-ARM / FISHERS	P=0.360	P=0.500N	P=0.500
MAX-ISO-POLY-3	P=0.253	P=0.158N	P=0.329
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Skin			
Keratoacanthoma			
TUMOR RATES	#	#	#
OVERALL (a)	3/50 (6%)	2/50 (4%)	0/50 (0%)
POLY-3 RATE (b)	3/38.53	2/41.50	0/43.54
POLY-3 PERCENT (g)	7.8%	4.8%	0%
TERMINAL (d)	2/18 (11%)	2/27 (7%)	0/31 (0%)
FIRST INCIDENCE	701	734 (T)	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.066N	P=0.466N	P=0.098N
POLY 1.5	P=0.073N	P=0.481N	P=0.107N
POLY 6	P=0.057N	P=0.441N	P=0.085N
COCH-ARM / FISHERS	P=0.082N	P=0.500N	P=0.121N
MAX-ISO-POLY-3	P=0.061N	P=0.300N	P=0.037N*
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTEs	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTEs	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
<hr/>			
Skin			
Lipoma			
<hr/>			
TUMOR RATES	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	2/50 (4%)
POLY-3 RATE (b)	0/38.40	0/41.50	2/43.64
POLY-3 PERCENT (g)	0%	0%	4.6%
TERMINAL (d)	0/18 (0%)	0/27 (0%)	1/31 (3%)
FIRST INCIDENCE	---	---	708
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
<hr/>			
STATISTICAL TESTS			
POLY 3	P=0.106	(e)	P=0.266
POLY 1.5	P=0.101	(e)	P=0.253
POLY 6	P=0.116	(e)	P=0.290
COCH-ARM / FISHERS	P=0.095	(e)	P=0.247
MAX-ISO-POLY-3	P=0.082	(e)	P=0.103
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Skin			
Squamous Cell Papilloma, Papilloma, Squamous Cell Carcinoma or Keratoacanthoma			
TUMOR RATES	#	#	#
OVERALL (a)	3/50 (6%)	2/50 (4%)	0/50 (0%)
POLY-3 RATE (b)	3/38.53	2/41.50	0/43.54
POLY-3 PERCENT (g)	7.8%	4.8%	0%
TERMINAL (d)	2/18 (11%)	2/27 (7%)	0/31 (0%)
FIRST INCIDENCE	701	734 (T)	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.066N	P=0.466N	P=0.098N
POLY 1.5	P=0.073N	P=0.481N	P=0.107N
POLY 6	P=0.057N	P=0.441N	P=0.085N
COCH-ARM / FISHERS	P=0.082N	P=0.500N	P=0.121N
MAX-ISO-POLY-3	P=0.061N	P=0.300N	P=0.037N*
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Skin			
Squamous Cell Papilloma, Papilloma, or Keratoacanthoma			
TUMOR RATES	#	#	#
OVERALL (a)	3/50 (6%)	2/50 (4%)	0/50 (0%)
POLY-3 RATE (b)	3/38.53	2/41.50	0/43.54
POLY-3 PERCENT (g)	7.8%	4.8%	0%
TERMINAL (d)	2/18 (11%)	2/27 (7%)	0/31 (0%)
FIRST INCIDENCE	701	734 (T)	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.066N	P=0.466N	P=0.098N
POLY 1.5	P=0.073N	P=0.481N	P=0.107N
POLY 6	P=0.057N	P=0.441N	P=0.085N
COCH-ARM / FISHERS	P=0.082N	P=0.500N	P=0.121N
MAX-ISO-POLY-3	P=0.061N	P=0.300N	P=0.037N*
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Stomach, Forestomach Squamous Cell Carcinoma			
TUMOR RATES	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	2/50 (4%)
POLY-3 RATE (b)	0/38.40	0/41.50	2/43.61
POLY-3 PERCENT (g)	0%	0%	4.6%
TERMINAL (d)	0/18 (0%)	0/27 (0%)	1/31 (3%)
FIRST INCIDENCE	---	---	715
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.106	(e)	P=0.266
POLY 1.5	P=0.101	(e)	P=0.253
POLY 6	P=0.115	(e)	P=0.289
COCH-ARM / FISHERS	P=0.095	(e)	P=0.247
MAX-ISO-POLY-3	P=0.082	(e)	P=0.103
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
<hr/>			
Testes			
Adenoma			
<hr/>			
TUMOR RATES			
OVERALL (a)	0/50 (0%)	0/50 (0%)	2/50 (4%)
POLY-3 RATE (b)	0/38.40	0/41.50	2/43.54
POLY-3 PERCENT (g)	0%	0%	4.6%
TERMINAL (d)	0/18 (0%)	0/27 (0%)	2/31 (7%)
FIRST INCIDENCE	---	---	734 (T)
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
<hr/>			
STATISTICAL TESTS			
POLY 3	P=0.106	(e)	P=0.266
POLY 1.5	P=0.101	(e)	P=0.253
POLY 6	P=0.115	(e)	P=0.288
COCH-ARM / FISHERS	P=0.095	(e)	P=0.247
MAX-ISO-POLY-3	P=0.082	(e)	P=0.103
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Thyroid Gland: C-Cell Adenoma			
TUMOR RATES			
OVERALL (a)	2/50 (4%)	1/50 (2%)	5/50 (10%)
POLY-3 RATE (b)	2/38.83	1/41.52	5/45.14
POLY-3 PERCENT (g)	5.2%	2.4%	11.1%
TERMINAL (d)	1/18 (6%)	0/27 (0%)	1/31 (3%)
FIRST INCIDENCE	611	728	505
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.164	P=0.477N	P=0.281
POLY 1.5	P=0.149	P=0.487N	P=0.251
POLY 6	P=0.190	P=0.459N	P=0.330
COCH-ARM / FISHERS	P=0.133	P=0.500N	P=0.218
MAX-ISO-POLY-3	P=0.137	P=0.267N	P=0.182
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Thyroid Gland: C-Cell Carcinoma			
TUMOR RATES			
OVERALL (a)	1/50 (2%)	3/50 (6%)	2/50 (4%)
POLY-3 RATE (b)	1/38.41	3/41.50	2/43.72
POLY-3 PERCENT (g)	2.6%	7.2%	4.6%
TERMINAL (d)	0/18 (0%)	3/27 (11%)	1/31 (3%)
FIRST INCIDENCE	733	734 (T)	686
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.471	P=0.333	P=0.545
POLY 1.5	P=0.438	P=0.321	P=0.525
POLY 6	P=0.524	P=0.354	P=0.578
COCH-ARM / FISHERS	P=0.399	P=0.309	P=0.500
MAX-ISO-POLY-3	P=0.364	P=0.182	P=0.329
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTEs	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTEs	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Thyroid Gland: C-Cell Carcinoma or Adenoma			
TUMOR RATES			
OVERALL (a)	3/50 (6%)	4/50 (8%)	7/50 (14%)
POLY-3 RATE (b)	3/38.83	4/41.52	7/45.32
POLY-3 PERCENT (g)	7.7%	9.6%	15.4%
TERMINAL (d)	1/18 (6%)	3/27 (11%)	2/31 (7%)
FIRST INCIDENCE	611	728	505
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.167	P=0.537	P=0.227
POLY 1.5	P=0.142	P=0.521	P=0.194
POLY 6	P=0.213	P=0.565	P=0.283
COCH-ARM / FISHERS	P=0.114	P=0.500	P=0.159
MAX-ISO-POLY-3	P=0.207	P=0.384	P=0.156
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
All Organs			
Hemangiosarcoma or Hemangioma			
TUMOR RATES	#	#	#
OVERALL (a)	2/50 (4%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	2/38.57	0/41.50	0/43.54
POLY-3 PERCENT (g)	5.2%	0%	0%
TERMINAL (d)	1/18 (6%)	0/27 (0%)	0/31 (0%)
FIRST INCIDENCE	691	---	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.093N	P=0.221N	P=0.211N
POLY 1.5	P=0.094N	P=0.228N	P=0.223N
POLY 6	P=0.093N	P=0.209N	P=0.194N
COCH-ARM / FISHERS	P=0.095N	P=0.247N	P=0.247N
MAX-ISO-POLY-3	P=0.052N	P=0.075N	P=0.075N
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
All Organs			
Leukemia: Lymphocytic, Monocytic, Mononuclear, or Undifferentiated			
TUMOR RATES	#	#	#
OVERALL (a)	1/50 (2%)	0/50 (0%)	2/50 (4%)
POLY-3 RATE (b)	1/38.75	0/41.50	2/43.80
POLY-3 PERCENT (g)	2.6%	0%	4.6%
TERMINAL (d)	0/18 (0%)	0/27 (0%)	1/31 (3%)
FIRST INCIDENCE	638	---	663
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.385	P=0.486N	P=0.543
POLY 1.5	P=0.374	P=0.492N	P=0.523
POLY 6	P=0.403	P=0.476N	P=0.573
COCH-ARM / FISHERS	P=0.360	P=0.500N	P=0.500
MAX-ISO-POLY-3	P=0.249	P=0.158N	P=0.326
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
All Organs			
Benign Tumors			
TUMOR RATES	#	#	#
OVERALL (a)	22/50 (44%)	36/50 (72%)	36/50 (72%)
POLY-3 RATE (b)	22/40.95	36/45.88	36/48.24
POLY-3 PERCENT (g)	53.7%	78.5%	74.6%
TERMINAL (d)	12/18 (67%)	22/27 (82%)	21/31 (68%)
FIRST INCIDENCE	586	406	467
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.024*	P=0.007**	P=0.026*
POLY 1.5	P=0.008**	P=0.005**	P=0.010**
POLY 6	P=0.096	P=0.014*	P=0.083
COCH-ARM / FISHERS	P=0.003**	P=0.004**	P=0.004**
MAX-ISO-POLY-3	P=0.013*	P=0.005**	P=0.022*
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
All Organs			
Malignant Tumors			
TUMOR RATES	#	#	#
OVERALL (a)	16/50 (32%)	14/50 (28%)	15/50 (30%)
POLY-3 RATE (b)	16/42.45	14/44.06	15/46.20
POLY-3 PERCENT (g)	37.7%	31.8%	32.5%
TERMINAL (d)	4/18 (22%)	7/27 (26%)	7/31 (23%)
FIRST INCIDENCE	488	490	285
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.350N	P=0.361N	P=0.385N
POLY 1.5	P=0.392N	P=0.381N	P=0.430N
POLY 6	P=0.290N	P=0.326N	P=0.319N
COCH-ARM / FISHERS	P=0.457N	P=0.414N	P=0.500N
MAX-ISO-POLY-3	P=0.411N	P=0.283N	P=0.309N
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
All Organs			
Malignant and Benign Tumors			
TUMOR RATES	#	#	#
OVERALL (a)	32/50 (64%)	39/50 (78%)	38/50 (76%)
POLY-3 RATE (b)	32/43.83	39/46.92	38/49.18
POLY-3 PERCENT (g)	73%	83.1%	77.3%
TERMINAL (d)	14/18 (78%)	23/27 (85%)	22/31 (71%)
FIRST INCIDENCE	488	406	285
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.380	P=0.161	P=0.404
POLY 1.5	P=0.247	P=0.132	P=0.279
POLY 6	P=0.536N	P=0.217	P=0.586
COCH-ARM / FISHERS	P=0.109	P=0.093	P=0.138
MAX-ISO-POLY-3	P=0.286	P=0.109	P=0.319
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01
 Test Type: CHRONIC
 Route: DOSED FEED
 Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS
 Zinc Carbonate, Basic
 CAS Number: 5263-02-5

Date Report Requested: 11/22/2015
 Time Report Requested: 18:28:06
 First Dose M/F: 09/03/09 / 09/04/09
 Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
 TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Adrenal Medulla			
Pheochromocytoma Benign			
TUMOR RATES			
OVERALL (a)	0/50 (0%)	1/50 (2%)	0/50 (0%)
POLY-3 RATE (b)	0/39.46	1/44.33	0/42.11
POLY-3 PERCENT (g)	0%	2.3%	0%
TERMINAL (d)	0/25 (0%)	1/34 (3%)	0/32 (0%)
FIRST INCIDENCE	---	725 (T)	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Adrenal Medulla			
Pheochromocytoma: Benign, Complex, Malignant, NOS			
<hr/>			
TUMOR RATES			
OVERALL (a)	1/50 (2%)	1/50 (2%)	0/50 (0%)
POLY-3 RATE (b)	1/39.63	1/44.33	0/42.11
POLY-3 PERCENT (g)	2.5%	2.3%	0%
TERMINAL (d)	0/25 (0%)	1/34 (3%)	0/32 (0%)
FIRST INCIDENCE	681	725 (T)	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
<hr/>			
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Brain			
Oligodendroglioma, Glioma, or Astrocytoma			
TUMOR RATES			
OVERALL (a)	1/50 (2%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	1/39.94	0/44.33	0/42.11
POLY-3 PERCENT (g)	2.5%	0%	0%
TERMINAL (d)	0/25 (0%)	0/34 (0%)	0/32 (0%)
FIRST INCIDENCE	584	---	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
<hr/>			
Heart			
Schwannoma Malignant			
<hr/>			
TUMOR RATES			
OVERALL (a)	0/50 (0%)	1/50 (2%)	1/50 (2%)
POLY-3 RATE (b)	0/39.46	1/44.33	1/42.86
POLY-3 PERCENT (g)	0%	2.3%	2.3%
TERMINAL (d)	0/25 (0%)	1/34 (3%)	0/32 (0%)
FIRST INCIDENCE	---	725 (T)	459
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
<hr/>			
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Intestine Small: Site Unspecified Carcinoma			
<hr/>			
TUMOR RATES	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/39.46	0/44.33	0/42.11
POLY-3 PERCENT (g)	0%	0%	0%
TERMINAL (d)	0/25 (0%)	0/34 (0%)	0/32 (0%)
FIRST INCIDENCE	---	---	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
<hr/>			
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Islets, Pancreatic Adenoma			
TUMOR RATES			
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/39.46	0/44.33	0/42.11
POLY-3 PERCENT (g)	0%	0%	0%
TERMINAL (d)	0/25 (0%)	0/34 (0%)	0/32 (0%)
FIRST INCIDENCE	---	---	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Islets, Pancreatic Carcinoma or Adenoma			
TUMOR RATES			
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/39.46	0/44.33	0/42.11
POLY-3 PERCENT (g)	0%	0%	0%
TERMINAL (d)	0/25 (0%)	0/34 (0%)	0/32 (0%)
FIRST INCIDENCE	---	---	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

Experiment Number: 20403 - 01
 Test Type: CHRONIC
 Route: DOSED FEED
 Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS
 Zinc Carbonate, Basic
 CAS Number: 5263-02-5

Date Report Requested: 11/22/2015
 Time Report Requested: 18:28:06
 First Dose M/F: 09/03/09 / 09/04/09
 Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
 TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Mammary Gland Adenoma			
TUMOR RATES	#	#	#
OVERALL (a)	3/50 (6%)	0/50 (0%)	2/50 (4%)
POLY-3 RATE (b)	3/39.46	0/44.33	2/42.36
POLY-3 PERCENT (g)	7.6%	0%	4.7%
TERMINAL (d)	3/25 (12%)	0/34 (0%)	1/32 (3%)
FIRST INCIDENCE	725 (T)	---	659
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.384N	P=0.099N	P=0.468N
POLY 1.5	P=0.386N	P=0.106N	P=0.483N
POLY 6	P=0.382N	P=0.090N	P=0.443N
COCH-ARM / FISHERS	P=0.390N	P=0.121N	P=0.500N
MAX-ISO-POLY-3	P=0.166N	P=0.037N*	P=0.301N
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Mammary Gland Carcinoma			
TUMOR RATES	#	#	#
OVERALL (a)	4/50 (8%)	4/50 (8%)	4/50 (8%)
POLY-3 RATE (b)	4/40.92	4/45.14	4/42.54
POLY-3 PERCENT (g)	9.8%	8.9%	9.4%
TERMINAL (d)	1/25 (4%)	2/34 (6%)	3/32 (9%)
FIRST INCIDENCE	540	483	601
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.553N	P=0.589N	P=0.623N
POLY 1.5	P=0.562N	P=0.608N	P=0.632N
POLY 6	P=0.538N	P=0.566N	P=0.605N
COCH-ARM / FISHERS	P=0.573	P=0.643N	P=0.643N
MAX-ISO-POLY-3	P=0.620N	P=0.443N	P=0.476N
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Mammary Gland Carcinoma or Adenoma			
TUMOR RATES	#	#	#
OVERALL (a)	7/50 (14%)	4/50 (8%)	6/50 (12%)
POLY-3 RATE (b)	7/40.92	4/45.14	6/42.79
POLY-3 PERCENT (g)	17.1%	8.9%	14%
TERMINAL (d)	4/25 (16%)	2/34 (6%)	4/32 (13%)
FIRST INCIDENCE	540	483	601
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.413N	P=0.206N	P=0.465N
POLY 1.5	P=0.424N	P=0.226N	P=0.482N
POLY 6	P=0.395N	P=0.185N	P=0.436N
COCH-ARM / FISHERS	P=0.437N	P=0.262N	P=0.500N
MAX-ISO-POLY-3	P=0.317N	P=0.137N	P=0.351N
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Mammary Gland Fibroadenoma			
TUMOR RATES	#	#	#
OVERALL (a)	29/50 (58%)	33/50 (66%)	31/50 (62%)
POLY-3 RATE (b)	29/44.56	33/48.06	31/48.08
POLY-3 PERCENT (g)	65.1%	68.7%	64.5%
TERMINAL (d)	14/25 (56%)	22/34 (65%)	16/32 (50%)
FIRST INCIDENCE	435	447	323
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.513N	P=0.441	P=0.563N
POLY 1.5	P=0.501	P=0.379	P=0.537
POLY 6	P=0.421N	P=0.506	P=0.475N
COCH-ARM / FISHERS	P=0.379	P=0.268	P=0.419
MAX-ISO-POLY-3	P=0.550N	P=0.358	P=0.475N
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Mammary Gland Fibroma			
TUMOR RATES	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/39.46	0/44.33	0/42.11
POLY-3 PERCENT (g)	0%	0%	0%
TERMINAL (d)	0/25 (0%)	0/34 (0%)	0/32 (0%)
FIRST INCIDENCE	---	---	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Mammary Gland			
Fibroma, Fibroadenoma or Adenoma			
TUMOR RATES	#	#	#
OVERALL (a)	29/50 (58%)	33/50 (66%)	31/50 (62%)
POLY-3 RATE (b)	29/44.56	33/48.06	31/48.08
POLY-3 PERCENT (g)	65.1%	68.7%	64.5%
TERMINAL (d)	14/25 (56%)	22/34 (65%)	16/32 (50%)
FIRST INCIDENCE	435	447	323
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.513N	P=0.441	P=0.563N
POLY 1.5	P=0.501	P=0.379	P=0.537
POLY 6	P=0.421N	P=0.506	P=0.475N
COCH-ARM / FISHERS	P=0.379	P=0.268	P=0.419
MAX-ISO-POLY-3	P=0.550N	P=0.358	P=0.475N
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Mammary Gland			
Fibroma, Fibroadenoma, Carcinoma, or Adenoma			
<hr/>			
TUMOR RATES	#	#	#
OVERALL (a)	33/50 (66%)	35/50 (70%)	33/50 (66%)
POLY-3 RATE (b)	33/46.02	35/48.87	33/48.08
POLY-3 PERCENT (g)	71.7%	71.6%	68.6%
TERMINAL (d)	15/25 (60%)	22/34 (65%)	18/32 (56%)
FIRST INCIDENCE	435	447	323
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
<hr/>			
STATISTICAL TESTS			
POLY 3	P=0.414N	P=0.588N	P=0.459N
POLY 1.5	P=0.457N	P=0.542	P=0.502N
POLY 6	P=0.367N	P=0.552N	P=0.412N
COCH-ARM / FISHERS	P=0.542	P=0.415	P=0.583N
MAX-ISO-POLY-3	P=0.512N	P=0.496N	P=0.372N
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
<hr/>			
Pancreas Adenoma			
<hr/>			
TUMOR RATES			
OVERALL (a)	1/50 (2%)	0/49 (0%)	0/48 (0%)
POLY-3 RATE (b)	1/39.46	0/43.63	0/40.88
POLY-3 PERCENT (g)	2.5%	0%	0%
TERMINAL (d)	1/25 (4%)	0/34 (0%)	0/32 (0%)
FIRST INCIDENCE	725 (T)	---	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
<hr/>			
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

Experiment Number: 20403 - 01
 Test Type: CHRONIC
 Route: DOSED FEED
 Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS
 Zinc Carbonate, Basic
 CAS Number: 5263-02-5

Date Report Requested: 11/22/2015
 Time Report Requested: 18:28:06
 First Dose M/F: 09/03/09 / 09/04/09
 Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
 TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Pancreas			
Carcinoma or Adenoma			
TUMOR RATES			
OVERALL (a)	1/50 (2%)	0/49 (0%)	0/48 (0%)
POLY-3 RATE (b)	1/39.46	0/43.63	0/40.88
POLY-3 PERCENT (g)	2.5%	0%	0%
TERMINAL (d)	1/25 (4%)	0/34 (0%)	0/32 (0%)
FIRST INCIDENCE	725 (T)	---	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Pituitary Gland: Pars Distalis or Unspecified Site Adenoma			
TUMOR RATES			
OVERALL (a)	11/50 (22%)	9/50 (18%)	13/50 (26%)
POLY-3 RATE (b)	11/40.53	9/45.36	13/43.02
POLY-3 PERCENT (g)	27.1%	19.8%	30.2%
TERMINAL (d)	6/25 (24%)	4/34 (12%)	9/32 (28%)
FIRST INCIDENCE	609	615	601
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.408	P=0.293N	P=0.472
POLY 1.5	P=0.386	P=0.334N	P=0.442
POLY 6	P=0.442	P=0.248N	P=0.519
COCH-ARM / FISHERS	P=0.359	P=0.402N	P=0.408
MAX-ISO-POLY-3	P=0.337	P=0.225N	P=0.379
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef

**Pituitary Gland: Pars Distalis or Unspecified Site
Carcinoma or Adenoma**

TUMOR RATES

OVERALL (a)	12/50 (24%)	10/50 (20%)	13/50 (26%)
POLY-3 RATE (b)	12/40.53	10/45.87	13/43.02
POLY-3 PERCENT (g)	29.6%	21.8%	30.2%
TERMINAL (d)	7/25 (28%)	4/34 (12%)	9/32 (28%)
FIRST INCIDENCE	609	572	601
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		

STATISTICAL TESTS

POLY 3	P=0.510	P=0.280N	P=0.571
POLY 1.5	P=0.485	P=0.326N	P=0.538
POLY 6	P=0.548	P=0.227N	P=0.573N
COCH-ARM / FISHERS	P=0.453	P=0.405N	P=0.500
MAX-ISO-POLY-3	P=0.441	P=0.217N	P=0.475
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Pituitary Gland: Pars Intermedia Adenoma			
TUMOR RATES			
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/39.46	0/44.33	0/42.11
POLY-3 PERCENT (g)	0%	0%	0%
TERMINAL (d)	0/25 (0%)	0/34 (0%)	0/32 (0%)
FIRST INCIDENCE	---	---	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
<hr/>			
Pituitary Gland: Pars Intermedia			
Carcinoma or Adenoma			
<hr/>			
TUMOR RATES			
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/39.46	0/44.33	0/42.11
POLY-3 PERCENT (g)	0%	0%	0%
TERMINAL (d)	0/25 (0%)	0/34 (0%)	0/32 (0%)
FIRST INCIDENCE	---	---	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
<hr/>			
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Skin			
Basal Cell Carcinoma, Basal Cell Adenoma, Basosquamous Tumor (benign, malignant or NOS), or Trichoepithelioma			
<hr/>			
TUMOR RATES	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/39.46	0/44.33	0/42.11
POLY-3 PERCENT (g)	0%	0%	0%
TERMINAL (d)	0/25 (0%)	0/34 (0%)	0/32 (0%)
FIRST INCIDENCE	---	---	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
<hr/>			
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

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Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Skin			
Basal or Sq. Cell Carcinoma, Carcinoma, Basosq. Tumor (M or B), Basal Cell Adenoma, Adenoma, Papilloma, Sq Papilloma, Keratoacanthoma, Trichoepithelioma			
TUMOR RATES	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/39.46	0/44.33	0/42.11
POLY-3 PERCENT (g)	0%	0%	0%
TERMINAL (d)	0/25 (0%)	0/34 (0%)	0/32 (0%)
FIRST INCIDENCE	---	---	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
<hr/>			
Skin Fibroma			
<hr/>			
TUMOR RATES	#	#	#
OVERALL (a)	0/50 (0%)	1/50 (2%)	0/50 (0%)
POLY-3 RATE (b)	0/39.46	1/44.52	0/42.11
POLY-3 PERCENT (g)	0%	2.3%	0%
TERMINAL (d)	0/25 (0%)	0/34 (0%)	0/32 (0%)
FIRST INCIDENCE	---	676	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
<hr/>			
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Skin			
Fibroma, Fibrosarcoma, Sarcoma, Myxoma, Myxosarcoma, or Fibrous Histiocytoma			
TUMOR RATES	#	#	#
OVERALL (a)	0/50 (0%)	1/50 (2%)	0/50 (0%)
POLY-3 RATE (b)	0/39.46	1/44.52	0/42.11
POLY-3 PERCENT (g)	0%	2.3%	0%
TERMINAL (d)	0/25 (0%)	0/34 (0%)	0/32 (0%)
FIRST INCIDENCE	---	676	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Skin			
Fibrosarcoma			
<hr/>			
TUMOR RATES	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/39.46	0/44.33	0/42.11
POLY-3 PERCENT (g)	0%	0%	0%
TERMINAL (d)	0/25 (0%)	0/34 (0%)	0/32 (0%)
FIRST INCIDENCE	---	---	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
<hr/>			
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
<hr/>			
Skin			
Keratoacanthoma			
<hr/>			
TUMOR RATES	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/39.46	0/44.33	0/42.11
POLY-3 PERCENT (g)	0%	0%	0%
TERMINAL (d)	0/25 (0%)	0/34 (0%)	0/32 (0%)
FIRST INCIDENCE	---	---	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
<hr/>			
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
<hr/>			
Skin			
Lipoma			
<hr/>			
TUMOR RATES	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/39.46	0/44.33	0/42.11
POLY-3 PERCENT (g)	0%	0%	0%
TERMINAL (d)	0/25 (0%)	0/34 (0%)	0/32 (0%)
FIRST INCIDENCE	---	---	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
<hr/>			
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Skin			
Squamous Cell Papilloma, Papilloma, Squamous Cell Carcinoma or Keratoacanthoma			
<hr/>			
TUMOR RATES	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/39.46	0/44.33	0/42.11
POLY-3 PERCENT (g)	0%	0%	0%
TERMINAL (d)	0/25 (0%)	0/34 (0%)	0/32 (0%)
FIRST INCIDENCE	---	---	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
<hr/>			
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Skin			
Squamous Cell Papilloma, Papilloma, or Keratoacanthoma			
<hr/>			
TUMOR RATES	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/39.46	0/44.33	0/42.11
POLY-3 PERCENT (g)	0%	0%	0%
TERMINAL (d)	0/25 (0%)	0/34 (0%)	0/32 (0%)
FIRST INCIDENCE	---	---	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
<hr/>			
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Stomach, Forestomach Squamous Cell Carcinoma			
<hr/>			
TUMOR RATES	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/39.46	0/44.33	0/42.11
POLY-3 PERCENT (g)	0%	0%	0%
TERMINAL (d)	0/25 (0%)	0/34 (0%)	0/32 (0%)
FIRST INCIDENCE	---	---	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
<hr/>			
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

Date Report Requested: 11/22/2015

Time Report Requested: 18:28:06

First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Thyroid Gland: C-Cell Adenoma			
TUMOR RATES			
OVERALL (a)	1/50 (2%)	1/50 (2%)	2/49 (4%)
POLY-3 RATE (b)	1/39.46	1/44.52	2/41.45
POLY-3 PERCENT (g)	2.5%	2.3%	4.8%
TERMINAL (d)	1/25 (4%)	0/34 (0%)	2/32 (6%)
FIRST INCIDENCE	725 (T)	676	725 (T)
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.394	P=0.733N	P=0.517
POLY 1.5	P=0.384	P=0.744N	P=0.506
POLY 6	P=0.410	P=0.719N	P=0.536
COCH-ARM / FISHERS	P=0.372	P=0.753N	P=0.492
MAX-ISO-POLY-3	P=0.384	P=0.467N	P=0.300
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

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Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Thyroid Gland: C-Cell Carcinoma			
TUMOR RATES			
OVERALL (a)	1/50 (2%)	0/50 (0%)	0/49 (0%)
POLY-3 RATE (b)	1/39.56	0/44.33	0/41.45
POLY-3 PERCENT (g)	2.5%	0%	0%
TERMINAL (d)	0/25 (0%)	0/34 (0%)	0/32 (0%)
FIRST INCIDENCE	700	---	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

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First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Thyroid Gland: C-Cell Carcinoma or Adenoma			
TUMOR RATES			
OVERALL (a)	2/50 (4%)	1/50 (2%)	2/49 (4%)
POLY-3 RATE (b)	2/39.56	1/44.52	2/41.45
POLY-3 PERCENT (g)	5.1%	2.3%	4.8%
TERMINAL (d)	1/25 (4%)	0/34 (0%)	2/32 (6%)
FIRST INCIDENCE	700	676	725 (T)
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.603N	P=0.459N	P=0.678N
POLY 1.5	P=0.609N	P=0.475N	P=0.689N
POLY 6	P=0.595N	P=0.439N	P=0.659N
COCH-ARM / FISHERS	P=0.603	P=0.500N	P=0.684
MAX-ISO-POLY-3	P=0.502N	P=0.258N	P=0.480N
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

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First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
Uterus			
Polyp Stromal			
TUMOR RATES	#	#	#
OVERALL (a)	3/50 (6%)	1/50 (2%)	2/50 (4%)
POLY-3 RATE (b)	3/39.82	1/44.57	2/42.11
POLY-3 PERCENT (g)	7.5%	2.2%	4.8%
TERMINAL (d)	1/25 (4%)	0/34 (0%)	2/32 (6%)
FIRST INCIDENCE	677	663	725 (T)
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.388N	P=0.266N	P=0.474N
POLY 1.5	P=0.393N	P=0.281N	P=0.486N
POLY 6	P=0.381N	P=0.248N	P=0.456N
COCH-ARM / FISHERS	P=0.399N	P=0.309N	P=0.500N
MAX-ISO-POLY-3	P=0.284N	P=0.140N	P=0.305N
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

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First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
All Organs			
Hemangiosarcoma or Hemangioma			
TUMOR RATES	#	#	#
OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/39.46	0/44.33	0/42.11
POLY-3 PERCENT (g)	0%	0%	0%
TERMINAL (d)	0/25 (0%)	0/34 (0%)	0/32 (0%)
FIRST INCIDENCE	---	---	---
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

Zinc Carbonate, Basic

CAS Number: 5263-02-5

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First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
All Organs			
Leukemia: Lymphocytic, Monocytic, Mononuclear, or Undifferentiated			
TUMOR RATES	#	#	#
OVERALL (a)	1/50 (2%)	0/50 (0%)	1/50 (2%)
POLY-3 RATE (b)	1/40.02	0/44.33	1/42.86
POLY-3 PERCENT (g)	2.5%	0%	2.3%
TERMINAL (d)	0/25 (0%)	0/34 (0%)	0/32 (0%)
FIRST INCIDENCE	549	---	459
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	(n)	(n)	(n)
POLY 1.5	(n)	(n)	(n)
POLY 6	(n)	(n)	(n)
COCH-ARM / FISHERS	(n)	(n)	(n)
MAX-ISO-POLY-3	(n)	(n)	(n)
HISTCONT SAME RTE	(n)	(n)	(n)
HISTCONT ALL RTES	(n)	(n)	(n)
CURR VS HC SAME RTE	(n)		
CURR VS HC ALL RTES	(n)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

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Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
<hr/>			
All Organs			
Benign Tumors			
<hr/>			
TUMOR RATES	#	#	#
OVERALL (a)	35/50 (70%)	39/50 (78%)	39/50 (78%)
POLY-3 RATE (b)	35/45.41	39/48.79	39/48.08
POLY-3 PERCENT (g)	77.1%	79.9%	81.1%
TERMINAL (d)	17/25 (68%)	25/34 (74%)	24/32 (75%)
FIRST INCIDENCE	435	447	323
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
<hr/>			
STATISTICAL TESTS			
POLY 3	P=0.362	P=0.464	P=0.408
POLY 1.5	P=0.301	P=0.385	P=0.343
POLY 6	P=0.431	P=0.541	P=0.481
COCH-ARM / FISHERS	P=0.208	P=0.247	P=0.247
MAX-ISO-POLY-3	P=0.438	P=0.367	P=0.315
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

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Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
All Organs			
Malignant Tumors			
TUMOR RATES	#	#	#
OVERALL (a)	11/50 (22%)	8/50 (16%)	8/50 (16%)
POLY-3 RATE (b)	11/42.23	8/46.13	8/44.17
POLY-3 PERCENT (g)	26.1%	17.3%	18.1%
TERMINAL (d)	4/25 (16%)	4/34 (12%)	5/32 (16%)
FIRST INCIDENCE	540	483	350
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.226N	P=0.231N	P=0.264N
POLY 1.5	P=0.237N	P=0.256N	P=0.279N
POLY 6	P=0.213N	P=0.206N	P=0.246N
COCH-ARM / FISHERS	P=0.258N	P=0.306N	P=0.306N
MAX-ISO-POLY-3	P=0.245N	P=0.170N	P=0.191N
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

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Lab: BAT

**STATISTICAL ANALYSIS OF PRIMARY TUMORS IN RATS(HSD)
TERMINAL SACRIFICE AT 104 WEEKS**

DOSE	Females		
	Control (38ppm)	7ppm ZnDef	3.5ppm SevZnDef
All Organs			
Malignant and Benign Tumors			
TUMOR RATES	#	#	#
OVERALL (a)	40/50 (80%)	42/50 (84%)	41/50 (82%)
POLY-3 RATE (b)	40/47.44	42/50.00	41/49.72
POLY-3 PERCENT (g)	84.3%	84%	82.5%
TERMINAL (d)	18/25 (72%)	26/34 (77%)	24/32 (75%)
FIRST INCIDENCE	435	447	323
HC TUMORS SAME ROUTE	0/0 (0%)		
HC TUMORS ALL ROUTES	0/0 (0%)		
STATISTICAL TESTS			
POLY 3	P=0.457N	P=0.592N	P=0.511N
POLY 1.5	P=0.503N	P=0.566	P=0.558N
POLY 6	P=0.443N	P=0.560N	P=0.496N
COCH-ARM / FISHERS	P=0.448	P=0.398	P=0.500
MAX-ISO-POLY-3	P=0.552N	P=0.482N	P=0.403N
HISTCONT SAME RTE	(e)	(e)	(e)
HISTCONT ALL RTES	(e)	(e)	(e)
CURR VS HC SAME RTE	(e)		
CURR VS HC ALL RTES	(e)		

Experiment Number: 20403 - 01

Test Type: CHRONIC

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Species/Strain: RATS/HSD

P08: STATISTICAL ANALYSIS OF PRIMARY TUMORS

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LEGEND

- (a) Number of tumor-bearing animals/number of animals examined at site.
- (b) Number of tumor-bearing animals/Poly-3 number
- (d) Observed incidence at terminal kill.
- (e) Value of statistic cannot be computed.
- (f) Beneath the control incidence are the P-values associated with the trend test. Beneath the dosed group incidence are the P-values corresponding to pairwise comparisons between the controls and that dosed group.
- (g) Poly-3 adjusted lifetime tumor incidence.
- (h) Historical Controls statistic is not calculated when the HC Poly-3 rate is higher than the Poly-3 rates for all dose groups.
- (n) No statistics are calculated if all dose groups have fewer than two tumors.
- (I) Interim sacrifice
- (T) Terminal sacrifice
- # Tumor rates based on numbers of animals necropsied.
- * To the right of any statistical result, indicates significance at ($P \leq 0.05$).
- ** To the right of any statistical result, indicates significance at ($P \leq 0.01$).
- N Indicates a negative trend for all tests
The Cochran-Armitage and Fishers exact tests compare directly the overall incidence rates.

*** END OF REPORT ***