Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

E05: CLINICAL OBSERVATIONS SUMMARY

Zinc Carbonate, Basic CAS Number: 5263-02-5

Date Report Requested: 08/06/2015 Time Report Requested: 12:54:36 First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

NTP Study Number: C20403

Lock Date: 04/05/2013

Cage Range: ALL

Date Range: ALL

Reasons For Removal: ALL

Removal Date Range: ALL

Treatment Groups: Include ALL

Study Gender: Both

TDMSE Version: 3.0.2.2_002

PWG Approval Date: NONE

Test Type: CHRONIC Route: DOSED FEED

Species/Strain: RATS/HSD

E05: CLINICAL OBSERVATIONS SUMMARY

Zinc Carbonate, Basic CAS Number: 5263-02-5

Date Report Requested: 08/06/2015 Time Report Requested: 12:54:36 First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

	Control	(38ppm)	3.5ppm \$	3.5ppm SevZnDef 7ppm ZnDef		250ppmN	250ppmModZnExc	
OBSERVATION	CURRENT*	TOTAL+	CURRENT	TOTAL	CURRENT	TOTAL	CURRENT	TOTAL
Abnormal Breathing	0/0	1 / 60 DAY 652	0/0	0/60	0/0	0/60	0/0	0/60
Clonic Seizures	0/0	0/60	0/0	0/60	0/0	0/60	0/0	1 / 60 DAY 17
Eye Abnormality	0/0	2 / 60 DAY 92	0/0	3 / 60 DAY 29	0/0	6 / 60 DAY 92	0/0	2 / 60 DAY 2
Head Tilt	0/0	1 / 60 DAY 232	0/0	1 / 60 DAY 29	0/0	2 / 60 DAY 29	0/0	1 / 60 DAY 23
Lethargic	0/0	0/60	0/0	1 / 60 DAY 708	0/0	0/60	0/0	1 / 60 DAY 4
Mass Appendage	0/0	0/60	0/0	0/60	0/0	1 / 60 DAY 428	0/0	1 / 60 DAY 56
Mass Head	0/0	2 / 60 DAY 344	0/0	3 / 60 DAY 372	0/0	2 / 60 DAY 372	0/0	2 / 60 DAY 56
Mass Torso/Dorsal	0/0	11 / 60 DAY 316	0/0	5 / 60 DAY 260	0/0	2 / 60 DAY 484	0/0	2 / 60 DAY 42

^{*} ANIMALS WITH OBSERVATION IN CURRENT PERIOD / TOTAL ANIMALS OBSERVED IN CURRENT PERIOD (WITHIN 30 DAYS OF RUN DATE)

⁺ ROW 1 = CUMULATIVE NO. OF ANIMALS WITH OBSERVATION / TOTAL ANIMALS STARTED ON STUDY ROW 2 = DAY OF ONSET

Test Type: CHRONIC **Route:** DOSED FEED

Route: DOSED FEED
Species/Strain: RATS/HSD

E05: CLINICAL OBSERVATIONS SUMMARY

Zinc Carbonate, Basic CAS Number: 5263-02-5

Date Report Requested: 08/06/2015 Time Report Requested: 12:54:36 First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

SEX: MALE	WEEK: 105

JEX. WALL	WLLK	. 100
	500ppm	ZnExc
OBSERVATION	CURRENT*	TOTAL+
Abnormal Breathing	0/0	0/60
Clonic Seizures	0/0	0/60
Eye Abnormality	0/0	2 / 60 DAY 288
Head Tilt	0/0	1 / 60 DAY 120
Lethargic	0/0	0/60
Mass Appendage	0/0	0/60
Mass Head	0/0	2 / 60 DAY 316
Mass Torso/Dorsal	0/0	3 / 60 DAY 512

^{*} ANIMALS WITH OBSERVATION IN CURRENT PERIOD / TOTAL ANIMALS OBSERVED IN CURRENT PERIOD (WITHIN 30 DAYS OF RUN DATE)

⁺ ROW 1 = CUMULATIVE NO. OF ANIMALS WITH OBSERVATION / TOTAL ANIMALS STARTED ON STUDY ROW 2 = DAY OF ONSET

Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

E05: CLINICAL OBSERVATIONS SUMMARY

Zinc Carbonate, Basic CAS Number: 5263-02-5

Date Report Requested: 08/06/2015 Time Report Requested: 12:54:36 First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

	Control	(38ppm)	3.5ppm SevZnDef 7ppm ZnDef		250ppmModZnExc			
OBSERVATION	CURRENT*	TOTAL+	CURRENT	TOTAL	CURRENT	TOTAL	CURRENT	TOTAL
Mass Torso/Lateral	0/0	6 / 60 DAY 484	0/0	8 / 60 DAY 428	0/0	6 / 60 DAY 344	0/0	7 / 60 DAY 428
Mass Torso/Ventral	0/0	8 / 60 DAY 456	0/0	9 / 60 DAY 428	0/0	7 / 60 DAY 316	0/0	8 / 60 DAY 310
Nasal/Eye Discharge	0/0	10 / 60 DAY 92	0/0	6 / 60 DAY 120	0/0	17 / 60 DAY 148	0/0	13 / 60 DAY 120
Ruffled Fur	0/0	0/60	0/0	3 / 60 DAY 596	0/0	1 / 60 DAY 652	0/0	2 / 60 DAY 42
Thin	0/0	5 / 60 DAY 484	0/0	3 / 60 DAY 652	0/0	3 / 60 DAY 652	0/0	5 / 60 DAY 42
Tremors	0/0	0/60	0/0	0/60	0/0	1 / 60 DAY 428	0/0	1 / 60 DAY 450
Ulcer/Abscess Appendage	0/0	2 / 60 DAY 428	0/0	2 / 60 DAY 176	0/0	2 / 60 DAY 428	0/0	5 / 60 DAY 428
Ulcer/Abscess Head	0/0	1 / 60 DAY 652	0/0	1 / 60 DAY 708	0/0	0/60	0/0	4 / 60 DAY 17

^{*} ANIMALS WITH OBSERVATION IN CURRENT PERIOD / TOTAL ANIMALS OBSERVED IN CURRENT PERIOD (WITHIN 30 DAYS OF RUN DATE)

⁺ ROW 1 = CUMULATIVE NO. OF ANIMALS WITH OBSERVATION / TOTAL ANIMALS STARTED ON STUDY ROW 2 = DAY OF ONSET

Test Type: CHRONIC Route: DOSED FEED

Species/Strain: RATS/HSD

E05: CLINICAL OBSERVATIONS SUMMARY

Zinc Carbonate, Basic CAS Number: 5263-02-5

Date Report Requested: 08/06/2015 Time Report Requested: 12:54:36 First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

SEX: MALE	WEEK: 105

92 /(1 111/1 122		
	500 ppm	ZnExc
OBSERVATION	CURRENT*	TOTAL+
Mass Torso/Lateral	0/0	4 / 60 DAY 484
Mass Torso/Ventral	0/0	4 / 60 DAY 456
Nasal/Eye Discharge	0/0	17 / 60 DAY 92
Ruffled Fur	0/0	0/60
Thin	0/0	2 / 60 DAY 680
Tremors	0/0	0/60
Ulcer/Abscess Appendage	0/0	2 / 60 DAY 428
Ulcer/Abscess Head	0/0	1 / 60 DAY 176

^{*} ANIMALS WITH OBSERVATION IN CURRENT PERIOD / TOTAL ANIMALS OBSERVED IN CURRENT PERIOD (WITHIN 30 DAYS OF RUN DATE)

⁺ ROW 1 = CUMULATIVE NO. OF ANIMALS WITH OBSERVATION / TOTAL ANIMALS STARTED ON STUDY ROW 2 = DAY OF ONSET

Test Type: CHRONIC Route: DOSED FEED

Species/Strain: RATS/HSD

E05: CLINICAL OBSERVATIONS SUMMARY

Zinc Carbonate, Basic CAS Number: 5263-02-5

Date Report Requested: 08/06/2015 Time Report Requested: 12:54:36 First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

	Control	(38ppm)	3.5ppm \$	SevZnDef	7ppm	ZnDef	250ppmN	lodZnExc
OBSERVATION	CURRENT*	TOTAL+	CURRENT	TOTAL	CURRENT	TOTAL	CURRENT	TOTAL
Ulcer/Abscess Torso/Dorsal	0/0	4 / 60 DAY 456	0/0	5 / 60 DAY 29	0/0	4 / 60 DAY 652	0/0	1 / 60 DAY 652
Ulcer/Abscess Torso/Lateral	0/0	2 / 60 DAY 652	0/0	0/60	0/0	0/60	0/0	4 / 60 DAY 652
Ulcer/Abscess Torso/Ventral	0/0	2 / 60 DAY 428	0/0	1 / 60 DAY 484	0/0	0/60	0/0	2 / 60 DAY 456

^{*} ANIMALS WITH OBSERVATION IN CURRENT PERIOD / TOTAL ANIMALS OBSERVED IN CURRENT PERIOD (WITHIN 30 DAYS OF RUN DATE)

⁺ ROW 1 = CUMULATIVE NO. OF ANIMALS WITH OBSERVATION / TOTAL ANIMALS STARTED ON STUDY ROW 2 = DAY OF ONSET

Test Type: CHRONIC **Route:** DOSED FEED

Species/Strain: RATS/HSD

E05: CLINICAL OBSERVATIONS SUMMARY

Zinc Carbonate, Basic CAS Number: 5263-02-5

Date Report Requested: 08/06/2015 Time Report Requested: 12:54:36 First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

SEX: MALE WEEK: 105

	500ppm ZnExc				
OBSERVATION	CURRENT*	TOTAL+	-		
Ulcer/Abscess Torso/Dorsal	0/0	0/60			
Ulcer/Abscess Torso/Lateral	0/0	1 / 60 DAY 652			
Ulcer/Abscess Torso/Ventral	0/0	0/60			

END OF MALE DATA

^{*} ANIMALS WITH OBSERVATION IN CURRENT PERIOD / TOTAL ANIMALS OBSERVED IN CURRENT PERIOD (WITHIN 30 DAYS OF RUN DATE)

⁺ ROW 1 = CUMULATIVE NO. OF ANIMALS WITH OBSERVATION / TOTAL ANIMALS STARTED ON STUDY ROW 2 = DAY OF ONSET

Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

E05: CLINICAL OBSERVATIONS SUMMARY

Zinc Carbonate, Basic CAS Number: 5263-02-5

Date Report Requested: 08/06/2015 **Time Report Requested:** 12:54:36 **First Dose M/F:** 09/03/09 / 09/04/09

Lab: BAT

	Control (38ppm)		3.5ppm \$	3.5ppm SevZnDef		7ppm ZnDef		250ppmModZnExc	
OBSERVATION	CURRENT*	TOTAL+	CURRENT	TOTAL	CURRENT	TOTAL	CURRENT	TOTAL	
Clonic Seizures	0/0	0/60	0/0	1 / 60 DAY 204	0/0	0/60	0/0	0/60	
Eye Abnormality	0/0	2 / 60 DAY 260	0/0	3 / 60 DAY 204	0/0	0/60	0/0	0/60	
Head Tilt	0/0	1 / 60 DAY 316	0/0	0/60	0/0	0/60	0/0	0/60	
Impaired Gait	0/0	0/60	0/0	0/60	0/0	0/60	0/0	0/60	
Lethargic	0/0	0/60	0/0	0/60	0/0	0/60	0/0	1 / 60 DAY 45	
Mass Appendage	0/0	0/60	0/0	1 / 60 DAY 344	0/0	1 / 60 DAY 596	0/0	0/60	
Mass Head	0/0	1 / 60 DAY 568	0/0	0/60	0/0	0/60	0/0	3 / 60 DAY 596	
Mass Torso/Dorsal	0/0	1 / 60 DAY 540	0/0	0/60	0/0	0/60	0/0	0/60	

^{*} ANIMALS WITH OBSERVATION IN CURRENT PERIOD / TOTAL ANIMALS OBSERVED IN CURRENT PERIOD (WITHIN 30 DAYS OF RUN DATE)

⁺ ROW 1 = CUMULATIVE NO. OF ANIMALS WITH OBSERVATION / TOTAL ANIMALS STARTED ON STUDY ROW 2 = DAY OF ONSET

Test Type: CHRONIC Route: DOSED FEED

Species/Strain: RATS/HSD

E05: CLINICAL OBSERVATIONS SUMMARY

Zinc Carbonate, Basic CAS Number: 5263-02-5

Date Report Requested: 08/06/2015 Time Report Requested: 12:54:36 First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

JEX. I LIVIALL	WEEK	. 107
	500ppm	
OBSERVATION	CURRENT*	TOTAL+
Clonic Seizures	0/0	0/60
Eye Abnormality	0/0	1 / 60 DAY 316
Head Tilt	0/0	3 / 60 DAY 120
Impaired Gait	0/0	1 / 60 DAY 456
Lethargic	0/0	0/60
Mass Appendage	0/0	0/60
Mass Head	0/0	1 / 60 DAY 680
Mass Torso/Dorsal	0/0	0/60

^{*} ANIMALS WITH OBSERVATION IN CURRENT PERIOD / TOTAL ANIMALS OBSERVED IN CURRENT PERIOD (WITHIN 30 DAYS OF RUN DATE)

⁺ ROW 1 = CUMULATIVE NO. OF ANIMALS WITH OBSERVATION / TOTAL ANIMALS STARTED ON STUDY ROW 2 = DAY OF ONSET

Test Type: CHRONIC Route: DOSED FEED

Species/Strain: RATS/HSD

E05: CLINICAL OBSERVATIONS SUMMARY

Zinc Carbonate, Basic CAS Number: 5263-02-5

Date Report Requested: 08/06/2015 Time Report Requested: 12:54:36 First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

	Control (38ppm)		3.5ppm SevZnDef		7ppm ZnDef		250ppmModZnExc	
OBSERVATION	CURRENT*	TOTAL+	CURRENT	TOTAL	CURRENT	TOTAL	CURRENT	TOTAL
Mass Torso/Lateral	0/0	17 / 60 DAY 316	0/0	15 / 60 DAY 372	0/0	12 / 60 DAY 428	0/0	16 / 60 DAY 316
Mass Torso/Ventral	0/0	20 / 60 DAY 344	0/0	22 / 60 DAY 204	0/0	26 / 60 DAY 260	0/0	25 / 60 DAY 176
Nasal/Eye Discharge	0/0	3 / 60 DAY 316	0/0	5 / 60 DAY 204	0/0	0/60	0/0	2 / 60 DAY 204
Ruffled Fur	0/0	0/60	0/0	0/60	0/0	0/60	0/0	1 / 60 DAY 456
Thin	0/0	0/60	0/0	0/60	0/0	0/60	0/0	1 / 60 DAY 456
Ulcer/Abscess Head	0/0	0/60	0/0	1 / 60 DAY 204	0/0	0/60	0/0	1 / 60 DAY 680
Ulcer/Abscess Torso/Dorsal	0/0	0/60	0/0	1 / 60 DAY 680	0/0	0/60	0/0	0/60
Ulcer/Abscess Torso/Lateral	0/0	1 / 60 DAY 708	0/0	0/60	0/0	0/60	0/0	0/60

^{*} ANIMALS WITH OBSERVATION IN CURRENT PERIOD / TOTAL ANIMALS OBSERVED IN CURRENT PERIOD (WITHIN 30 DAYS OF RUN DATE)

⁺ ROW 1 = CUMULATIVE NO. OF ANIMALS WITH OBSERVATION / TOTAL ANIMALS STARTED ON STUDY ROW 2 = DAY OF ONSET

Test Type: CHRONIC Route: DOSED FEED

Species/Strain: RATS/HSD

E05: CLINICAL OBSERVATIONS SUMMARY

Zinc Carbonate, Basic CAS Number: 5263-02-5

Date Report Requested: 08/06/2015 Time Report Requested: 12:54:36 First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

SEX: FEMALE	WEEK: 104

EX. I LIVIALL	WELL	1. 10 1
	500ppm ZnExc	
OBSERVATION	CURRENT*	TOTAL+
Mass Torso/Lateral	0/0	13 / 60 DAY 316
Mass Torso/Ventral	0/0	23 / 60 DAY 344
Nasal/Eye Discharge	0/0	4 / 60 DAY 120
Ruffled Fur	0/0	2 / 60 DAY 456
Thin	0/0	0/60
Ulcer/Abscess Head	0/0	0/60
Ulcer/Abscess Torso/Dorsal	0/0	0/60
Ulcer/Abscess Torso/Lateral	0/0	0/60

^{*} ANIMALS WITH OBSERVATION IN CURRENT PERIOD / TOTAL ANIMALS OBSERVED IN CURRENT PERIOD (WITHIN 30 DAYS OF RUN DATE)

⁺ ROW 1 = CUMULATIVE NO. OF ANIMALS WITH OBSERVATION / TOTAL ANIMALS STARTED ON STUDY ROW 2 = DAY OF ONSET

Test Type: CHRONIC Route: DOSED FEED

Species/Strain: RATS/HSD

E05: CLINICAL OBSERVATIONS SUMMARY

Zinc Carbonate, Basic CAS Number: 5263-02-5

Date Report Requested: 08/06/2015 Time Report Requested: 12:54:36 First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

	Control (38ppm)		3.5ppm SevZnDef		7ppm ZnDef		250ppmModZnExc	
OBSERVATION	CURRENT*	TOTAL+	CURRENT	TOTAL	CURRENT	TOTAL	CURRENT	TOTAL
Ulcer/Abscess Torso/Ventral	0/0	0/60	0/0	0/60	0/0	1 / 60 DAY 708	0/0	0/60

^{*} ANIMALS WITH OBSERVATION IN CURRENT PERIOD / TOTAL ANIMALS OBSERVED IN CURRENT PERIOD (WITHIN 30 DAYS OF RUN DATE)

⁺ ROW 1 = CUMULATIVE NO. OF ANIMALS WITH OBSERVATION / TOTAL ANIMALS STARTED ON STUDY ROW 2 = DAY OF ONSET

Test Type: CHRONIC Route: DOSED FEED

Species/Strain: RATS/HSD

E05: CLINICAL OBSERVATIONS SUMMARY

Zinc Carbonate, Basic CAS Number: 5263-02-5

Date Report Requested: 08/06/2015 Time Report Requested: 12:54:36 First Dose M/F: 09/03/09 / 09/04/09

Lab: BAT

SEX: FEMALE WEEK: 104

	500ppm ZnExc		
OBSERVATION	CURRENT*	TOTAL+	
Ulcer/Abscess Torso/Ventral	0/0	0/60	

END OF REPORT

^{*} ANIMALS WITH OBSERVATION IN CURRENT PERIOD / TOTAL ANIMALS OBSERVED IN CURRENT PERIOD (WITHIN 30 DAYS OF RUN DATE)

⁺ ROW 1 = CUMULATIVE NO. OF ANIMALS WITH OBSERVATION / TOTAL ANIMALS STARTED ON STUDY ROW 2 = DAY OF ONSET