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Acephate: 3-Generation Reproduction Study in Rats
Chevron Chemical Company. 1987. MRID No. 40323401
HED Doc. No. 006759

ACEPHATE

83-4 Three-Generation Reproduction Study with Rats

No. 303005 and S-2497

Study Date: April 3, 1987

MRID No. 40323401 (main study) and

MRID NO. 40605701 (corrected pages)

EXECUTIVE SUMMARY

In this 3-Generation Reproduction Study (83-4; MRIDs: 40323401 - main study and 40605701 - corrections), Charles River rats, 30 males and 30 females/group, were fed diets containing Acephate Technical (purity: 98.7%) for 75 days before they were bred to produce F_{1a} , F_{1b} , F_{2a} , and F_{2b} litters. Because of low fertility in all groups, including the controls, for the F_{1b} and F_{2b} litters, a third generation (F_{3a}) was produced from the F_{2b} litters. All rats were continuously exposed to the test material or the control diets either directly in their feed or through the mothers' milk during lactation. The nominal doses used were 0, 25, 50 and 500 ppm, and were based on the results of an earlier (1983) rat reproduction study (MRID 00129508) in which a reproductive NOEL was not determined. Using the FDA/HED conversion factor (1 ppm in food = 0.05 mg/kg/day, for the older rat; Appraisal of the Safety of Chemicals in Foods, Drugs and Cosmetics, 1959), these doses were equivalent to 0, 1.25, 2.5 and 25 mg/kg/day, respectively. Parameters examined were those routinely examined in a multigeneration rat reproduction study.

Treatment-related effects were observed only in the 500 ppm group and included: (1) Decreased body weights and/or weight gains for adult males (in each generation) and females (in some generations) and for pups in the F_{2a} and F_{3a} generations; (2) Increases in food consumption for males and females during the pre-mating period and decreases in food consumption for females during the gestation and lactation periods; (3) Clinical signs in males (increased incidence of alopecia in the first generation and increased incidence of soft or liquid stools in the second and third generations); (4) Decreases in mating performance for the F_{2b} generation; (5) Decreases in mean litter size (25-30%, $p < 0.01$) for the F_{1b} , F_{2a} , F_{2b} and F_{3a} generations; and (6) Significant ($p < 0.01$) decreases in pup survival to day 4 for the F_{1a} (3.2%) and the F_{2a} (6.3%) generations.

Based on decreased body weights and/or weight gains for adult males (each generation), and for adult females and pups (some generations), decreased food consumption during gestation and lactation periods, and decreases in litter size (some generations), the parental LOEL and NOEL are 500 ppm (25 mg/kg/day) and 50 ppm (2.5 mg/kg/day), respectively. Based on decreases in viability index (two generations) and in mating performance (one generation), the reproductive LOEL and NOEL are also 500 ppm and 50 ppm, respectively.

This study is ACCEPTABLE - Guideline and satisfies the guideline requirement for a reproduction study in the rat (83-4).

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Budd
6/21/88

DATA EVALUATION REPORT

STUDY TYPE: 83-4. Multi-generation reproduction-rats.

TOX. CHEM. NO.: 2A

MOID
ACCESSION NUMBER: 403234-01 (3 volumes) and 406057-01 containing corrected pages.

TEST MATERIAL: Acephate Technical, Lot SX-1102 of 98.7% purity.

SYNONYMS: Orthene

STUDY NUMBER(S): 303005 (Argus Research Lab), S-2497 (Chevron Co.)

SPONSOR: Chevron Chem. Co.

TESTING FACILITY: Argus Research Laboratories, Horsham. Pa.

TITLE OF REPORT: "Two-generation (two litter) Reproduction Study in Rats with Chevron Acephate Technical"

AUTHOR(S): Alan M. Hoberman, Ph.D.

REPORT ISSUED: April 3, 1987

CONCLUSIONS: NOEL = 50 ppm

LEL = 500 ppm. At 500 ppm there were decreases in body weight gain for adults and in some litters of the pups; increases in food consumption relative to body weight; clinical signs in males (alopecia and loose stools); decreases in litter size (25-30%) for 4 of the five litter groups; and decreases in pup survival to day 4.

Classification: core-GUIDELINES

Special Review Criteria (40 CFR 154.7): N/A

Quality Assurance Statement. 14.

A quality assurance statement signed by Jane E. Goeke, James A. Hills and Cynthia A. Dutt was provided attesting that thirty six inspections of this study were made.

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Review

A. Basic Design.

In this study, four groups of 30 rats of each sex (Crl: COBS*CD(SD)BR, obtained from the Charles River Breeding Laboratories) were dosed with either 0, 25, 50 or 500 ppm of acephate technical (Lot No.: SX-1102 and stated to be of 98.7% purity). The F₀ groups were dosed with this diet for 75 days before being bred to produce the F_{1a} and later the F_{1b} litters. Pups from the F_{1b} litters were selected and bred to produce F_{2a} and F_{2b} litters. Because of low fertility in all groups including the control for the F_{1b} and F_{2b} litters, a third generation (F_{3a}) was produced from the F_{2b} litters. The cohabitation (mating period) was scheduled to be for three weeks and the rats were mated in pairs. All rats were continuously exposed to acephate or the control diets either directly in their feed or through the mothers milk during lactation.

The test diets were prepared weekly by combining the test material with Certified Rodent Chow Meal #5002 (Ralston Purina) to provide the nominal concentrations of 0, 25, 50 and 500 ppm. During the first 12 weeks of the study the diets were replaced weekly with freshly prepared samples. After 12 weeks, each freshly prepared batch was divided in halves with one half being placed in a freezer and the other being offered to the rats without freezing. During the week the frozen diet (after thawing) replaced the diet offered to the rats. Samples of each diet preparation and samples from the feed hoppers were taken for chemical analysis for both accuracy of the diet preparation and stability of the test material in the hoppers.

The analysis for acephate was performed separately by the Chevron Chemical Co.. The report authored by A.A. Spiros is in Volume III (EPA Acc. No.: 403234-01). Analysis revealed that the test material was of 98.5% purity based on the results of several trials (this is slightly lower than 98.7% purity originally reported). The homogeneity of the diets were found to be within 85.4% to 99.4% of the uniform target concentrations. The stability tests for acephate in the diet indicated that 79.7, 87.0 and 76.0% of the acephate was present after seven days in the hoppers for the 25, 50 and 500 ppm diet groups. The analytical data also indicated that the levels of acephate were 94.3 +/-7.6%, 95.6 +/-9.5% and 91.7 +/-4.3% of the target concentrations for the low, mid and high dose test groups respectively for the freshly prepared diets.

It should be noted that on weeks 14, 15, 46, 50, 66 and 70, acephate at up to about 6 ppm was found in some control diet samples. No explanation for this was provided. The contamination

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might have been at either the diet preparation or in the analytical laboratory.

B. Results.

1. Mortality.

No mature rats died as a result of exposure to acephate.

2. Body weight.

i. Adults

The study report presents an extensive write up and analysis of body weight data. Statistically significant body weight decreases were evident in the high dose group males for each generation. For example, the F0 generation male rats were 6% lower at termination than the controls. Some decreases in female body weight were also evident particularly during gestation and lactation. Although the F3a mid dose group was statistically significantly lower during gestation, this was reasonably attributed to the small litter size which was delivered for this group. Other examples of body weight changes were similarly related to litter size.

ii. Pups

Pup body weights (as average weight per litter) for all dosage groups for all litters were comparable with the possible exception of growth during days 14-21 of lactation when some decreases were noted. Pup weights (at day 21 as average weight per litter) were also comparable among all groups except that the F2a high dose group (-8%) and F3a (-7%) being statistically significantly decreased.

The overall conclusion by TB is that no consistent effects on body weight were evident for the 25 and 50 ppm groups. The effects at 500 ppm were of a small magnitude.

NOEL = 50 ppm, LEL = 500 ppm for overall body weight effects (adults and pups).

3. Food Consumption.

Increases in food consumption were noted for the males starting at weeks 2-4 and continuing to week 10 for the first and second generations for the high dose group. Increases were also

noted for females during the pre-mating period but decreases were noted during the gestation period for the high dose group.

Food consumption varied widely with the age and stage of development of the rats and for females its condition regarding pregnancy. As the food consumption varied so did the intake of acephate. The study report investigated this aspect of the data intensively and prepared numerous data tables for the various times in the life cycles of the rats such as growth, pre-mating period, gestation, lactation, and weaning etc for each of the parental groups and litters available. Much data is presented to show the mg acephate/kg/day ingested at various stages of development. The report states that the symptoms of acephate toxicity (weight loss, some clinical signs) were most obvious when the rats were consuming the most food and hence the most acephate.

NOEL = 50 ppm, LEL = 500 ppm for increased food consumption relative to body weight.

4. Clinical signs.

The only clinical responses to acephate treatment were reported as being in the high dose group males. No effects were reported in females. These were increased incidences of alopecia in the first generation and increased incidences of soft or liquid stools in the second and third generations.

NOEL = 50 ppm, LEL = 500 ppm for clinical signs.

5. Mating performance.

No dose related effects on mating performances were evident for any of the parental groups which produced the Fl_a, Fl_b, F_{2a} or F_{2b} litters. A statistically significant decrease ($p < 0.01$) in the mating performance for the high dose parental group (F_{2b}) which produced the F_{3a} litters was evident (refer to Table 1 below). This resulted in less females being pregnant in this group (60% in the high dose group versus 90% in the control) and only 162 pups delivered versus 372 pups in the control group. The study report did not relate this decrease in mating performance to the presence of acephate in the diet. According to the study report this decrease in performance was said to be related to "heavier body weight" of the rats assigned to cohabitation and the "inbreeding" that had occurred as a result of random selection from the limited population of rats for three generations.

Inspection of the data related to matings not resulting in pregnancy (fertility index) revealed comparable incidences among all groups except for the F_{3a} high dose test group which had 7 incidences versus only 2 incidences in the controls

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indicating a possible effect for this group.

There were no obvious consistent test chemical effects on the days spent in cohabitation except that the high dose group for the F3a litter appeared to average a day longer than the other three groups in this generation (i.e. 2 days vs 3 days).

The gestation index (percentage of pregnancies resulting in litters) was not affected by acephate in the diet.

TB believes that the decrease in mating for the high dose group for the F3a generation may be related to the test material and the explanation provided by the study report, although plausible, is not readily acceptable.

Note: The mating performance for the rats in this study varied among the five mating groups as shown in Table 1 below. In particular, the rats in the second matings (to produce the Flb and F2b litters) showed decreases in the mating performance relative to the same rats in these groups which produced the Fla and F2a litters. This is best illustrated by examining the data for the Flb litters which had mating frequencies of 30.0 to 43.3 % which were much lower than the 73.3 to 83.3 % obtained for the Fla matings. The reduced mating performance was also evident but to a somewhat lesser degree in the F2b (53.3 to 70 %) when compared to the F2a (66.7 to 83.3 %). Although the mating performance was decreased in the Flb and F2b litters, there was no evidence of this being related to acephate in the diet (i.e. the control groups were similarly affected). The testing laboratory made an elaborate effort to attempt to determine the cause of this decrease in mating performance (for example, refer to letters between Mildred S. Christian and E. Marshall Johnson dated Jan 14, 1986 and Jan 17, 1986 discussing this matter). The explanation for the reduced mating performance was not precisely determined but was attributed to natural variations in the cycle of the rats and was considered to be independent of the presence of the test material.

T B recognizes that the mating performance in the Flb and F2b groups was decreased but does not consider that this was related to the test material or significantly compromised the acceptability of the study.

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Table 1. Pregnancy rate (pregnant rats relative to rats co-habitated, expressed as a percentage).

Dose Level	Generation/Litter				
	F1a ¹	F1b ¹	F2a ²	F2b ²	F3a ³
Control	83.3	43.3	83.3	53.3	90.0
25 ppm	73.3	33.3	73.3	63.3	80.0
50 ppm	76.7	30.0	70.0	70.0	96.7
500 ppm	76.7	36.7	66.7	53.3	60.0**

1. Appendix A Tables 37 and 38

2. Appendix B Tables 35 and 36

3. Appendix C Table 25

** Statistically significant $p < 0.01$

6. Duration of gestation and delivery of litters.

These parameters were not significantly affected by the presence of acephate in the diet.

7. Litter size and stillborn pups.

The average litter size at birth was statistically significantly decreased (25-30%) by the presence of acephate in the diet for 4 of the five litters produced. The Table 2 illustrates the average litter size (number of pups per litter) at birth.

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Table 2. Litter size (mean number of pups per litter +/- standard deviation).

Dose Level	Generation/Litter				
	<u>F1a</u>	<u>F1b</u>	<u>F2a</u>	<u>F2b</u>	<u>F3a</u>
Control	12.6(3.1)	13.1(1.8)	13.6(3.2)	13.2(2.2)	13.8(2.6)
25 ppm	12.2(2.9)	10.4(4.7)	13.5(1.6)	13.8(2.6)	13.5(1.7)
50 ppm	11.3(3.8)	11.1(2.1)	12.6(3.9)	14.3(3.0)	12.3(2.8)*
500 ppm	11.3(2.5)	9.7(3.0)*	10.2(3.4)**	9.9(3.4)**	9.7(2.8)**

*statistically significant $p < 0.05$ **statistically significant $p < 0.01$

Although the F3a mid dose group reaches statistical significance, the testing laboratory does not attribute this decrease to acephate in the diet. The control group for the F3a generation (13.8) is high and the mid dose group (12.3) is within the range for the other non affected groups.

NOEL = 50 ppm, LEL = 500 ppm for decrease in litter size.

The effect of acephate on litter size may have occurred early in pregnancy since there was no increase in the number of stillborn pups due to acephate in the diet.

8. Pup survival.

The number of pups surviving to day 4 (as a percentage of live pups delivered) was slightly decreased for the mid (-3.2%) and high (-3.5%) dose groups for the F1a generation and for the high dose group for the F2a (-6.9%) generation. Refer to the Table 3 below.

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Table 3. Pup survival (pups surviving 4 days relative to total liveborn pups, expressed as a percentage).

Dose level	Generation/Litter				
	<u>F1a</u>	<u>F1b</u>	<u>F2a</u>	<u>F2b</u>	<u>F3a</u>
Control	99.7	98.8	99.4	99.0	98.1
25 ppm	98.1	99.0	99.0	97.7	96.8
50 ppm	96.8**	100	98.8	99.3	98.6
500 ppm	96.5**	98.1	93.1**	99.4	95.1

** statistically significant $p < 0.01$

The inconsistency of the decreases in the 4 day survival for all litter groups and the small percentages involved do not convincingly indicate a test material related effect. The study report, however, considers these decreases to be "biologically remarkable only for the high dose group". No effect of acephate was noted on the 4-21 day survival.

NOEL = 50 ppm, LEL = 500 ppm for pup survival.

9. Sex ratio.

There were no effects evident on the ratio of males to females.

10. Gross Necropsy and Histopathology.

Complete necropsies were performed on all parental rats in the Fo, F1b and F2b generations. The females were reported to have also been evaluated for the number of implantation sites at necropsy.

No test chemical related increases in lesions were noted at gross necropsy for the rats dosed with acephate. Information on the total number of implantation sites could not be found in the study report.

The histopathology report is presented in Appendix H and was prepared by W. Ray Brown, D.V.M., Ph.D., Veterinary Pathologist (report dated April 24, 1987).

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Microscopic evaluations of the control and high dose rats in the Fo, Flb and F2b parental groups were made. The tissues specified for evaluation were testes, epididymides, prostate, seminal vesicles, uteri, cervix, and tissues with gross lesions. Preparation consisted of embedding the tissue in paraffin, sectioning at 5 microns, and staining with hematoxylin and eosin.

No test chemical related microscopic lesions were noted in any of the parental rats for the Fo, Flb or F2b generations.

NOEL = 500 ppm.

CONCLUSION.

This study is classified as CORE GUIDELINES. Sufficient data were generated to define a NOEL of 50 ppm. At 500 ppm there were decreases in body weight gain for adults and pups; increases in food consumption relative to body weight for adults; clinical signs in male adults (alopecia and loose stools); decrease in litter size (25-30%) in 4 of the 5 litter groups; and decreases in pup survival to day 4.

It should be noted that this study did not assess for inhibition of AChE or ChE.

D. Summary Tables

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Parameter	Dosage (ppm)	FO-F1a	FO-F1b	F1b-F2a	F1b-F2b	F2b-F3a
Mating						
Index(I)	0	28/30(93.3)	20/30(66.7)	29/30(96.7)	28/30(93.3)	29/30(96.7)
	25	27/30(90.0)	19/30(63.3)	30/30(100.0)	29/30(96.7)	29/29(100.0)
	50	28/30(93.3)	20/30(66.7)	28/30(93.3)	30/30(100.0)	29/30(96.7)
	500	29/30(96.7)	20/30(66.7)	28/30(93.3)	28/30(93.3)	25/30(83.3)**
	0a	30/30(100.0)	27/30(90.0)	25/25(100.0)	25/25(100.0)	—
Fertility						
Index(I)	0	25/28(89.3)	13/20(65.0)	25/29(86.2)	16/28(57.1)	27/29(93.1)
	25	22/27(81.5)	10/19(52.6)	21/30(70.0)	19/29(65.5)	24/29(82.8)
	50	23/28(82.1)	9/20(45.0)	21/28(75.0)	21/30(70.0)	29/29(100.0)
	500	23/29(79.3)	11/20(55.0)	20/28(71.4)	16/28(57.1)	18/25(72.0)**
	0a	26/30(86.7)	22/27(81.5)	20/25(80.0)	18/25(72.0)	—
Postnatal Survival						
Index(I)	0	307/308(99.7)	166/168(98.8)	332/334(99.4)	210/212(99.0)	365/372(98.1)
(days 0-4)	25	259/264(98.1)	103/104(99.0)	291/294(99.0)	251/257(97.7)	300/310(96.8)
	50	241/249(96.8)**	100/100(100.0)	260/263(98.8)	297/299(99.3)	344/349(98.6)
	500	248/257(96.5)**	105/107(98.1)	188/202(93.1)**	157/158(99.4)	154/162(95.1)
	0a	344/346(99.4)	255/263(97.0)	260/260(100.0)	238/242(98.3)	—
Lactation						
Index(I)	0	194/195(99.5)	104/104(100.0)	194/194(100.0)	128/128(100.0)	211/213(99.1)
(days 4-21)	25	171/172(99.4)	69/70(98.6)	178/178(100.0)	149/150(99.3)	182/184(98.9)
	50	159/163(97.5)	70/70(100.0)	159/160(99.4)	164/164(100.0)	228/228(100.0)
	500	173/178(97.2)	83/84(98.8)	136/137(99.3)	115/117(98.3)	125/125(100.0)
Litter Size (Total)						
	0	12.6±3.1	13.1±1.8	13.6±3.2	13.2±2.2	13.8±2.6
	25	12.2±2.9	10.4±4.7	13.5±1.6	13.8±2.6	13.5±1.7
	50	11.3±3.8	11.1±2.1	12.6±3.9	14.3±3.0	12.3±2.8*
	500	11.3±2.5	9.7±3.0* 26%↓	10.2±3.4** 25%↓	9.9±3.4** 27%	9.7±2.8** 30%
	0a	13.3±3.4	12.0±4.6	13.0±2.4	13.5±3.1 25%	—
Pup Weight (Grams)						
	0					
	Day 0	6.3±0.6	6.5±0.6	6.0±0.8	6.3±0.5	6.0±0.5
	0a	6.2±0.4	6.4±1.0	6.2±0.6	6.2±0.6	—
	Day 21	55.8±4.1	58.0±4.4	48.8±5.3	55.0±4.6	53.5±5.5
	25					
	Day 0	6.3±0.9	6.8±1.1	6.1±0.5	6.0±0.5	6.1±0.4
	Day 21	55.2±5.8	57.1±5.7	49.7±3.4	51.6±4.4	49.9±4.7*
	50					
	Day 0	6.5±0.6	6.6±0.8	6.2±0.7	6.0±0.7	6.0±0.6
	Day 21	56.0±3.3	56.9±6.0	47.5±6.3	53.3±6.5	50.8±4.4
	500					
	Day 0	6.4±0.5	6.7±0.7	6.2±0.7	6.4±0.7	6.2±0.6
	Day 21	53.5±3.6	55.9±4.9	44.8±6.0*	53.9±6.3	51.4±3.9

* = Significantly different from vehicle control (P<0.05)

** = Significantly different from vehicle control (P<0.01)

0a. Values for another two generation study (two litters per generation) simultaneously conducted in an adjacent Mating Index (I) can be found in the Mating and Fertility Tables for each generation as "Rate Which Mated". Fertility Index (I) can be found in the Mating and Fertility Tables for each generation as "Pregnant Pairs/Mated". Postnatal Survival Index (I) (days 0-4) can be found in the Natural Delivery and Litter Data Tables for each generation as "Pups Surviving 4 Days/Total Liveborn Pups (Preculling)". Lactation Index (I) (days 4-21) can be found in Natural Delivery and Litter Data Tables for each generation as "Pups Surviving 21 Days/Pups Selected on Day 4".

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACETATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 11 (PAGE 1): SUMMARY OF WEEKLY BODY WEIGHTS - F0 GENERATION MALE RATS

Dosage Group		0 (Vehicle)	25 ppm	50 ppm	500 ppm
Animals - Tested	N	30	30	30	30
Body Weight (g)					
Day 1	$\bar{X} \pm S.D.$	215.1 $\pm$ 12.7	215.3 $\pm$ 12.6	214.3 $\pm$ 10.7	213.1 $\pm$ 12.1
Day 8	$\bar{X} \pm S.D.$	280.8 $\pm$ 17.0	276.3 $\pm$ 17.6	276.1 $\pm$ 16.0	266.8 $\pm$ 15.6**
Day 15	$\bar{X} \pm S.D.$	328.0 $\pm$ 22.1	328.5 $\pm$ 23.0	324.7 $\pm$ 20.4	313.0 $\pm$ 19.6*
Day 22	$\bar{X} \pm S.D.$	369.9 $\pm$ 25.6	372.1 $\pm$ 29.1	370.4 $\pm$ 24.3	349.9 $\pm$ 19.7**
Day 29	$\bar{X} \pm S.D.$	405.0 $\pm$ 28.7	406.3 $\pm$ 32.6	406.2 $\pm$ 28.0	384.5 $\pm$ 25.6*
Day 36	$\bar{X} \pm S.D.$	438.0 $\pm$ 31.8	440.1 $\pm$ 38.5	442.2 $\pm$ 31.7	413.3 $\pm$ 29.1**
Day 43	$\bar{X} \pm S.D.$	461.2 $\pm$ 34.2	464.9 $\pm$ 42.4	463.3 $\pm$ 36.0	431.9 $\pm$ 32.3**
Day 50	$\bar{X} \pm S.D.$	480.6 $\pm$ 36.7	484.6 $\pm$ 43.8	484.8 $\pm$ 37.5	449.1 $\pm$ 38.7**
Day 57	$\bar{X} \pm S.D.$	503.8 $\pm$ 41.4	507.9 $\pm$ 48.6	503.8 $\pm$ 40.8	466.8 $\pm$ 44.9**
Day 64	$\bar{X} \pm S.D.$	520.5 $\pm$ 44.0	526.4 $\pm$ 53.3	525.8 $\pm$ 46.3	485.2 $\pm$ 46.4**
Day 71 ^a	$\bar{X} \pm S.D.$	532.8 $\pm$ 49.2	540.1 $\pm$ 57.0	540.5 $\pm$ 49.3	495.4 $\pm$ 49.6**
Day 78 ^o	$\bar{X} \pm S.D.$	536.6 $\pm$ 51.5	544.2 $\pm$ 56.2	541.2 $\pm$ 48.9	497.4 $\pm$ 48.2**
Day 85 ^a	$\bar{X} \pm S.D.$	549.9 $\pm$ 52.6	559.2 $\pm$ 61.2	556.0 $\pm$ 52.9	512.9 $\pm$ 48.1*
Day 92	$\bar{X} \pm S.D.$	566.5 $\pm$ 52.5	578.0 $\pm$ 64.7	575.1 $\pm$ 56.9	531.1 $\pm$ 53.0*
Day 99	$\bar{X} \pm S.D.$	583.3 $\pm$ 54.9	598.3 $\pm$ 68.3	594.2 $\pm$ 59.5	546.2 $\pm$ 56.4*
Day 106	$\bar{X} \pm S.D.$	598.8 $\pm$ 59.7	609.0 $\pm$ 70.3	603.3 $\pm$ 62.4	555.1 $\pm$ 58.6*
Day 113	$\bar{X} \pm S.D.$	603.5 $\pm$ 60.9	620.9 $\pm$ 72.4	616.6 $\pm$ 64.1	565.5 $\pm$ 58.9*

Doy = Number of days on test diet.

a. Rats in cohabitation.

* Significantly different from vehicle control ($P < 0.05$).

** Significantly different from vehicle control ($P < 0.01$).

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACETPHATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 11 (PAGE 2): SUMMARY OF WEEKLY BODY WEIGHTS - F0 GENERATION MALE RATS

Dosage Group		0 (Vehicle)	25 ppm	50 ppm	500 ppm
Animals - Tested	N	30	30	30	30
Body Weight (g)					
Day 120	$\bar{X} \pm S.D.$	615.7 $\pm$ 62.1	633.5 $\pm$ 74.0	629.0 $\pm$ 65.2	576.8 $\pm$ 56.7*
Day 127	$\bar{X} \pm S.D.$	623.6 $\pm$ 63.5	642.0 $\pm$ 75.6	636.7 $\pm$ 67.2	579.7 $\pm$ 65.6*
Day 134	$\bar{X} \pm S.D.$	635.1 $\pm$ 65.3	655.6 $\pm$ 78.4	648.9 $\pm$ 70.1	589.6 $\pm$ 64.9*
Day 141	$\bar{X} \pm S.D.$	643.6 $\pm$ 68.3	661.3 $\pm$ 79.5	655.9 $\pm$ 70.3	595.1 $\pm$ 64.3*
Day 148	$\bar{X} \pm S.D.$	649.3 $\pm$ 69.6	669.1 $\pm$ 82.2	660.9 $\pm$ 71.8	601.4 $\pm$ 66.2*
Day 155	$\bar{X} \pm S.D.$	655.8 $\pm$ 69.9	677.7 $\pm$ 81.7	668.7 $\pm$ 73.0	608.7 $\pm$ 67.0*
Day 162	$\bar{X} \pm S.D.$	661.3 $\pm$ 71.7 [29] ^a	685.0 $\pm$ 85.0	673.5 $\pm$ 74.8	618.1 $\pm$ 67.0
Day 169 ^b	$\bar{X} \pm S.D.$	658.9 $\pm$ 72.0	678.7 $\pm$ 86.7	669.5 $\pm$ 75.0	616.7 $\pm$ 68.5*
Day 176 ^b	$\bar{X} \pm S.D.$	664.9 $\pm$ 70.6	688.6 $\pm$ 86.0	678.0 $\pm$ 76.6	624.9 $\pm$ 70.9
Day 183 ^b	$\bar{X} \pm S.D.$	675.0 $\pm$ 74.9	699.9 $\pm$ 87.2	688.9 $\pm$ 78.0	634.8 $\pm$ 76.8
Day 190 ^c	$\bar{X} \pm S.D.$	684.7 $\pm$ 75.6	704.2 $\pm$ 88.8	693.9 $\pm$ 77.6	639.0 $\pm$ 76.8*
Day 197	$\bar{X} \pm S.D.$	694.2 $\pm$ 78.0	713.8 $\pm$ 93.0	706.2 $\pm$ 80.0	648.4 $\pm$ 74.4*
Day 204	$\bar{X} \pm S.D.$	696.2 $\pm$ 80.7	718.1 $\pm$ 95.3	710.4 $\pm$ 81.0	652.1 $\pm$ 72.3
Day c	$\bar{X} \pm S.D.$	704.3 $\pm$ 79.7	728.7 $\pm$ 96.8	712.9 $\pm$ 87.2 [29] ^a	664.6 $\pm$ 69.5 [29] ^a

Day = Number of days on test diet.

a. Value incorrectly or inadvertently not recorded; excluded from analyses.

b. Rate in cohabitation.

c. Terminal weight.

* Significantly different from vehicle control ($P < 0.05$).

[] = Number of values averaged.

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACEPHATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 12 (PAGE 1): SUMMARY OF WEEKLY BODY WEIGHT CHANGES - F0 GENERATION MALE RATS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Treated	N	30	30	30	30
Body Weight Change (g)					
Days 1-8	$\bar{X} \pm S.D.$	+65.7 $\pm$ 7.9	+61.0 $\pm$ 9.9	+61.8 $\pm$ 8.9	+53.7 $\pm$ 7.8**
Days 8-15	$\bar{X} \pm S.D.$	+47.2 $\pm$ 9.0	+52.2 $\pm$ 11.6	+48.7 $\pm$ 7.8	+46.2 $\pm$ 8.3
Days 15-22	$\bar{X} \pm S.D.$	+41.9 $\pm$ 7.4	+43.6 $\pm$ 9.6	+45.7 $\pm$ 9.6	+36.9 $\pm$ 7.1*
Days 22-29	$\bar{X} \pm S.D.$	+35.1 $\pm$ 6.1	+34.2 $\pm$ 10.4	+35.8 $\pm$ 10.2	+34.6 $\pm$ 10.3
Days 29-36	$\bar{X} \pm S.D.$	+33.1 $\pm$ 5.9	+33.8 $\pm$ 11.9	+35.9 $\pm$ 9.2	+28.8 $\pm$ 6.4*
Days 36-43	$\bar{X} \pm S.D.$	+23.2 $\pm$ 6.1	+24.8 $\pm$ 6.3	+21.2 $\pm$ 11.8	+18.6 $\pm$ 7.1*
Days 43-50	$\bar{X} \pm S.D.$	+19.3 $\pm$ 10.8	+19.7 $\pm$ 6.8	+21.5 $\pm$ 6.1	+17.2 $\pm$ 12.1
Days 50-57	$\bar{X} \pm S.D.$	+23.3 $\pm$ 11.2	+23.3 $\pm$ 9.2	+19.0 $\pm$ 9.6*	+17.6 $\pm$ 15.4*
Days 57-64	$\bar{X} \pm S.D.$	+16.7 $\pm$ 5.9	+18.4 $\pm$ 8.5	+22.0 $\pm$ 9.8	+18.5 $\pm$ 16.9
Days 64-71	$\bar{X} \pm S.D.$	+12.3 $\pm$ 8.5	+13.7 $\pm$ 7.0	+14.7 $\pm$ 8.0	+10.1 $\pm$ 6.9
Days 71-78 ^a	$\bar{X} \pm S.D.$	+ 3.8 $\pm$ 7.1	+ 4.1 $\pm$ 5.5	+ 0.7 $\pm$ 5.9	+ 2.1 $\pm$ 9.0
Days 78-85 ^a	$\bar{X} \pm S.D.$	+13.4 $\pm$ 8.0	+15.0 $\pm$ 8.9	+14.8 $\pm$ 8.8	+15.4 $\pm$ 7.1

Day = Number of days on test diet.

a. Rats in cohabitation.

* Significantly different from vehicle control ($P < 0.05$).

** Significantly different from vehicle control ($P < 0.01$).

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACETATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 12 (PAGE 2): SUMMARY OF WEEKLY BODY WEIGHT CHANGES - F0 GENERATION MALE RATS

Oesage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	N				
Body Weight Change (g)					
Days 85-92 ^a	$\bar{x} \pm S.O.$	+16.5 $\pm$ 1.7	+18.8 $\pm$ 5.1	+19.1 $\pm$ 8.0	+18.2 $\pm$ 7.5
Days 92-99	$\bar{x} \pm S.D.$	+16.8 $\pm$ 5.7	+20.3 $\pm$ 6.2	+19.2 $\pm$ 8.1	+15.1 $\pm$ 5.8
Days 99-106	$\bar{x} \pm S.D.$	+ 7.6 $\pm$ 9.5	+10.7 $\pm$ 6.6	+ 9.0 $\pm$ 8.5	+ 8.9 $\pm$ 4.5
Days 106-113	$\bar{x} \pm S.O.$	+12.7 $\pm$ 5.2	+11.9 $\pm$ 11.0	+13.3 $\pm$ 7.6	+10.4 $\pm$ 4.4
Days 113-120 ^a	$\bar{x} \pm S.O.$	+12.2 $\pm$ 7.1	+12.5 $\pm$ 12.2	+12.4 $\pm$ 5.5	+11.2 $\pm$ 16.2
Days 120-127	$\bar{x} \pm S.O.$	+ 7.9 $\pm$ 4.3	+ 8.5 $\pm$ 4.8	+ 7.7 $\pm$ 5.6	+ 3.0 $\pm$ 25.6
Days 127-134	$\bar{x} \pm S.D.$	+11.5 $\pm$ 3.5	+13.6 $\pm$ 5.5	+12.2 $\pm$ 6.0	+ 9.8 $\pm$ 9.9
Days 134-141	$\bar{x} \pm S.D.$	+ 8.5 $\pm$ 5.9	+ 5.7 $\pm$ 4.2	+ 7.1 $\pm$ 6.3	+ 5.5 $\pm$ 6.3
Days 141-148	$\bar{x} \pm S.O.$	+ 5.7 $\pm$ 5.4	+ 7.8 $\pm$ 4.3	+ 5.0 $\pm$ 6.0	+ 6.3 $\pm$ 6.3
Days 148-155	$\bar{x} \pm S.D.$	+ 6.5 $\pm$ 6.3	+ 8.6 $\pm$ 4.6	+ 7.8 $\pm$ 7.9	+ 7.4 $\pm$ 5.1
Days 155-162	$\bar{x} \pm S.O.$	+7.1 $\pm$ 6.0[29] ^b	+ 7.4 $\pm$ 5.5	+ 4.8 $\pm$ 6.1	+ 9.4 $\pm$ 5.7
Days 162-169 ^a	$\bar{x} \pm S.O.$	-4.0 $\pm$ 7.1[29] ^b	- 6.4 $\pm$ 13.1	- 4.0 $\pm$ 7.2	- 1.4 $\pm$ 5.2
Days 169-176 ^a	$\bar{x} \pm S.O.$	+ 6.0 $\pm$ 8.4	+ 9.9 $\pm$ 8.0	+ 8.5 $\pm$ 7.6	+ 8.1 $\pm$ 6.5

Day = Number of days on test diet.

a. Rats in cohabitation.

b. One value incorrectly or inadvertently not recorded. Excluded from analyses.

{ } = Number of values averaged.

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACETATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 12 (PAGE 3): SUMMARY OF WEEKLY BODY WEIGHT CHANGES - F0 GENERATION MALE RATS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	N	30	30	30	30
Body Weight Change (g)					
Days 176-183 ^a	$\bar{X} \pm S.D.$	+10.2 $\pm$ 10.1	+11.3 $\pm$ 7.3	+10.8 $\pm$ 10.3	+10.0 $\pm$ 8.3
Days 183-190 ^a	$\bar{X} \pm S.D.$	+ 9.7 $\pm$ 4.7	+ 4.4 $\pm$ 6.4**	+ 5.0 $\pm$ 13.8	+ 4.2 $\pm$ 7.0**
Days 190-197	$\bar{X} \pm S.D.$	+ 9.5 $\pm$ 5.5	+ 9.5 $\pm$ 8.9	+12.3 $\pm$ 7.1	+ 9.4 $\pm$ 11.3
Days 197-204	$\bar{X} \pm S.D.$	+ 2.0 $\pm$ 13.0	+ 4.3 $\pm$ 10.5	+ 4.2 $\pm$ 7.6	+ 3.7 $\pm$ 6.1
Days 204- c	$\bar{X} \pm S.D.$	+ 8.1 $\pm$ 7.0	+10.6 $\pm$ 8.5	+5.0 $\pm$ 5.4[29] ^b	+ 6.8 $\pm$ 7.4[29] ^b
Days 1 - c	$\bar{X} \pm S.D.$	+489.2 $\pm$ 76.7	+513.4 $\pm$ 92.4	+499.3 $\pm$ 88.7[29] ^b	+451.2 $\pm$ 65.5[29] ^b

Day = Number of days on test diet. a. Rats in cohabitation. (= Number of values averaged.
b. One value incorrectly or inadvertently not recorded. Excluded from averages.
c. Terminal weight.
** Significantly different from vehicle control ($P < 0.01$).

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACEPHATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 16 (PAGE 1): SUMMARY OF WEEKLY PREMATING FEED CONSUMPTION - GRAMS/KILOGRAM OF BODY WEIGHT PER DAY -
FO GENERATION FEMALE RATS

Dosage Group		0 (Vehicle)	25 ppm	50 ppm	500 ppm
Animal - Tested	N	30	30	30	30
Feed Consumption (g/kg/day)					
Days 1-8	$\bar{X} \pm S.D.$	110.0 $\pm$ 6.5	109.9 $\pm$ 19.8	112.4 $\pm$ 11.8	111.8 $\pm$ 7.8
Days 8-15	$\bar{X} \pm S.D.$	105.1 $\pm$ 6.3	108.6 $\pm$ 12.5	103.2 $\pm$ 7.0	103.8 $\pm$ 7.1
Days 15-22	$\bar{X} \pm S.D.$	97.8 $\pm$ 6.9	98.2 $\pm$ 8.0	96.5 $\pm$ 7.3	101.6 $\pm$ 10.0
Days 22-29	$\bar{X} \pm S.D.$	92.7 $\pm$ 5.3	92.8 $\pm$ 7.4	91.9 $\pm$ 6.8	95.5 $\pm$ 6.8
Days 29-36	$\bar{X} \pm S.D.$	90.3 $\pm$ 6.6	91.2 $\pm$ 8.4	88.7 $\pm$ 12.7	93.8 $\pm$ 7.4
Days 36-43	$\bar{X} \pm S.D.$	85.1 $\pm$ 4.9	85.4 $\pm$ 10.0 [29] ^a	84.6 $\pm$ 6.8	91.5 $\pm$ 10.7 **
Days 43-50	$\bar{X} \pm S.D.$	82.4 $\pm$ 5.7	81.4 $\pm$ 7.5	82.9 $\pm$ 6.5	85.0 $\pm$ 5.0
Days 50-57	$\bar{X} \pm S.D.$	80.1 $\pm$ 5.9	78.1 $\pm$ 5.1	78.6 $\pm$ 7.1	81.0 $\pm$ 4.5
Days 57-64	$\bar{X} \pm S.D.$	76.7 $\pm$ 5.5	75.0 $\pm$ 4.8	74.1 $\pm$ 4.6	77.9 $\pm$ 6.2
Days 64-71 ^b	$\bar{X} \pm S.D.$	57.8 $\pm$ 10.9	64.1 $\pm$ 9.0 *	55.5 $\pm$ 8.6	58.4 $\pm$ 10.5
Days 1-71 ^b	$\bar{X} \pm S.D.$	86.1 $\pm$ 4.5	86.6 $\pm$ 4.1 [29] ^a	85.1 $\pm$ 4.5	88.4 $\pm$ 4.0

Day = Number of days on test diet.

* Value incorrectly or inadvertently not recorded; excluded from analyses.

^b Last weekly body weight taken prior to rehabilitation.

^c * Significantly different from vehicle control (p < 0.05).

** Significantly different from vehicle control (p < 0.01).

[] = Number of values averaged.

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACEPIATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 18 (PAGE 1): SUMMARY OF MATERNAL FEED CONSUMPTION - GRAMS PER KILOGRAM OF BODY WEIGHT PER DAY
(GESTATION PERIOD) - FO GENERATION FEMALE RATS/FIA GENERATION LITTERS

Dosage Group		O (Vehicle)	25 ppm	50 ppm	500 ppm
Animals - Tested Pregnant Dams Without a Con- firmed Date of Mating	N	30	30	30	30
	N(%)	25(83.3)	22(73.3)	23(76.7)	23(76.7)
	N	0	1	1	0
Internal Feed Consumption ^a (g/kg/day)		25	21	22	23
Days 0-7	$\bar{X} \pm S.D.$	76.1 $\pm$ 7.1	73.0 $\pm$ 9.5	74.6 $\pm$ 7.7	75.2 $\pm$ 7.0
Days 7-14	$\bar{X} \pm S.D.$	73.4 $\pm$ 8.4	71.2 $\pm$ 8.1	70.8 $\pm$ 8.0	75.5 $\pm$ 9.6
Days 14-20	$\bar{X} \pm S.D.$	59.4 $\pm$ 7.7 [24] ^b	57.2 $\pm$ 11.2	53.5 $\pm$ 17.5	57.0 $\pm$ 7.2

a. This table is restricted to pregnant animals with a confirmed date of mating.

b. Value incorrectly or inadvertently not taken; excluded from analyses.

[] = Number of values averaged.

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACETATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 20 (PAGE 1): SUMMARY OF MATERNAL FEED CONSUMPTION - GRAHNS PER KILOGRAM OF BODY WEIGHT PER DAY
(LACTATION PERIOD) - F0 GENERATION FEMALE RATS/F1A GENERATION LITTERS

Dosage Group		0 (Vehicle)	25 ppm	50 ppm	500 ppm
Animals - Tested	N	30	30	30	30
Pregnant and Delivering a Litter	N(%)	25(83.3)	22(73.0)	23(76.7)	23(76.7)
Maternal Feed Consumption (g/kg/day)					
Days 0 - 4	$\bar{x} \pm S.D.$	84.4 $\pm$ 21.0	86.8 $\pm$ 20.1	88.7 $\pm$ 22.0 [22]	82.5 $\pm$ 15.5
Days 4 - 7	$\bar{x} \pm S.D.$	116.9 $\pm$ 20.6	118.8 $\pm$ 17.9	123.2 $\pm$ 20.1 [22]	119.6 $\pm$ 19.1
Days 7 - 14	$\bar{x} \pm S.D.$	157.0 $\pm$ 21.0 (24) ^a	158.0 $\pm$ 25.5	162.5 $\pm$ 18.1 [21]	155.6 $\pm$ 26.4
Days 0 - 14	$\bar{x} \pm S.D.$	128.9 $\pm$ 19.6 (24) ^a	129.9 $\pm$ 20.8	135.0 $\pm$ 16.0 [21]	127.7 $\pm$ 21.0

[] = Number of values averaged, excluding animals with no surviving pups.
a. Excluded values which are incorrectly or inadvertently not recorded.

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TABLE 22 (PAGE 1): SUMMARY OF MATERNAL FEED CONSUMPTION - GRAMS PER KILOGRAM OF BODY WEIGHT PER DAY
(GESTATION PERIOD) - F0 GENERATION FEMALE RATS/F1B GENERATION LITTERS

Dosage Group		0 (Vehicle)	25 ppm	50 ppm	500 ppm
Animals - Tested Pregnant Dams Without a Con- firmed Date of Mating	N	30	30	30	30
	N(%)	13(43.3)	10(33.3)	9(30.0)	11(36.7)
Maternal Feed Consumption ^a (g/kg/day)	N	1	1	1	0
	N	12	9	8	11
	$\bar{X} \pm S.D.$	70.0 $\pm$ 5.8	70.6 $\pm$ 9.0	71.0 $\pm$ 6.0	64.9 $\pm$ 15.2
	$\bar{X} \pm S.D.$	58.6 $\pm$ 12.7	62.9 $\pm$ 9.9	62.9 $\pm$ 5.0	62.3 $\pm$ 14.1
Days 0-7	$\bar{X} \pm S.D.$	50.5 $\pm$ 12.6	49.4 $\pm$ 14.5	51.8 $\pm$ 5.3	47.8 $\pm$ 12.5
Days 7-14					
Days 14-20					

a. This table is restricted to pregnant animals with a confirmed date of mating.

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACETUATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 24 (PAGE 1): SUMMARY OF MATERNAL FEED CONSUMPTION - GRAHS PER KILOGRAM OF BODY WEIGHT PER DAY
(LACTATION PERIOD) - F0 GENERATION FEMALE RATS/F1B GENERATION LITTERS

Dosage Group		0 (Vehicle)	25 ppm	50 ppm	500 ppm
Animals - Tested	N	30	30	30	30
Pregnant and Delivering a Litter	N(Z)	13(43.3)	10(33.3)	9(30.0)	11(36.7)
Maternal Feed Consumption (g/kg/day)					
Days 0 - 4	$\bar{X} \pm S.D.$	85.3 $\pm$ 10.8	76.6 $\pm$ 28.3	73.7 $\pm$ 21.4	76.2 $\pm$ 14.0
Days 4 - 7	$\bar{X} \pm S.D.$	108.2 $\pm$ 15.0	109.8 $\pm$ 29.0 [9]	108.2 $\pm$ 13.9	100.9 $\pm$ 16.7
Days 7 - 14	$\bar{X} \pm S.D.$	139.8 $\pm$ 18.4	131.8 $\pm$ 14.2 [9]	133.0 $\pm$ 13.0	129.1 $\pm$ 17.4
Days 0 - 14	$\bar{X} \pm S.D.$	117.8 $\pm$ 13.9	112.9 $\pm$ 18.6 [9]	110.7 $\pm$ 14.8	108.0 $\pm$ 15.5

[] - Number of values averaged, excluding animals with no surviving pups.

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACEPHATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 25 (PAGE 1): SUMMARY OF WEEKLY PREMATING BODY WEIGHTS - F0 GENERATION FEMALE RATS

Oosaga Group		0 (Vehicle)	25 ppm	50 ppm	500 ppm
Animals - Tested	N	30	30	30	30
Body Weight (g)					
Day 1	$\bar{X} \pm S.D.$	150.5 $\pm$ 9.3	150.5 $\pm$ 9.4	149.5 $\pm$ 9.2	150.0 $\pm$ 7.9
Day 8	$\bar{X} \pm S.D.$	174.3 $\pm$ 10.3	174.8 $\pm$ 11.8	173.8 $\pm$ 12.5	171.7 $\pm$ 11.9
Day 15	$\bar{X} \pm S.D.$	197.2 $\pm$ 14.4	197.5 $\pm$ 18.2	196.2 $\pm$ 16.2	194.0 $\pm$ 14.3
Day 22	$\bar{X} \pm S.D.$	217.9 $\pm$ 16.7	219.2 $\pm$ 15.7	215.4 $\pm$ 18.6	215.5 $\pm$ 18.3
Day 29	$\bar{X} \pm S.D.$	232.3 $\pm$ 18.0	234.7 $\pm$ 16.4	233.0 $\pm$ 19.8	233.2 $\pm$ 20.9
Day 36	$\bar{X} \pm S.D.$	249.2 $\pm$ 20.3	252.1 $\pm$ 18.9	246.6 $\pm$ 21.5	248.4 $\pm$ 23.6
Day 43	$\bar{X} \pm S.D.$	259.8 $\pm$ 23.9	261.8 $\pm$ 20.4	256.1 $\pm$ 23.9	260.2 $\pm$ 24.5
Day 50	$\bar{X} \pm S.D.$	268.0 $\pm$ 25.7	269.5 $\pm$ 21.6	265.9 $\pm$ 30.7	268.7 $\pm$ 24.8
Day 57	$\bar{X} \pm S.D.$	278.3 $\pm$ 27.0	279.2 $\pm$ 24.3	277.8 $\pm$ 29.9	278.3 $\pm$ 26.6
Day 64	$\bar{X} \pm S.D.$	286.6 $\pm$ 29.9	286.2 $\pm$ 25.3	282.2 $\pm$ 30.0	286.5 $\pm$ 28.7
Day 71 ^a	$\bar{X} \pm S.D.$	293.5 $\pm$ 32.1	290.8 $\pm$ 26.2	287.9 $\pm$ 32.7	289.6 $\pm$ 29.1

Day = Number of days on test diet.

a. Last weekly body weight taken prior to cohabitation.

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACEPATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 26 (PAGE 1): SUMMARY OF WEEKLY PREMATING BODY WEIGHT CHANGES - F0 GENERATION FEMALE RATS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	N	30	30	30	30
Body Weight Change (g)					
Days 1-8	$\bar{X} \pm S.D.$	+23.8 $\pm$ 5.4	+24.3 $\pm$ 9.0	+24.3 $\pm$ 6.1	+21.7 $\pm$ 7.1
Days 8-15	$\bar{X} \pm S.D.$	+22.9 $\pm$ 6.0	+22.7 $\pm$ 14.2	+22.4 $\pm$ 6.0	+22.3 $\pm$ 5.4
Days 15-22	$\bar{X} \pm S.D.$	+20.7 $\pm$ 5.8	+21.8 $\pm$ 10.9	+19.2 $\pm$ 6.3	+21.5 $\pm$ 6.3
Days 22-29	$\bar{X} \pm S.D.$	+14.4 $\pm$ 5.5	+15.5 $\pm$ 5.7	+17.6 $\pm$ 5.8	+17.6 $\pm$ 6.5
Days 29-36	$\bar{X} \pm S.D.$	+16.9 $\pm$ 6.7	+17.4 $\pm$ 5.8	+13.6 $\pm$ 5.0	+15.2 $\pm$ 7.0
Days 36-43	$\bar{X} \pm S.D.$	+10.5 $\pm$ 6.8	+9.7 $\pm$ 8.2	+9.5 $\pm$ 7.0	+11.9 $\pm$ 5.0
Days 43-50	$\bar{X} \pm S.D.$	+8.3 $\pm$ 5.5	+7.7 $\pm$ 9.0	+9.8 $\pm$ 14.4	+8.5 $\pm$ 4.1
Days 50-57	$\bar{X} \pm S.D.$	+10.3 $\pm$ 5.8	+9.7 $\pm$ 6.3	+11.9 $\pm$ 14.8	+9.6 $\pm$ 5.5
Days 57-64	$\bar{X} \pm S.D.$	+8.3 $\pm$ 6.4	+7.0 $\pm$ 4.5	+4.4 $\pm$ 7.2	+8.2 $\pm$ 4.6
Days 64-71 ^a	$\bar{X} \pm S.D.$	+6.9 $\pm$ 4.5	+4.6 $\pm$ 5.0	+5.7 $\pm$ 7.1	+3.0 $\pm$ 4.5**
Days 1-71 ^a	$\bar{X} \pm S.D.$	+143.0 $\pm$ 26.4	+140.3 $\pm$ 21.4	+138.4 $\pm$ 26.5	+139.6 $\pm$ 25.0

Day = Number of days on toat diet.

a. Last weekly body weight taken prior to cohabitation.

** Significantly different from vehicle control ($P \leq 0.01$).

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACEPHATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 27 (PAGE 1): SUMMARY OF MATERNAL BODY HEIGHTS (GESTATION PERIOD) - F0 GENERATION FEMALE RATS/
F1A GENERATION LITTERS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested Pregnant Dams Without a Con- firmed Day of Mating	N	30	30	30	30
	N(%)	25(83.3)	22(73.3)	23(76.7)	23(76.7)
	N	0	1	1	0
Maternal Body Weight ^a (g)		N	21	22	23
Day 0	$\bar{X} \pm S.D.$	292.0 $\pm$ 31.0	293.8 $\pm$ 28.6	284.9 $\pm$ 20.9	293.0 $\pm$ 30.2
Day 7	$\bar{X} \pm S.D.$	320.5 $\pm$ 32.0	321.0 $\pm$ 28.0	306.8 $\pm$ 30.7	317.8 $\pm$ 30.5
Day 14	$\bar{X} \pm S.D.$	345.7 $\pm$ 36.6	342.0 $\pm$ 33.7	328.5 $\pm$ 27.4	340.8 $\pm$ 28.0
Day 20	$\bar{X} \pm S.O.$	406.0 $\pm$ 39.0 [24] ^b	394.6 $\pm$ 38.5	376.5 $\pm$ 43.5	393.0 $\pm$ 29.6

a. This table restricted to pregnant animals with a confirmed date of mating.

b. Animal #29191 delivered on day 18 of presumed gestation.

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACETATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 28 (PAGE 1): SUMMARY OF MATERNAL BODY WEIGHT CHANGES (GESTATION PERIOD) - F0 GENERATION FEMALE RATS/
F1A GENERATION LITTERS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	N	30	30	30	30
	N(X)	25(83.3)	22(73.3)	23(76.7)	23(76.7)
	N	0	1	1	0
Maternal Body Weight Change ^a (g)		N	21	22	23
Days 0-7		$\bar{X} \pm S.D.$	$+27.2 \pm 9.8$	$+21.9 \pm 17.8$	$+24.8 \pm 6.5$
Days 7-14		$\bar{X} \pm S.D.$	$+20.9 \pm 15.9$	$+21.7 \pm 13.0$	$+23.0 \pm 10.2$
Days 14-20		$\bar{X} \pm S.D.$	$+52.7 \pm 33.4$	$+48.0 \pm 33.0$	$+52.2 \pm 11.5$
Days 0-20		$\bar{X} \pm S.D.$	$+100.8 \pm 34.9$	$+91.6 \pm 35.7$	$+100.0 \pm 17.5$

a. This table restricted to pregnant animals with a confirmed date of mating.

[] = Number of values averaged.

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACEPHATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 29 (PAGE 1): SUMMARY OF MATERNAL BODY WEIGHTS (LACTATION PERIOD) - F0 GENERATION FEMALE RATS/
F1A GENERATION LITTERS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested Pregnant and Delivering a Litter	N N(%)	30 25(83.3)	30 22(73.3)	30 23(76.7)	30 23(76.7)
Maternal Body Weight (g)					
Day 0	$\bar{X} \pm S.D.$	326.1 $\pm$ 31.5	320.0 $\pm$ 30.3	304.0 $\pm$ 27.4	315.4 $\pm$ 28.0
Day 4	$\bar{X} \pm S.D.$	324.8 $\pm$ 28.2	321.4 $\pm$ 28.1	309.0 $\pm$ 21.4 [22]	316.7 $\pm$ 24.7
Day 7	$\bar{X} \pm S.D.$	328.7 $\pm$ 25.7	326.4 $\pm$ 26.1	314.7 $\pm$ 20.3 [22]	321.8 $\pm$ 25.1
Day 14	$\bar{X} \pm S.D.$	344.1 $\pm$ 22.1	340.2 $\pm$ 27.8	327.9 $\pm$ 23.4 [21]	332.2 $\pm$ 24.8
Day 20	$\bar{X} \pm S.D.$	325.2 $\pm$ 15.1	321.1 $\pm$ 24.0	315.3 $\pm$ 20.0 [21]	315.1 $\pm$ 21.6

[] = Number of values averaged. Animals with no surviving pups excluded.

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACEPHATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 30 (PAGE 1): SUMMARY OF MATERNAL BODY WEIGHT CHANGES (LACTATION PERIOD) - F0 GENERATION FEMALE RATS/
F1A GENERATION LITTERS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	N	30	30	30	30
Pregnant and Delivering a Litter	N(X)	25(83.3)	22(73.3)	23(76.7)	23(76.7)
Maternal Body Weight Change (g)					
Days 0-4	$\bar{X} \pm S.O.$	- 1.3 $\pm$ 9.6	+ 1.4 $\pm$ 10.1	+ 2.7 $\pm$ 11.5(22)	+ 1.3 $\pm$ 7.9
Days 4-7	$\bar{X} \pm S.D.$	+ 3.9 $\pm$ 7.4	+ 5.1 $\pm$ 7.3	+ 5.8 $\pm$ 7.7(22)	+ 5.1 $\pm$ 6.6
Days 7-14	$\bar{X} \pm S.D.$	+ 15.4 $\pm$ 9.8	+ 13.7 $\pm$ 13.1	+ 12.8 $\pm$ 9.4(21)	+ 10.4 $\pm$ 10.2
Days 14-20	$\bar{X} \pm S.D.$	- 19.0 $\pm$ 10.8	- 19.1 $\pm$ 10.6	- 12.6 $\pm$ 9.5(21)	- 17.1 $\pm$ 11.3
Days 0-20	$\bar{X} \pm S.O.$	- 0.9 $\pm$ 20.9	+ 1.1 $\pm$ 17.7	+ 9.0 $\pm$ 19.5(21)	- 0.3 $\pm$ 16.1

() = Number of values averaged, excluding animals with no surviving pups.

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACETATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 31 (PAGE 1): SUMMARY OF MATERNAL BODY WEIGHTS (GESTATION PERIOD) - F0 GENERATION FEMALE RATS/
F1B GENERATION LITTERS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	Pregnant	N N(2)	30 13(43.3)	30 9(30.0)	30 11(36.7)
	Dams Without a Confirmed Day of Mating	N 1	1	1	0
Maternal Body Weight ^a (g)		N	9	8	11
Day 0	$\bar{x} \pm S.D.$	334.4 $\pm$ 32.0	336.8 $\pm$ 28.5	317.6 $\pm$ 22.3	332.1 $\pm$ 32.9
Day 7	$\bar{x} \pm S.D.$	357.3 $\pm$ 35.4	361.7 $\pm$ 28.3	340.4 $\pm$ 26.8	352.4 $\pm$ 26.0
Day 14	$\bar{x} \pm S.D.$	366.6 $\pm$ 31.9	380.7 $\pm$ 33.8	362.6 $\pm$ 27.4	367.2 $\pm$ 28.5
Day 20	$\bar{x} \pm S.D.$	432.6 $\pm$ 34.2	430.2 $\pm$ 37.1	413.8 $\pm$ 33.2	417.3 $\pm$ 25.6

a. This table restricted to pregnant animals with a confirmed date of mating.

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACETPHATE TECHNICAL
(CHEVRON PROTOCOL 5-2497)

TABLE 32 (PAGE 1): SUMMARY OF MATERNAL BODY WEIGHT CHANGES (GESTATION PERIOD) - F0 GENERATION FEMALE RATS/
F1B GENERATION LITTERS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested Pregnant Dams Without a Con- firmed Date of Mating	N	30	30	30	30
	N(X)	13(43.3)	10(33.3)	9(30.0)	11(36.7)
	N	7	1	1	0
Maternal Body Weight Changes (g)	N	12	9	8	11
	$\bar{X} \pm S.D.$	+22.9 $\pm$ 6.2	+24.9 $\pm$ 7.1	+22.8 $\pm$ 8.0	+20.3 $\pm$ 13.9
	$\bar{X} \pm S.D.$	+ 9.2 $\pm$ 26.6	+19.0 $\pm$ 15.9	+22.2 $\pm$ 4.9	+14.8 $\pm$ 13.7
	$\bar{X} \pm S.D.$	+66.0 $\pm$ 18.3	+49.6 $\pm$ 23.5	+51.1 $\pm$ 14.2	+50.1 $\pm$ 13.5
Days 0-7	$\bar{X} \pm S.D.$	+98.2 $\pm$ 31.5	+93.4 $\pm$ 37.5	+96.1 $\pm$ 19.0	+85.2 $\pm$ 18.3
Days 7-14					
Days 14-20					
Days 0-20					

a. This table restricted to pregnant animals with a confirmed date of mating.

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACETPHATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 33 (PAGE 1): SUMMARY OF MATERNAL BODY WEIGHTS (LACTATION PERIOD) - F0 GENERATION FEMALE RATS/
F18 GENERATION LITTERS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested Pregnant and Delivering a Litter	N N(%)	30 13(43.3)	30 10(33.3)	30 9(30.0)	30 11(36.7)
Maternal Body Weight (g)					
Day 0	$\bar{X} \pm S.D.$	350.6 $\pm$ 28.5	364.2 $\pm$ 37.6	346.1 $\pm$ 29.9	354.2 $\pm$ 31.6
Day 4	$\bar{X} \pm S.D.$	356.9 $\pm$ 30.2	360.0 $\pm$ 27.9	346.1 $\pm$ 27.1	353.3 $\pm$ 24.3
Day 7	$\bar{X} \pm S.D.$	360.9 $\pm$ 31.1	358.8 $\pm$ 20.9 [9]	344.0 $\pm$ 30.7	356.4 $\pm$ 22.3
Day 14	$\bar{X} \pm S.D.$	368.3 $\pm$ 23.0	365.0 $\pm$ 19.0 [9]	353.9 $\pm$ 26.2	354.7 $\pm$ 26.7
Day 20	$\bar{X} \pm S.D.$	343.5 $\pm$ 22.0	348.6 $\pm$ 13.8 [9]	329.1 $\pm$ 20.4	339.0 $\pm$ 18.6

[] = Number of values averaged. Animals with no surviving pups excluded.

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACETATE TECHNICAL
(CHEVRON PROTOCOL, S-2497)

TABLE 34 (PAGE 1): SUMMARY OF MATERNAL BODY WEIGHT CHANGES (LACTATION PERIOD) - F0 GENERATION FEMALE RATS/
F1B GENERATION LITTERS

Dose Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested, Pregnant and Delivering a Litter	N N(%)	30 13(43.3)	30 10(33.3)	30 9(30.0)	30 11(36.7)
Maternal Body Weight Change (g)					
Days 0-4	$\bar{X} \pm S.O.$	+ 6.3 $\pm$ 7.8	- 4.2 $\pm$ 16.1	+ 0.0 $\pm$ 8.9	- 0.9 $\pm$ 9.2
Days 4-7	$\bar{X} \pm S.D.$	+ 4.0 $\pm$ 7.3	+ 3.0 $\pm$ 10.0 [9]	- 2.1 $\pm$ 11.3	+ 3.1 $\pm$ 5.0
Days 7-14	$\bar{X} \pm S.D.$	+ 7.4 $\pm$ 11.8	+ 6.2 $\pm$ 7.7 [9]	+ 9.9 $\pm$ 14.2	- 1.6 $\pm$ 9.7
Days 14-20	$\bar{X} \pm S.D.$	- 24.8 $\pm$ 7.6	- 16.4 $\pm$ 14.9 [9]	- 24.8 $\pm$ 11.1	- 15.7 $\pm$ 11.6
Days 0-20	$\bar{X} \pm S.O.$	- 7.2 $\pm$ 14.6	- 10.4 $\pm$ 35.4 [9]	- 17.0 $\pm$ 22.2	- 15.2 $\pm$ 19.7

() = Number of values averaged, excluding animals with no surviving pups.

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACEPHATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 1.1 (PAGE 1): SUMMARY OF WEEKLY BODY WEIGHTS - F1B GENERATION MALE RATS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	N	30	30	30	30
Body Weight (g)					
Day 1	$\bar{X} \pm S.D.$	59.8 $\pm$ 7.7(8) ^a	59.1 $\pm$ 6.6(16) ^a	58.5 $\pm$ 3.4(17) ^a	55.8 $\pm$ 6.1(16) ^a
Day 8	$\bar{X} \pm S.D.$	92.7 $\pm$ 12.2	96.9 $\pm$ 11.8	98.0 $\pm$ 10.2	93.0 $\pm$ 14.6(29) ^a
Day 15	$\bar{X} \pm S.D.$	150.8 $\pm$ 16.1	155.7 $\pm$ 15.1	157.8 $\pm$ 13.9	145.8 $\pm$ 25.6
Day 22	$\bar{X} \pm S.D.$	214.3 $\pm$ 17.3	215.8 $\pm$ 18.2	220.6 $\pm$ 17.2	205.8 $\pm$ 30.0
Day 29	$\bar{X} \pm S.D.$	275.2 $\pm$ 20.4	276.3 $\pm$ 22.0	280.5 $\pm$ 21.5	263.3 $\pm$ 32.6
Day 36	$\bar{X} \pm S.D.$	334.5 $\pm$ 22.2	331.9 $\pm$ 24.9	335.8 $\pm$ 24.6	317.4 $\pm$ 34.3*
Day 43	$\bar{X} \pm S.D.$	379.3 $\pm$ 26.1	375.8 $\pm$ 27.6	380.8 $\pm$ 26.4	360.6 $\pm$ 34.7*
Day 50	$\bar{X} \pm S.D.$	420.9 $\pm$ 29.8	415.7 $\pm$ 32.6	420.2 $\pm$ 30.9	398.7 $\pm$ 37.6*
Day 57	$\bar{X} \pm S.D.$	454.2 $\pm$ 33.1	447.0 $\pm$ 36.2	453.1 $\pm$ 34.3	428.8 $\pm$ 40.0*
Day 64	$\bar{X} \pm S.D.$	481.4 $\pm$ 34.5	471.0 $\pm$ 39.3	478.6 $\pm$ 37.2	452.7 $\pm$ 42.9**
Day 71	$\bar{X} \pm S.D.$	503.3 $\pm$ 39.0	492.1 $\pm$ 44.3	500.4 $\pm$ 39.8	472.4 $\pm$ 45.6**
Day 78 ^b	$\bar{X} \pm S.D.$	517.2 $\pm$ 42.7	503.4 $\pm$ 45.9	514.3 $\pm$ 41.4	482.7 $\pm$ 49.4**
Day 85 ^b	$\bar{X} \pm S.D.$	535.7 $\pm$ 46.0	523.6 $\pm$ 50.2	533.7 $\pm$ 44.8	494.6 $\pm$ 51.3**
Day 92 ^b	$\bar{X} \pm S.D.$	555.2 $\pm$ 49.4	540.4 $\pm$ 55.2	550.0 $\pm$ 49.1	504.5 $\pm$ 51.6**
Day 99	$\bar{X} \pm S.D.$	567.9 $\pm$ 54.0	553.0 $\pm$ 57.8	564.1 $\pm$ 51.6	512.4 $\pm$ 56.2**

Days = Number of days on test diet.

a. Not all rats were assigned to study at this interval.

b. Rats in cohabitation.

* Significantly different from vehicle control ($P \leq 0.05$).

** Significantly different from vehicle control ($P \leq 0.01$).

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACEPHATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 11 (PAGE 2): SUMMARY OF WEEKLY BODY WEIGHTS - F1B GENERATION MALE RATS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	N	30	30	30	30
Body Weight (g)					
Day 106	$\bar{X} \pm S.D.$	579.4 $\pm$ 57.1	565.3 $\pm$ 58.9	576.3 $\pm$ 53.7	516.9 $\pm$ 65.2**
Day 113	$\bar{X} \pm S.D.$	588.1 $\pm$ 59.7	575.5 $\pm$ 62.4	585.0 $\pm$ 55.5	526.7 $\pm$ 63.2**
Day 120	$\bar{X} \pm S.D.$	595.3 $\pm$ 62.6	584.1 $\pm$ 67.0	594.1 $\pm$ 58.3	534.0 $\pm$ 65.0**
Day 127	$\bar{X} \pm S.D.$	605.2 $\pm$ 62.2	596.1 $\pm$ 67.2	606.9 $\pm$ 60.5	543.7 $\pm$ 68.9**
Day 134	$\bar{X} \pm S.D.$	614.5 $\pm$ 62.1	606.2 $\pm$ 71.4	617.7 $\pm$ 62.0	552.8 $\pm$ 73.0**
Day 141	$\bar{X} \pm S.D.$	627.7 $\pm$ 61.8	616.8 $\pm$ 71.1	629.1 $\pm$ 63.8	563.1 $\pm$ 75.3**
Day 148 ^a	$\bar{X} \pm S.D.$	629.5 $\pm$ 62.6	617.6 $\pm$ 74.2	631.7 $\pm$ 63.5	565.0 $\pm$ 76.9**
Day 155 ^a	$\bar{X} \pm S.D.$	638.8 $\pm$ 62.3	628.2 $\pm$ 76.4	640.6 $\pm$ 62.4	574.5 $\pm$ 78.8**
Day 162 ^a	$\bar{X} \pm S.D.$	639.7 $\pm$ 76.1	638.7 $\pm$ 79.8	648.3 $\pm$ 64.8	582.5 $\pm$ 78.5**
Day 169	$\bar{X} \pm S.D.$	650.7 $\pm$ 74.0	646.1 $\pm$ 80.1	654.4 $\pm$ 66.2	587.3 $\pm$ 81.3**
Day 176	$\bar{X} \pm S.D.$	658.8 $\pm$ 77.9	653.1 $\pm$ 83.6	663.8 $\pm$ 66.6	588.3 $\pm$ 84.5**
Day 183	$\bar{X} \pm S.D.$	674.0 $\pm$ 73.7	664.3 $\pm$ 83.3	673.6 $\pm$ 69.1	599.2 $\pm$ 89.5**
Day 190	$\bar{X} \pm S.D.$	680.0 $\pm$ 76.1	670.2 $\pm$ 85.4	681.1 $\pm$ 71.4	602.3 $\pm$ 98.6**
Day 194	$\bar{X} \pm S.D.$	679.4 $\pm$ 72.8	670.2 $\pm$ 85.3	681.0 $\pm$ 72.7	601.5 $\pm$ 98.6**
Day b	$\bar{X} \pm S.D.$	684.7 $\pm$ 73.6	677.1 $\pm$ 85.1	689.8 $\pm$ 74.5	608.1 $\pm$ 98.5**

Days = Number of days on test diet.

a. Rats in cohabitation.

b. Terminal body weight.

** Significantly different from vehicle control (p<0.01).

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACETATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 12 (PAGE 1): SUMMARY OF WEEKLY BODY WEIGHT CHANGES - F1B GENERATION MALE RATS

Doseage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	N				
Body Weight Change (g)					
Days 1-8	$\bar{X} \pm S.D.$	+46.4 $\pm$ 3.2[8] ^a	+44.7 $\pm$ 5.6[16] ^a	+46.0 $\pm$ 3.2[17] ^a	+44.5 $\pm$ 4.1[16] ^a
Days 8-15	$\bar{X} \pm S.D.$	+58.2 $\pm$ 6.3	+58.8 $\pm$ 5.4	+59.8 $\pm$ 5.0	+55.8 $\pm$ 5.9[29] ^a
Days 15-22	$\bar{X} \pm S.D.$	+63.5 $\pm$ 4.0	+60.1 $\pm$ 6.2*	+62.8 $\pm$ 5.7	+60.0 $\pm$ 5.7*
Days 22-29	$\bar{X} \pm S.D.$	+60.9 $\pm$ 5.8	+60.5 $\pm$ 5.9	+59.8 $\pm$ 5.4	+57.5 $\pm$ 4.8
Days 29-36	$\bar{X} \pm S.D.$	+59.3 $\pm$ 6.4	+55.5 $\pm$ 6.6*	+55.3 $\pm$ 5.5*	+54.1 $\pm$ 6.2**
Days 36-43	$\bar{X} \pm S.D.$	+44.8 $\pm$ 9.3	+44.0 $\pm$ 6.0	+45.0 $\pm$ 5.7	+43.2 $\pm$ 5.4
Days 43-50	$\bar{X} \pm S.D.$	+41.6 $\pm$ 6.3	+39.9 $\pm$ 7.6	+39.4 $\pm$ 6.2	+38.1 $\pm$ 7.0
Days 50-57	$\bar{X} \pm S.D.$	+33.3 $\pm$ 6.2	+31.2 $\pm$ 5.6	+33.0 $\pm$ 5.3	+30.0 $\pm$ 6.2
Days 57-64	$\bar{X} \pm S.D.$	+27.1 $\pm$ 6.6	+24.0 $\pm$ 8.4	+25.3 $\pm$ 5.2	+24.0 $\pm$ 6.3
Days 64-71	$\bar{X} \pm S.D.$	+21.9 $\pm$ 7.0	+21.1 $\pm$ 7.3	+21.8 $\pm$ 4.6	+19.7 $\pm$ 6.3
Days 71-78 ^b	$\bar{X} \pm S.D.$	+14.0 $\pm$ 7.7	+11.4 $\pm$ 7.7	+13.9 $\pm$ 5.3	+10.3 $\pm$ 6.7
Days 78-85 ^b	$\bar{X} \pm S.D.$	+18.4 $\pm$ 5.6	+20.2 $\pm$ 6.6	+19.4 $\pm$ 5.3	+11.9 $\pm$ 5.5**
Days 85-92 ^b	$\bar{X} \pm S.D.$	+19.6 $\pm$ 5.8	+16.8 $\pm$ 8.1	+16.2 $\pm$ 6.1	+ 9.9 $\pm$ 15.6**
Days 92-99 ^b	$\bar{X} \pm S.D.$	+12.7 $\pm$ 8.6	+12.6 $\pm$ 8.6	+14.1 $\pm$ 5.2	+ 7.9 $\pm$ 18.8

Days = Number of days on test diet.

a. Not all rats were assigned to study at this interval.

b. Rats in cohabitation.

* Significantly different from vehicle control (P $\leq$ 0.05).** Significantly different from vehicle control (P $\leq$ 0.01).

[] = Number of values averaged.

PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACEPHATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 12 (PAGE 2): SUMMARY OF WEEKLY BODY WEIGHT CHANGES - F1B GENERATION MALE RATS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	N	30	30	30	30
Body Weight Change (g)					
Days 99-106	$\bar{X} \pm S.D.$	+ 11.5 $\pm$ 6.8	+ 12.3 $\pm$ 7.0	+ 12.2 $\pm$ 6.1	+ 4.5 $\pm$ 16.3*
Days 106-113	$\bar{X} \pm S.D.$	+ 8.7 $\pm$ 5.8	+ 10.2 $\pm$ 6.9	+ 8.7 $\pm$ 6.0	+ 9.7 $\pm$ 10.2
Days 113-120	$\bar{X} \pm S.D.$	+ 7.2 $\pm$ 10.5	+ 8.6 $\pm$ 8.7	+ 9.0 $\pm$ 7.8	+ 7.3 $\pm$ 4.8
Days 120-127	$\bar{X} \pm S.D.$	+ 9.9 $\pm$ 9.3	+ 12.0 $\pm$ 7.5	+ 12.9 $\pm$ 4.9	+ 9.7 $\pm$ 8.0
Days 127-134	$\bar{X} \pm S.D.$	+ 9.3 $\pm$ 6.3	+ 10.1 $\pm$ 6.1	+ 10.8 $\pm$ 5.8	+ 9.1 $\pm$ 9.2
Days 134-141	$\bar{X} \pm S.D.$	+ 13.2 $\pm$ 6.3	+ 10.6 $\pm$ 5.4	+ 11.4 $\pm$ 4.6	+ 10.3 $\pm$ 5.0
Days 141-148 ^a	$\bar{X} \pm S.D.$	+ 1.8 $\pm$ 7.9	+ 0.8 $\pm$ 5.6	+ 2.6 $\pm$ 5.3	+ 1.9 $\pm$ 4.8
Days 148-155 ^a	$\bar{X} \pm S.D.$	+ 9.3 $\pm$ 6.1	+ 10.6 $\pm$ 5.4	+ 8.9 $\pm$ 6.2	+ 9.5 $\pm$ 6.2
Days 155-162 ^a	$\bar{X} \pm S.D.$	+ 0.8 $\pm$ 36.6	+ 10.5 $\pm$ 13.3	+ 7.7 $\pm$ 4.8	+ 7.9 $\pm$ 9.4
Days 162-169 ^a	$\bar{X} \pm S.D.$	+ 11.0 $\pm$ 40.4	+ 7.4 $\pm$ 11.3	+ 6.2 $\pm$ 14.8	+ 4.8 $\pm$ 12.3
Days 169-176	$\bar{X} \pm S.D.$	+ 8.1 $\pm$ 20.7	+ 7.1 $\pm$ 5.1	+ 9.3 $\pm$ 5.2	+ 1.0 $\pm$ 15.2**
Days 176-183	$\bar{X} \pm S.D.$	+ 15.1 $\pm$ 17.5	+ 11.1 $\pm$ 5.1	+ 9.9 $\pm$ 5.7	+ 10.9 $\pm$ 14.0
Days 183-190	$\bar{X} \pm S.D.$	+ 6.0 $\pm$ 9.0	+ 6.0 $\pm$ 5.1	+ 7.5 $\pm$ 7.1	+ 3.1 $\pm$ 12.9
Days 190-194	$\bar{X} \pm S.D.$	- 0.6 $\pm$ 7.4	+ 0.0 $\pm$ 5.3	- 0.1 $\pm$ 5.8	- 0.9 $\pm$ 5.4
Oocytes 1-b	$\bar{X} \pm S.D.$	+ 601.0 $\pm$ 90.0	+ 590.6 $\pm$ 87.9	+ 652.0 $\pm$ 80.7	+ 580.2 $\pm$ 74.6

Days = Number of days on test diet.

a. Rats in cohabitation.

b. Terminal body weight.

* Significantly different from vehicle control ($p \leq 0.05$).

** Significantly different from vehicle control ($p \leq 0.01$).

[] = Number of values averaged.

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACETPHATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 16 (PAGE 1): SUMMARY OF WEEKLY PREMATING FEED CONSUMPTION - GRAMS/KILOGRAM OF BODY WEIGHT PER DAY -
PIB GENERATION FEMALE RATS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Treated	N				
Feed Consumption (g/kg/day)					
Days 1-8	$\bar{X} \pm S.D.$	138.4 $\pm$ 15.0 [9] ^a	157.2 $\pm$ 15.0 [15] ^a	150.7 $\pm$ 28.8 [21] ^a	155.0 $\pm$ 18.0 [16] ^a
Days 8-15	$\bar{X} \pm S.D.$	144.8 $\pm$ 17.4	147.5 $\pm$ 8.0	151.2 $\pm$ 13.9	146.6 $\pm$ 41.1 ^a
Days 15-22	$\bar{X} \pm S.O.$	126.1 $\pm$ 10.2	124.2 $\pm$ 8.9	128.0 $\pm$ 7.2 [29] ^b	140.8 $\pm$ 18.7 ^{**}
Days 22-29	$\bar{X} \pm S.D.$	109.0 $\pm$ 7.7	109.6 $\pm$ 5.0	110.5 $\pm$ 6.7	128.2 $\pm$ 19.8 ^{**}
Days 29-36	$\bar{X} \pm S.D.$	90.7 $\pm$ 8.2	93.0 $\pm$ 4.2	93.3 $\pm$ 5.9	111.6 $\pm$ 21.5 ^{**}
Days 36-43	$\bar{X} \pm S.D.$	86.7 $\pm$ 6.1	87.5 $\pm$ 5.2	89.8 $\pm$ 7.8	99.9 $\pm$ 11.1 ^{**}
Days 43-50	$\bar{X} \pm S.D.$	85.5 $\pm$ 6.0	84.5 $\pm$ 6.6	88.3 $\pm$ 7.0	97.8 $\pm$ 14.6 ^{**}
Days 50-57	$\bar{X} \pm S.D.$	78.5 $\pm$ 5.4	78.6 $\pm$ 5.8	80.3 $\pm$ 6.5	89.9 $\pm$ 9.8 ^{**}
Days 57-64	$\bar{X} \pm S.D.$	77.4 $\pm$ 5.8	76.0 $\pm$ 5.3	78.3 $\pm$ 6.9	84.6 $\pm$ 16.5
Days 64-71 ^c	$\bar{X} \pm S.D.$	74.9 $\pm$ 7.5	73.9 $\pm$ 5.2	75.9 $\pm$ 7.0	78.2 $\pm$ 9.6
Days 71-77 ^c	$\bar{X} \pm S.D.$	93.3 $\pm$ 5.8	93.4 $\pm$ 3.3	95.6 $\pm$ 5.6 [29] ^b	103.6 $\pm$ 8.4 ^{**}

Day = Number of days on test diet.

a. Not all animals were assigned to study at this interval.

b. Values which are incorrectly recorded are excluded from analyses.

c. Last weekly interval prior to cohabitation.

* Significantly different from vehicle control (P<0.05).

** Significantly different from vehicle control (P<0.01).

[] = Number of values averaged.

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACETATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 18 (PAGE 1): SUMMARY OF MATERNAL FEED CONSUMPTION - GRAMS PER KILOGRAM OF BODY WEIGHT PER DAY (GESTATION PERIOD)
F1B GENERATION FEMALE RATS/Y2A GENERATION LITTERS

Dose Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	N	30	30	30	30
	N(%)	25(83.3)	22(73.3)	21(70.0)	20(66.7)
Pregnant Dams Without a Con- firmed Date of Mating	N	0	0	0	0
	$\bar{X} \pm S.O.$				
	Days 0-7	79.3 $\pm$ 7.4	74.0 $\pm$ 10.9[21] ^b	74.9 $\pm$ 8.8	78.1 $\pm$ 12.3[19] ^b
	Days 7-14	70.1 $\pm$ 8.2	68.8 $\pm$ 6.5[21] ^b	69.6 $\pm$ 6.6	75.0 $\pm$ 13.2
Maternal Feed Consumption ^a (g/kg/day)	$\bar{X} \pm S.O.$				
	Days 14-20	62.7 $\pm$ 6.4	59.3 $\pm$ 6.0	62.2 $\pm$ 6.2	59.8 $\pm$ 10.3[19] ^b
Days 0-20	$\bar{X} \pm S.O.$	70.4 $\pm$ 5.8	67.0 $\pm$ 6.2	68.7 $\pm$ 5.5	71.8 $\pm$ 9.2[19] ^b

a. This table is restricted to pregnant animals with a confirmed date of mating.

b. Value incorrectly or inadvertently not taken; excluded from analyses.

[] - Number of values averaged.

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACETPHATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 20 (PAGE 1): SUMMARY OF MATERNAL FEED CONSUMPTION - GRAMS PER KILOGRAM OF BODY WEIGHT PER DAY
(LACTATION PERIOD) - F1B GENERATION FEMALE RATS/F2A GENERATION LITTERS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	N	30	30	30	30
Pregnant and Delivering Litters	N(x)	25(83.3)	22(73.3)	21(70.0)	20(66.7)
Maternal Feed Consumption (g/kg/day)					
Days 0-4	$\bar{X} \pm S.D.$	93.8 $\pm$ 21.9	92.4 $\pm$ 25.0	90.6 $\pm$ 17.5	91.2 $\pm$ 25.0 [18]
Days 4-7	$\bar{X} \pm S.D.$	121.9 $\pm$ 19.0	124.0 $\pm$ 18.5	120.2 $\pm$ 19.3	114.7 $\pm$ 26.6 [18]
Days 7-14	$\bar{X} \pm S.D.$	156.1 $\pm$ 19.7	159.5 $\pm$ 14.9	156.4 $\pm$ 22.0	147.3 $\pm$ 20.6 [18]
Days 0-14	$\bar{X} \pm S.D.$	131.8 $\pm$ 17.7	133.4 $\pm$ 15.1	130.6 $\pm$ 17.7	124.7 $\pm$ 22.1 [18]

[] = Number of values averaged, excluding animals with no surviving pups.

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACEPHATE TECHNICAL
(CHEVRON PROTOCOL 5-2497)

TABLE 22 (PAGE 1): SUMMARY OF MATERNAL FEED CONSUMPTION - GRAMS PER KILOGRAM OF BODY WEIGHT PER DAY
(GESTATION PERIOD) - F1B GENERATION FEMALE RATS/P2B GENERATION LITTERS

Dosage Group		0 ppm	25ppm	50ppm	500ppm
Animals - Tested Pregnant	N	30	30	30	30
	N(Z)	16(53.3)	19(63.3)	21(70.0)	16(53.3)
Dams Without a Con- firmed Date of Mating	N	0	0	0	0
	N(Z)	0	0	0	0
Maternal Feed Consumption (g/kg/day)					
Days 0-7	$\bar{X} \pm S.D.$	68.9 $\pm$ 5.6	69.8 $\pm$ 7.6	71.4 $\pm$ 8.6	69.0 $\pm$ 8.7
Days 7-14	$\bar{X} \pm S.D.$	61.6 $\pm$ 5.2	60.6 $\pm$ 8.7	61.8 $\pm$ 7.4	59.8 $\pm$ 5.8 [15] ^b
Days 14-20	$\bar{X} \pm S.D.$	55.0 $\pm$ 3.8	52.3 $\pm$ 6.3	55.6 $\pm$ 5.2	48.0 $\pm$ 10.5 [15] ^b
Days 0-20	$\bar{X} \pm S.D.$	61.7 $\pm$ 3.5	60.8 $\pm$ 5.3	62.8 $\pm$ 5.6	58.9 $\pm$ 8.7 [15] ^b

a. This table restricted to pregnant animals with a confirmed date of mating.

b. Value incorrectly or inadvertently not taken; excluded from analyses.

[] - Number of values averaged.

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PI 201 JUL 005: 190 GENERATION (190 LITTER) REFROD ON STUDY 10 RATS WITH CHEVRON ACETATE. TECHNICIA
(CHEVRON PROTOCOL S-2497)

TABLE 24 (PAGE 1): SUMMARY OF MATERNAL FEED CONSUMPTION - GRAMS PER KILOGRAM OF BODY WEIGHT PER DAY
(LACTATION PERIOD) - F1B GENERATION FEMALE RATS/P2B GENERATION LITTERS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	N	30	30	30	30
Pregnant and Delivering a Litter	N(%)	16(53.3)	19(63.3)	21(70.0)	16(53.3)
Maternal Feed Consumption (g/kg/day)					
Days 0-4	$\bar{X} \pm S.D.$	87.6 $\pm$ 10.2 [15] ^a	78.1 $\pm$ 12.2	92.3 $\pm$ 17.9	71.9 $\pm$ 26.8**
Days 4-7	$\bar{X} \pm S.D.$	113.0 $\pm$ 10.4	101.0 $\pm$ 14.9*	114.4 $\pm$ 13.5	96.4 $\pm$ 20.1**
Days 7-14	$\bar{X} \pm S.D.$	138.6 $\pm$ 11.8	132.8 $\pm$ 14.6	142.2 $\pm$ 14.8	122.2 $\pm$ 21.5**
Days 0-14	$\bar{X} \pm S.D.$	117.6 $\pm$ 8.0 [15] ^a	110.6 $\pm$ 12.4	112.2 $\pm$ 14.6	102.4 $\pm$ 21.6**

a. Excludes values that are incorrectly or inadvertently not recorded. [] = Number of values averaged.

* Significantly different from vehicle control (P<0.05).

** Significantly different from vehicle control (P<0.01).

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACETATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 26 (PAGE 1): SUMMARY OF WEEKLY PREMATING BODY WEIGHT CHANGES - F1B GENERATION FEMALE RATS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	N	30	30	30	30
Body Weight Change (g)					
Days 1-8	$\bar{X} \pm S.D.$	+ 37.6 $\pm$ 2.4 [9] ^a	+ 39.1 $\pm$ 4.4 [15] ^a	+ 43.4 $\pm$ 17.1 [22] ^a	+ 33.9 $\pm$ 4.1 [16] ^a
Days 8-15	$\bar{X} \pm S.D.$	+ 42.0 $\pm$ 4.2	+ 42.5 $\pm$ 5.1	+ 43.4 $\pm$ 4.7	+ 41.2 $\pm$ 4.0 [28] ^a
Days 15-22	$\bar{X} \pm S.D.$	+ 33.4 $\pm$ 5.9	+ 31.3 $\pm$ 6.7	+ 34.2 $\pm$ 4.6	+ 33.1 $\pm$ 4.2
Days 22-29	$\bar{X} \pm S.D.$	+ 26.8 $\pm$ 4.0	+ 25.9 $\pm$ 4.6	+ 25.1 $\pm$ 4.5	+ 27.8 $\pm$ 7.5
Days 29-36	$\bar{X} \pm S.D.$	+ 21.1 $\pm$ 7.4	+ 25.2 $\pm$ 7.2	+ 21.4 $\pm$ 4.7	+ 23.0 $\pm$ 5.0
Days 36-43	$\bar{X} \pm S.D.$	+ 15.8 $\pm$ 8.0	+ 18.4 $\pm$ 7.4	+ 18.6 $\pm$ 6.8	+ 17.4 $\pm$ 6.5
Days 43-50	$\bar{X} \pm S.D.$	+ 15.2 $\pm$ 6.4	+ 13.6 $\pm$ 9.4	+ 16.6 $\pm$ 7.3	+ 17.8 $\pm$ 7.1
Days 50-57	$\bar{X} \pm S.D.$	+ 12.8 $\pm$ 6.8	+ 14.8 $\pm$ 8.1	+ 13.0 $\pm$ 7.0	+ 14.7 $\pm$ 5.6
Days 57-64	$\bar{X} \pm S.D.$	+ 11.1 $\pm$ 4.9	+ 11.5 $\pm$ 6.4	+ 11.2 $\pm$ 4.3	+ 10.3 $\pm$ 5.7
Days 64-71 ^b	$\bar{X} \pm S.D.$	+ 9.8 $\pm$ 7.2	+ 9.2 $\pm$ 7.4	+ 7.5 $\pm$ 6.3	+ 8.2 $\pm$ 4.4
Days 71-78 ^b	$\bar{X} \pm S.D.$	+ 204.8 $\pm$ 22.1	+ 210.3 $\pm$ 26.4	+ 206.8 $\pm$ 22.1	+ 205.7 $\pm$ 22.8 [28] ^a

a. Not all animals were assigned to study at this interval.

b. Last weekly body weight taken prior to cohabitation.

Day = Number of days on test diet.
[] = Number of values averaged.

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACEPHATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 27 (PAGE 1): SUMMARY OF MATERNAL BODY WEIGHTS (GESTATION PERIOD) - F1B GENERATION FEMALE RATS/
F2A GENERATION LITTERS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	N	30	30	30	30
	N(%)	25(83.3)	22(73.3)	21(70.0)	20(66.7)
Pregnant Dams Without a Con- firmed Day of Mating	N	0	0	0	0
	N(%)	0	0	0	0
Maternal Body Weight ^a (g)					
Day 0	$\bar{X} \pm S.D.$	271.0 $\pm$ 22.7	284.5 $\pm$ 33.0	278.0 $\pm$ 17.7	276.0 $\pm$ 24.3
Day 7	$\bar{X} \pm S.D.$	300.1 $\pm$ 21.1	306.3 $\pm$ 34.9 [2] ^b	301.4 $\pm$ 17.3	298.0 $\pm$ 27.9
Day 14	$\bar{X} \pm S.D.$	321.6 $\pm$ 19.7	329.3 $\pm$ 37.7	324.2 $\pm$ 16.9	317.4 $\pm$ 28.7
Day 20	$\bar{X} \pm S.D.$	380.0 $\pm$ 25.6	391.0 $\pm$ 43.9	381.1 $\pm$ 25.6	360.4 $\pm$ 35.7

a. This table is restricted to pregnant animals with a confirmed date of mating.

b. Value incorrectly or inadvertently not recorded; excluded from analyses.

[] = Number of values averaged.

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACETPHATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 28 (PAGE 1): SUMMARY OF MATERNAL BODY WEIGHT CHANGES (GESTATION PERIOD) - F18 GENERATION FEMALE RATS
F2A GENERATION LITTERS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	N	30	30	30	30
Pregnant	N(%)	25(83.3)	22(73.3)	21(70.0)	20(66.7)
Dams Without a Confirmed Date of Mating	N(%)	0	0	0	0
Maternal Body Weight Change (g)					
Days 0-7	$\bar{X} \pm S.D.$	+29.0 $\pm$ 6.4	+21.9 $\pm$ 12.3* (21) ^b	+23.5 $\pm$ 7.8	+22.0 $\pm$ 7.3**
Days 7-14	$\bar{X} \pm S.D.$	+21.5 $\pm$ 6.0	+22.8 $\pm$ 10.1 (21) ^b	+22.8 $\pm$ 4.5	+19.3 $\pm$ 4.7
Days 14-20	$\bar{X} \pm S.D.$	+58.4 $\pm$ 16.7	+61.7 $\pm$ 8.9	+56.9 $\pm$ 15.8	+43.1 $\pm$ 28.0*
Days 0-20	$\bar{X} \pm S.D.$	+109.0 $\pm$ 22.1	+106.4 $\pm$ 16.2	+103.1 $\pm$ 20.2	+84.4 $\pm$ 29.0**

a. This table is restricted to pregnant animals with a confirmed date of mating.

b. Value incorrectly or inadvertently not recorded; excluded from analysis.

() = Number of values averaged.

* Significantly different from vehicle control ($P < 0.05$).

** Significantly different from vehicle control ($P < 0.01$).

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACETATE TECHNICAL
(CHEVRON PROTOCOL 5-2497)

TABLE 29 (PAGE 1): SUMMARY OF MATERNAL BODY WEIGHTS (LACTATION PERIOD) - F1B GENERATION FEMALE RATS /
F2A GENERATION LITTERS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	N	30	30	30	30
Pregnant and Delivering a Litter	N(%)	25(83.3)	22(73.3)	21(70.0)	20(66.7)
Maternal Body Weight (g)					
Day 0	$\bar{X} \pm S.D.$	297.2 $\pm$ 20.2	308.0 $\pm$ 37.8	303.7 $\pm$ 18.0	297.6 $\pm$ 25.3 (19)
Day 4	$\bar{X} \pm S.D.$	308.6 $\pm$ 20.4	313.6 $\pm$ 32.6	307.4 $\pm$ 17.9	298.3 $\pm$ 24.6 (18)
Day 7	$\bar{X} \pm S.D.$	312.5 $\pm$ 14.4	316.3 $\pm$ 33.6	312.0 $\pm$ 18.0	303.3 $\pm$ 25.3 (18)
Day 14	$\bar{X} \pm S.D.$	328.0 $\pm$ 17.8	333.6 $\pm$ 30.7	328.9 $\pm$ 16.7	315.7 $\pm$ 22.6 (18)
Day 20	$\bar{X} \pm S.D.$	311.0 $\pm$ 21.0	321.5 $\pm$ 24.6	319.3 $\pm$ 18.1	305.0 $\pm$ 20.1 (18)

[] - Number of Values averaged, excluding animals with no surviving pups.

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACETPHATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 30 (PAGE 1): SUMMARY OF MATERNAL BODY WEIGHT CHANGES (LACTATION PERIOD) - F1B GENERATION FEMALE RATS/
F2A GENERATION LITTERS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animale - Tested Pregnant and De- livering a Litter	N	30	30	30	30
	N(%)	25(83.3)	22(73.3)	21(70.0)	20(66.7)
Maternal Body Weight Change (g)					
Days 0-4	$\bar{X} \pm S.D.$	+11.3 $\pm$ 11.6	+5.6 $\pm$ 12.7	+3.7 $\pm$ 10.0	+1.0 $\pm$ 5.6(18)**
Days 4-7	$\bar{X} \pm S.O.$	+4.0 $\pm$ 10.8	+2.7 $\pm$ 6.5	+4.5 $\pm$ 9.0	+4.9 $\pm$ 5.6(18)
Days 7-14	$\bar{X} \pm S.D.$	+15.5 $\pm$ 8.9	+17.3 $\pm$ 11.3	+17.0 $\pm$ 9.2	+12.4 $\pm$ 9.2(18)
Days 14-20	$\bar{X} \pm S.D.$	-17.0 $\pm$ 17.0	-12.0 $\pm$ 13.4	-9.6 $\pm$ 9.2	-10.7 $\pm$ 8.6(18)
Days 0-20	$\bar{X} \pm S.D.$	+13.8 $\pm$ 21.0	+13.5 $\pm$ 20.4	+15.6 $\pm$ 13.1	+7.7 $\pm$ 12.6(18)

() = Number of values averaged, excluding animals with no surviving pupa.

** Significantly different from vehicle control ($P < 0.01$).

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACEPHATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 31 (PAGE 1): SUMMARY OF MATERNAL BODY WEIGHTS (GESTATION PERIOD) - F1B GENERATION FEMALE RATS/
F2B GENERATION LITTERS

Dose Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested Pregnant	N	30	30	30	30
	N(Z)	16(53.3)	19(63.3)	21(70.0)	16(53.3)
Maternal Body Weight ^a (g)	N	0	0	0	0
	$\bar{X} \pm S.D.$				
	Day 0	314.2 $\pm$ 22.4	331.0 $\pm$ 33.4	320.8 $\pm$ 18.0	327.1 $\pm$ 28.3
	Day 7	338.8 $\pm$ 20.8	357.2 $\pm$ 41.6	346.7 $\pm$ 22.8	352.1 $\pm$ 31.8
	Day 14	359.9 $\pm$ 23.5	374.4 $\pm$ 38.8	366.0 $\pm$ 22.2	368.6 $\pm$ 32.0
	Day 20	425.2 $\pm$ 25.6	440.2 $\pm$ 42.8	431.8 $\pm$ 25.8	417.8 $\pm$ 31.3

a. This table restricted to pregnant animals with a confirmed date of mating.

PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACEPRATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 32 (PAGE 1): SUMMARY OF MATERNAL BODY WEIGHT CHANGES (GESTATION PERIOD) - F1B GENERATION FEMALE RATS
F2B GENERATION LITTERS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested Pregnant Dams Without a Con- firmed Date of Mating	N	30	30	30	30
	N(%)	16(53.3)	19(63.3)	21(70.0)	16(53.3)
Maternal Body Weight Change ^a (g)	N	0	0	0	0
	Days 0-7	$\bar{X} \pm S.D.$	+ 24.6 $\pm$ 6.1	+ 26.1 $\pm$ 2.6	+ 24.9 $\pm$ 6.9
	Days 7-14	$\bar{X} \pm S.D.$	+ 21.1 $\pm$ 9.8	+ 17.3 $\pm$ 6.9	+ 16.5 $\pm$ 5.7
	Days 14-20	$\bar{X} \pm S.D.$	+ 65.2 $\pm$ 9.7	+ 65.8 $\pm$ 3.9	+ 49.2 $\pm$ 14.4**
Days 0-20	$\bar{X} \pm S.D.$	+110.9 $\pm$ 16.0	+109.2 $\pm$ 23.2	+110.9 $\pm$ 15.6	+ 90.6 $\pm$ 17.4**

a. This table restricted to pregnant animals with a confirmed date of mating.

** Significantly different from vehicle control (p<0.01).

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACETPHATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 33 (PAGE 1): SUMMARY OF MATERNAL BODY WEIGHTS (LACTATION PERIOD) - F1B GENERATION FEMALE RATS/
F2B GENERATION LITTERS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested Pregnant and Delivering a Litter	N N(x)	30 16(53.3)	30 19(63.3)	30 21(70.0)	30 16(53.3)
Maternal Body Weight (g)	$\bar{X} \pm S.D.$				
Day 0	$\bar{X} \pm S.D.$	340.6 $\pm$ 21.4	352.3 $\pm$ 34.0	344.5 $\pm$ 21.6	353.2 $\pm$ 37.0
Day 4	$\bar{X} \pm S.D.$	349.1 $\pm$ 22.8	354.8 $\pm$ 30.2	354.0 $\pm$ 21.0	357.2 $\pm$ 30.6
Day 7	$\bar{X} \pm S.D.$	346.9 $\pm$ 21.5	353.9 $\pm$ 31.2	349.9 $\pm$ 18.6	354.1 $\pm$ 25.0
Day 14	$\bar{X} \pm S.D.$	350.7 $\pm$ 19.7	364.8 $\pm$ 27.3	360.8 $\pm$ 20.8	355.5 $\pm$ 28.5
Day 20	$\bar{X} \pm S.D.$	336.4 $\pm$ 21.2	350.7 $\pm$ 29.0	335.4 $\pm$ 29.1	339.0 $\pm$ 29.7

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#708335-A
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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACETATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 34 (PAGE 1): SUMMARY OF MATERNAL BODY WEIGHT CHANGES (LACTATION PERIOD) - F1B GENERATION FEMALE RATS/
F2B GENERATION LITTERS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	N	30	30	30	30
Pregnant and Delivering a Litter	N(Z)	16(53.3)	19(63.3)	21(70.0)	16(53.3)
Maternal Body Weight Change (g)					
Days 0-4	$\bar{X} \pm S.D.$	+ 8.5 $\pm$ 10.5	+ 2.5 $\pm$ 10.9	+ 9.5 $\pm$ 8.9	+ 4.0 $\pm$ 9.3
Days 4-7	$\bar{X} \pm S.D.$	- 2.2 $\pm$ 5.6	- 0.9 $\pm$ 6.4	- 4.1 $\pm$ 8.7	- 3.1 $\pm$ 12.4
Days 7-14	$\bar{X} \pm S.D.$	+ 3.8 $\pm$ 11.3	+ 10.9 $\pm$ 10.6	+ 11.0 $\pm$ 11.8	+ 1.4 $\pm$ 13.3
Days 14-20	$\bar{X} \pm S.D.$	- 14.2 $\pm$ 18.8	- 14.0 $\pm$ 17.5	- 25.5 $\pm$ 22.5	- 16.5 $\pm$ 10.3
Days 0-20	$\bar{X} \pm S.D.$	- 4.2 $\pm$ 19.4	- 1.6 $\pm$ 24.8	- 9.1 $\pm$ 25.9	- 14.2 $\pm$ 18.7

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACEPHATE TECHINICAL
(CHEVRON PROTOCOL S-2497)

TABLE 2 (PAGE 1): SUMMARY OF WEEKLY BODY WEIGHTS - F2B GENERATION MALE RATS

Dosage Group		4 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	N	30	30	30	30
Body Weight (g)					
Day 1	$\bar{X} \pm S.D.$	58.0 $\pm$ 6.0 [17] ^a	55.4 $\pm$ 7.5 [11] ^a	54.8 $\pm$ 7.6 [19] ^a	57.2 $\pm$ 4.6 [12] ^a
Day 8	$\bar{X} \pm S.D.$	98.9 $\pm$ 9.6	91.7 $\pm$ 11.8*	94.3 $\pm$ 10.3	89.4 $\pm$ 13.7**
Day 15	$\bar{X} \pm S.D.$	158.8 $\pm$ 12.7	146.9 $\pm$ 15.7*	149.0 $\pm$ 15.9	143.1 $\pm$ 18.6**
Day 22	$\bar{X} \pm S.D.$	214.5 $\pm$ 13.6	204.1 $\pm$ 17.6	205.5 $\pm$ 19.9	203.1 $\pm$ 20.2
Day 29	$\bar{X} \pm S.D.$	275.1 $\pm$ 17.4	263.8 $\pm$ 22.1	264.1 $\pm$ 25.8	263.3 $\pm$ 23.1
Day 36	$\bar{X} \pm S.D.$	329.9 $\pm$ 20.1	319.1 $\pm$ 25.8	317.9 $\pm$ 28.9	319.3 $\pm$ 26.4
Day 43	$\bar{X} \pm S.D.$	369.9 $\pm$ 23.0	359.3 $\pm$ 27.2	358.8 $\pm$ 32.0	363.7 $\pm$ 25.6
Day 50	$\bar{X} \pm S.D.$	409.3 $\pm$ 25.9	400.5 $\pm$ 30.4	395.8 $\pm$ 35.8	401.2 $\pm$ 28.2
Day 57	$\bar{X} \pm S.D.$	439.0 $\pm$ 31.8	427.8 $\pm$ 33.8	425.2 $\pm$ 38.2	429.3 $\pm$ 35.6
Day 64	$\bar{X} \pm S.D.$	462.2 $\pm$ 35.3	448.4 $\pm$ 42.4	449.9 $\pm$ 41.8	452.8 $\pm$ 37.8

Day = Number of days in test interval.

a. Not all rats were analyzed to study at this interval.

* Significantly different from vehicle control ($P < 0.05$).

** Significantly different from vehicle control ($P < 0.01$).

† - Dashes at values averaged.

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CHEVRON
8706223-3
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PROTOCOL 303-005: TWO GENERATION (F0 AND F1) REPRODUCTION STUDY IN RATS WITH CHEVRON ACEPHATE TECHNICAL
(CHEVRON PROTOCOL, S-2497)

TABLE 9 (PAGE 2): SUMMARY OF WEEKLY BODY WEIGHTS - F28 GENERATION MALE RATS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	n	30	30	30	30
Body Weight (g)					
Day 71	$\bar{X} \pm S.D.$	487.0 $\pm$ 37.3	473.1 $\pm$ 48.5	473.1 $\pm$ 42.4	473.4 $\pm$ 41.4
Day 78	$\bar{X} \pm S.D.$	503.1 $\pm$ 40.8	490.6 $\pm$ 49.7	490.2 $\pm$ 42.8	491.1 $\pm$ 43.9
Day 85 ^a	$\bar{X} \pm S.D.$	509.8 $\pm$ 41.2	498.7 $\pm$ 52.2	499.1 $\pm$ 44.6	501.6 $\pm$ 46.2
Day 92 ^a	$\bar{X} \pm S.D.$	527.2 $\pm$ 42.7	519.5 $\pm$ 53.6	517.1 $\pm$ 47.9	515.4 $\pm$ 47.9
Day 99 ^a	$\bar{X} \pm S.D.$	542.3 $\pm$ 45.6	534.1 $\pm$ 57.8	531.5 $\pm$ 48.1	529.3 $\pm$ 51.5
Day 106	$\bar{X} \pm S.D.$	553.8 $\pm$ 48.0	546.8 $\pm$ 61.8	542.6 $\pm$ 50.0	539.9 $\pm$ 54.9
Day 113 ^a	$\bar{X} \pm S.D.$	567.2 $\pm$ 49.0	561.9 $\pm$ 66.4	552.8 $\pm$ 51.3	551.9 $\pm$ 58.3
Day 120	$\bar{X} \pm S.D.$	581.9 $\pm$ 52.3	577.0 $\pm$ 69.1	566.8 $\pm$ 52.6	564.2 $\pm$ 61.8
Day 127	$\bar{X} \pm S.D.$	587.1 $\pm$ 54.4	582.3 $\pm$ 71.5	574.5 $\pm$ 53.7	574.7 $\pm$ 64.4
Day 131 ^b	$\bar{X} \pm S.D.$	597.3 $\pm$ 56.4	594.0 $\pm$ 75.0	584.6 $\pm$ 54.9	584.1 $\pm$ 67.0

Day = Number of days on Test diet.

a. Rats in early lactation.

b. Terminal body weight.

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACEPHATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE III (PA ') : SUMMARY OF WEEKLY BODY WEIGHT CHANGES - F2B GENERATION MALE RATS

Housing Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	N	30	30	30	30
Body Weight Change (g)					
Days 1-8	$\bar{X} \pm S.D.$	$+46.1 \pm 6.6 [17]^a$	$+44.2 \pm 3.0 [11]^a$	$+43.3 \pm 4.9 [19]^a$	$+46.0 \pm 3.4 [12]^a$
Days 8-15	$\bar{X} \pm S.D.$	$+56.9 \pm 5.5$	$+55.2 \pm 5.2$	$+54.7 \pm 6.4$	$+53.7 \pm 5.5$
Days 15-22	$\bar{X} \pm S.D.$	$+58.7 \pm 5.1$	$+57.2 \pm 4.2$	$+56.5 \pm 6.0$	$+60.0 \pm 3.9$
Days 22-29	$\bar{X} \pm S.D.$	$+60.6 \pm 6.2$	$+59.7 \pm 5.9$	$+58.5 \pm 7.4$	$+60.1 \pm 5.4$
Days 29-36	$\bar{X} \pm S.D.$	$+54.7 \pm 7.2$	$+55.3 \pm 6.1$	$+53.8 \pm 6.4$	$+56.0 \pm 6.4$
Days 36-43	$\bar{X} \pm S.D.$	$+40.0 \pm 6.5$	$+40.1 \pm 4.6$	$+40.9 \pm 7.3$	$+44.4 \pm 6.8^a$
Days 43-50	$\bar{X} \pm S.D.$	$+39.4 \pm 5.7$	$+41.3 \pm 6.1$	$+37.0 \pm 6.4$	$+37.5 \pm 5.1$
Days 50-57	$\bar{X} \pm S.D.$	$+29.6 \pm 8.3$	$+27.3 \pm 9.9$	$+29.4 \pm 5.5$	$+28.7 \pm 12.7$
Days 57-64	$\bar{X} \pm S.D.$	$+23.3 \pm 7.4$	$+20.5 \pm 18.6$	$+24.7 \pm 5.5$	$+23.5 \pm 6.0$
Days 64-71	$\bar{X} \pm S.D.$	$+24.0 \pm 5.5$	$+24.7 \pm 8.4$	$+23.2 \pm 5.6$	$+20.5 \pm 6.4^a$

Day - Number of days on test diet.

a. All rats were assigned to study at this interval.
A significantly different from vehicle control ($p < 0.05$).

[] - Number of values averaged.

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVROL ACEPIATE TECHNICAL
(CHEVROL PROTOCOL S-2497)

TABLE 10 (PAGE 2): SUMMARY OF WEEKLY BODY WEIGHT CHANGES - F2B GENERATION MALE RATS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	11	30	30	30	30
Body Weight Change (g)					
Days 71-78	$\bar{X} \pm S.D.$	+16.1 $\pm$ 5.3	+17.6 $\pm$ 6.4	+17.1 $\pm$ 4.9	+17.8 $\pm$ 6.9
Days 78-85 ^a	$\bar{X} \pm S.D.$	+6.6 $\pm$ 6.4	+8.1 $\pm$ 7.7	+8.9 $\pm$ 5.4	+10.4 $\pm$ 5.1
Days 85-92 ^a	$\bar{X} \pm S.D.$	+17.4 $\pm$ 5.4	+20.8 $\pm$ 5.7*	+17.9 $\pm$ 5.6	+13.9 $\pm$ 4.3*
Days 92-99 ^a	$\bar{X} \pm S.D.$	+15.2 $\pm$ 5.7	+14.6 $\pm$ 6.6	+14.4 $\pm$ 3.7	+13.9 $\pm$ 4.7
Days 99-106 ^a	$\bar{X} \pm S.D.$	+11.5 $\pm$ 6.2	+12.7 $\pm$ 6.2	+11.1 $\pm$ 4.6	+10.6 $\pm$ 5.6
Days 106-113	$\bar{X} \pm S.D.$	+13.4 $\pm$ 5.2	+15.1 $\pm$ 6.4	+10.2 $\pm$ 8.4	+12.0 $\pm$ 5.9
Days 113-120 ^b	$\bar{X} \pm S.D.$	+14.7 $\pm$ 7.1	+15.1 $\pm$ 9.3	+14.0 $\pm$ 7.1	+12.3 $\pm$ 6.6
Days 120-127	$\bar{X} \pm S.D.$	+5.2 $\pm$ 5.5	+5.2 $\pm$ 5.7	+7.7 $\pm$ 5.4	+10.5 $\pm$ 5.5**
Days 127-131 ^b	$\bar{X} \pm S.D.$	+10.2 $\pm$ 4.8	+11.8 $\pm$ 6.8	+10.1 $\pm$ 4.7	+9.4 $\pm$ 6.2
Days 1-131 ^b	$\bar{X} \pm S.D.$	+530.3 $\pm$ 51.4 (17)	+517.7 $\pm$ 86.0 (11)	+533.5 $\pm$ 58.3 (19)	+575.7 $\pm$ 52.1 (12)

Day = number of days on test diet.

a. Data in cubulation.

b. Terminal body weight.

* Significantly different from vehicle control ($P < 0.05$).

** Significantly different from vehicle control ($P < 0.01$).

|| = number of values averaged.

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8708335-3
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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACETATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 14 (PAGE 1): SUMMARY OF WEEKLY PREHATING FEED CONSUMPTION - GRAMS PER KILOGRAM OF BODY WEIGHT PER DAY -
F2B GENERATION FEMALE RATS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	N	30	29 ^a	30	30
Feed Consumption (g/kg/day)					
Days 1-8	$\bar{X} \pm S.D.$	172.5 $\pm$ 61.8 [16] ^b	144.6 $\pm$ 36.4 [9] ^b	150.6 $\pm$ 23.1 [20] ^b	147.1 $\pm$ 21.1 [10] ^b
Days 8-15	$\bar{X} \pm S.D.$	140.4 $\pm$ 12.6	147.2 $\pm$ 10.0*	140.6 $\pm$ 10.4	157.9 $\pm$ 14.9**
Days 15-22	$\bar{X} \pm S.D.$	118.9 $\pm$ 11.2	122.8 $\pm$ 8.4	118.0 $\pm$ 10.3	131.6 $\pm$ 10.8**
Days 22-29	$\bar{X} \pm S.D.$	101.7 $\pm$ 7.7	105.2 $\pm$ 8.2	101.8 $\pm$ 8.4	118.6 $\pm$ 13.2**
Days 29-36	$\bar{X} \pm S.D.$	93.4 $\pm$ 5.8	95.7 $\pm$ 6.2	93.8 $\pm$ 6.6	109.9 $\pm$ 16.0**
Days 36-43	$\bar{X} \pm S.D.$	86.4 $\pm$ 6.1	90.4 $\pm$ 9.4	88.2 $\pm$ 7.6	100.0 $\pm$ 13.9**
Days 43-50	$\bar{X} \pm S.D.$	79.8 $\pm$ 6.0	82.4 $\pm$ 5.3	80.1 $\pm$ 6.5	89.8 $\pm$ 11.0**
Days 50-57	$\bar{X} \pm S.D.$	77.9 $\pm$ 4.9	80.8 $\pm$ 10.4	78.0 $\pm$ 6.0	86.6 $\pm$ 10.3**
Days 57-64	$\bar{X} \pm S.D.$	73.5 $\pm$ 5.0	76.6 $\pm$ 5.0	74.3 $\pm$ 5.3	81.7 $\pm$ 7.4**
Days 64-71	$\bar{X} \pm S.D.$	71.8 $\pm$ 5.1	75.0 $\pm$ 7.8	72.8 $\pm$ 5.6	76.0 $\pm$ 7.9
Days 71-78 ^c	$\bar{X} \pm S.D.$	65.0 $\pm$ 4.6	66.7 $\pm$ 4.5	65.2 $\pm$ 4.8	70.1 $\pm$ 7.6**
Days 78-85 ^c	$\bar{X} \pm S.D.$	87.8 $\pm$ 6.9	90.3 $\pm$ 5.4	88.1 $\pm$ 5.6	97.3 $\pm$ 7.9**

a. Excludes animal #6968 that was sacrificed moribund on F2B study day 22.

b. Not all animals were assigned to study at this interval.

c. Last weekly interval recorded prior to cohabitation.

* Significantly different from vehicle control (P<0.05).

** Significantly different from vehicle control (P<0.01).

[] = Number of values averaged.
Day = Number of days on test diet.

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACEPHATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 16 (PAGE 1): SUMMARY OF MATERNAL FEED CONSUMPTION - GRAMS PER KILOGRAM OF BODY WEIGHT PER DAY
(GESTATION PERIOD) - F28 GENERATION FEMALE RATS/F3A GENERATION LITTERS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested Pregnant Dams Without a Con- firmed Date of Mating	N	30	29 ^a	30	30
	n(x)	27(90.0)	26(82.0)	29(96.7)	18(60.0)**
Maternal Feed Consumption ^b (g/kg/day)	H	0	0	0	0
	$\bar{X} \pm S.D.$	68.4 $\pm$ 6.9	71.4 $\pm$ 4.3	69.3 $\pm$ 7.8	58.7 $\pm$ 5.8
	$\bar{X} \pm S.D.$	63.3 $\pm$ 7.1	65.8 $\pm$ 6.2	63.7 $\pm$ 7.4	66.9 $\pm$ 7.8
	$\bar{X} \pm S.D.$	57.1 $\pm$ 4.8	58.6 $\pm$ 10.0	55.4 $\pm$ 6.9	60.9 $\pm$ 7.2
	$\bar{X} \pm S.D.$	62.8 $\pm$ 5.2	65.1 $\pm$ 5.7	62.7 $\pm$ 6.3	65.5 $\pm$ 5.1

a. Excludes animal #6968 that was sacrificed moribund on F2B study day 22.

b. This table is restricted to pregnant animals with a confirmed date of mating.

** Significantly different from vehicle control ($P < 0.01$).

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACEPHATE TECHINICAL
(CHEVRON PROTOCOL S-2497)

TABLE 18 (FACE 1): SUMMARY OF MATERNAL FEED CONSUMPTION - GRAHS PER KILOGRAM OF BODY WEIGHT PER DAY
(LACTATION PERIOD) - F2B GENERATION FEMALE RATS/F3A GENERATION LITTERS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	N	30	29 ^a	30	30
Pregnant and Delivering a Litter	N(%)	27(90.0)	23(82.1) ^b	29(96.7)	17(58.6) ^{b**}
Maternal Feed Consumption (g/kg/day)					
Days 0-4	$\bar{X} \pm S.D.$	89.3 $\pm$ 17.6	98.6 $\pm$ 21.4	89.6 $\pm$ 20.8	85.6 $\pm$ 15.1
Days 4-7	$\bar{X} \pm S.D.$	121.1 $\pm$ 17.3	124.1 $\pm$ 18.4	122.0 $\pm$ 14.6	107.9 $\pm$ 17.0*
Days 7-14	$\bar{X} \pm S.D.$	154.5 $\pm$ 12.3	155.8 $\pm$ 14.5	154.6 $\pm$ 16.4	140.3 $\pm$ 22.6
Days 0-14	$\bar{X} \pm S.D.$	129.3 $\pm$ 13.0	133.1 $\pm$ 13.4	129.6 $\pm$ 15.5	118.0 $\pm$ 17.4*

a. Excludes animal #6968 that was sacrificed moribund on F2B study day 22.

b. Excludes animals #6952 and #7032. Delivery was not observed; pregnancy was confirmed at necropsy.

* Significantly different from vehicle control ($p < 0.05$).

** Significantly different from vehicle control ($p < 0.01$).

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CHEVRON
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PHOTOCHL 303-005, TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACEPHATE TECHINICAL (CHEVRON PROTOCOL S-2497)

TABLE 19 (PAGE 1): SUMMARY OF WEEKLY PREMATING BODY WEIGHTS - F28 GENERATION FEMALE RATS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	R	30	29 ^a	30	30
Body Weight (g)					
Day 1	$\bar{X} \pm S.D.$	56.1 $\pm$ 6.4 [16] ^b	49.6 $\pm$ 7.2 [9] ^b	54.0 $\pm$ 5.8 [20] ^b	55.8 $\pm$ 5.0 [10] ^b
Day 8	$\bar{X} \pm S.D.$	89.3 $\pm$ 9.7	78.8 $\pm$ 8.1**	87.7 $\pm$ 6.9	81.5 $\pm$ 12.0*
Day 15	$\bar{X} \pm S.D.$	129.2 $\pm$ 12.1	117.3 $\pm$ 9.9**	127.7 $\pm$ 8.1	121.3 $\pm$ 14.4
Day 22	$\bar{X} \pm S.D.$	161.3 $\pm$ 14.1	150.2 $\pm$ 11.7	159.2 $\pm$ 9.3	157.4 $\pm$ 14.1
Day 29	$\bar{X} \pm S.O.$	184.4 $\pm$ 16.3	174.3 $\pm$ 12.5	181.6 $\pm$ 12.3	183.5 $\pm$ 15.4
Day 36	$\bar{X} \pm S.D.$	205.9 $\pm$ 18.0	195.8 $\pm$ 13.8	202.2 $\pm$ 15.5	204.2 $\pm$ 16.3
Day 43	$\bar{X} \pm S.D.$	221.5 $\pm$ 19.3	211.8 $\pm$ 15.5	219.6 $\pm$ 18.2	225.1 $\pm$ 17.2
Day 50	$\bar{X} \pm S.D.$	236.6 $\pm$ 21.0	227.5 $\pm$ 16.8	231.6 $\pm$ 19.1	240.6 $\pm$ 17.3
Day 57	$\bar{X} \pm S.D.$	249.5 $\pm$ 22.6	239.6 $\pm$ 18.0	243.2 $\pm$ 21.2	253.2 $\pm$ 19.8
Day 64	$\bar{X} \pm S.D.$	258.8 $\pm$ 24.4	249.0 $\pm$ 19.7	252.6 $\pm$ 22.7	266.0 $\pm$ 21.2
* Day 71	$\bar{X} \pm S.D.$	265.3 $\pm$ 24.7	258.1 $\pm$ 20.8	261.2 $\pm$ 24.0	274.9 $\pm$ 22.6
Day 78 ^c	$\bar{X} \pm S.D.$	275.1 $\pm$ 27.0	267.5 $\pm$ 20.5	270.8 $\pm$ 26.1	286.3 $\pm$ 24.5

a. Excludes animal #6968 that was sacrificed moribund on F28 study day 22.

b. Not all animals were assigned to study at this interval.

c. Last weekly interval recorded prior to cohabitation.

* Significantly different from vehicle control (P<0.05).

** Significantly different from vehicle control (P<0.01).

[] = Number of values averaged.
Day = Number of days in test diet.

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACETAPATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 20 (PAGE 1): SUMMARY OF WEEKLY PREMATING BODY WEIGHT CHANGES - F2B GENERATION FEMALE RATS

Dosage Group		0 ppm	25 ppm	50 ppm	100 ppm
Animals - Tested	N	30	29 ^a	30	30
Body Weight Change (g)					
Days 1-8	$\bar{X} \pm S.D.$	+ 38.3 ± 3.7 [16] ^b	+ 33.4 ± 4.3 [9] ^b	+ 36.4 ± 4.3 [20] ^b	+ 36.2 ± 4.5 [10] ^b
Days 8-15	$\bar{X} \pm S.D.$	+ 39.9 ± 4.5	+ 38.6 ± 4.0	+ 40.0 ± 3.8	+ 39.8 ± 3.5
Days 15-22	$\bar{X} \pm S.D.$	+ 32.1 ± 7.6	+ 32.9 ± 4.6	+ 31.5 ± 4.8	+ 36.1 ± 4.9
Days 22-29	$\bar{X} \pm S.D.$	+ 23.1 ± 5.8	+ 24.0 ± 3.9	+ 22.4 ± 4.7	+ 26.1 ± 6.6
Days 29-36	$\bar{X} \pm S.O.$	+ 21.4 ± 5.2	+ 21.6 ± 4.4	+ 20.7 ± 4.9	+ 20.7 ± 3.8
Days 36-43	$\bar{X} \pm S.O.$	+ 15.6 ± 4.5	+ 16.0 ± 4.2	+ 17.3 ± 4.4	+ 20.9 ± 4.9**
Days 43-50	$\bar{X} \pm S.D.$	+ 15.1 ± 6.0	+ 15.7 ± 4.8	+ 12.0 ± 4.3	+ 15.5 ± 5.0
Days 50-57	$\bar{X} \pm S.D.$	+ 12.9 ± 5.6	+ 12.1 ± 5.3	+ 11.6 ± 5.3	+ 12.7 ± 5.6
Days 57-64	$\bar{X} \pm S.D.$	+ 9.3 ± 5.9	+ 9.3 ± 5.4	+ 9.4 ± 3.9	+ 12.8 ± 5.5
Days 64-71	$\bar{X} \pm S.D.$	+ 6.5 ± 6.6	+ 9.1 ± 3.9	+ 8.6 ± 4.6	+ 8.9 ± 4.1
Days 71-78 ^c	$\bar{X} \pm S.D.$	+ 9.8 ± 6.4	+ 9.4 ± 3.9	+ 9.6 ± 6.3	+ 11.4 ± 6.0
Days 5-78 ^c	$\bar{X} \pm S.D.$	+ 205.7 ± 26.2	+ 204.5 ± 70.0	+ 200.6 ± 25.1	+ 222.7 ± 23.1*

a. Excludes animal #6968 that was sacrificed moribund on F2B study day 22.

b. Not all animals were assigned to study at this interval.

c. Last weekly interval recorded prior to cohabitation.

* Significantly different from vehicle control (p < 0.05).

** Significantly different from vehicle control (p < 0.01).

[] = Number of values averaged.
Day = Number of days on test diet.

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8708335-3
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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACETATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 21 (PAGE 1): SUMMARY OF MATERNAL BODY WEIGHTS (GESTATION PERIOD) - F2B GENERATION FEMALE RATS/
F3A GENERATION LITTERS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	N	30	29 ^a	30	30
	N(%)	27(90.0)	24(82.8)	29(96.7)	18(60.0)**
	Dams Without a Confirmed Date of Mating	0	0	0	0
Maternal Body Weight ^{b,c} (g)					
Day 0	$\bar{X} \pm S.D.$	273.8 $\pm$ 27.2	269.0 $\pm$ 22.3	274.5 $\pm$ 27.1	282.6 $\pm$ 21.0
Day 7	$\bar{X} \pm S.D.$	297.4 $\pm$ 26.5	291.9 $\pm$ 24.1	295.6 $\pm$ 27.3	303.0 $\pm$ 24.0
Day 14	$\bar{X} \pm S.D.$	321.8 $\pm$ 28.7	315.5 $\pm$ 25.9	317.3 $\pm$ 26.4	324.8 $\pm$ 21.8
Day 20	$\bar{X} \pm S.D.$	381.2 $\pm$ 31.9	370.0 $\pm$ 30.4	366.8 $\pm$ 28.4	371.0 $\pm$ 23.2

a. Excludes animal #6968 that was sacrificed moribund on F2B study day 22.

b. This table is restricted to pregnant animals.

c. Excludes rats #6952 and #7032. Delivery was not observed; pregnancy was confirmed at necropsy.

** Significantly different from vehicle control ($P \leq 0.01$).

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACPHATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 22 (PAGE 1): SUMMARY OF MATERNAL BODY WEIGHT CHANGES (GESTATION PERIOD) - F2B GENERATION FEMALE RATS/
F3A GENERATION LITTERS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested Pregnant Dams Without a Con- firmed Date of Mating ^a	N	30	29 ^a	30	30
	N(Z)	27(90.0)	24(82.8)	29(96.7)	18(60.0)**
	N(Z)	0	0	0	0
Maternal Body Weight Change b,c (g)					
Days 0-7	$\bar{X} \pm S.D.$	+ 23.6 $\pm$ 6.2	+ 23.0 $\pm$ 4.5	+ 21.0 $\pm$ 6.7	+ 20.4 $\pm$ 7.6
Days 7-14	$\bar{X} \pm S.D.$	+ 24.5 $\pm$ 6.7	+ 23.6 $\pm$ 7.2	+ 21.8 $\pm$ 7.0	+ 21.8 $\pm$ 3.6
Days 14-20	$\bar{X} \pm S.D.$	+ 59.4 $\pm$ 10.9	+ 55.4 $\pm$ 8.1	+ 49.4 $\pm$ 10.9**	+ 46.2 $\pm$ 11.0**
Days 0-20	$\bar{X} \pm S.D.$	+ 107.5 $\pm$ 16.3	+ 101.9 $\pm$ 13.5	+ 92.3 $\pm$ 16.1**	+ 88.5 $\pm$ 15.1**

a. Excludes animal #6968 that was sacrificed moribund on F2B study day 22.

b. This table is restricted to pregnant animals.

c. Excludes rats #6952 and #7032. Delivery was not observed; pregnancy was confirmed at necropsy.

** Significantly different from vehicle control (p<0.01).

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PROTOCOL 303-005: TWO GENERATION (TWO LITTER) REPRODUCTION STUDY IN RATS WITH CHEVRON ACETATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 23 (PAGE 1): SUMMARY OF MATERNAL BODY WEIGHTS (LACTATION PERIOD) - F2B GENERATION FEMALE RATS/
F3A GENERATION LITTERS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Treated	II	30	29 ^a	30	30
Pregnant and Delivering a Litter	N(%)	27(90.0)	23(82.1) ^b	29(96.7)	17(58.6) ^{b**}
Maternal Body Weight (g)					
Day 0	$\bar{X} \pm S.D.$	302.1 $\pm$ 30.2	293.1 $\pm$ 27.0	296.2 $\pm$ 28.0	312.8 $\pm$ 25.1
Day 6	$\bar{X} \pm S.D.$	307.6 $\pm$ 23.4	297.0 $\pm$ 25.1	298.7 $\pm$ 23.4	315.6 $\pm$ 23.0
Day 7	$\bar{X} \pm S.D.$	307.9 $\pm$ 23.0	301.6 $\pm$ 25.0	301.4 $\pm$ 21.2	316.2 $\pm$ 24.1
Day 14	$\bar{X} \pm S.D.$	325.6 $\pm$ 22.7	314.1 $\pm$ 23.2	316.4 $\pm$ 20.5	325.1 $\pm$ 20.6
Day 20	$\bar{X} \pm S.D.$	310.3 $\pm$ 22.9	306.5 $\pm$ 19.5	301.9 $\pm$ 19.2	312.3 $\pm$ 20.9

u. Excludes animal #6968 that was sacrificed moribund on F2B study day 22.

b. Excludes animals #6952 and #7032. Delivery was not observed; pregnancy was confirmed at necropsy.

** Significant difference from vehicle control ($P < 0.01$).

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PROTOCOL 301-0051 THE GENERATION (TWO LITTER) DEPRIVATION STUDY IN RATS WITH CHEVRON ACETATE TECHNICAL
(CHEVRON PROTOCOL S-2497)

TABLE 24 (PAGE 1): SUMMARY OF MATERNAL BODY WEIGHT CHANGE (LACTATION PERIOD) - F2B GENERATION FEMALE RATS/
F3A GENERATION LITTERS

Dosage Group		0 ppm	25 ppm	50 ppm	500 ppm
Animals - Tested	N	30	29 ^a	30	30
Pregnant and Delivering a Litter	N(%)	27(90.0)	23(82.1) ^b	29(96.7)	17(58.6) ^{b**}
Maternal Body Weight Change (g)					
Days 0 - 4	$\bar{X} \pm S.D.$	+ 5.4 $\pm$ 15.0	+ 3.9 $\pm$ 7.5	+ 2.6 $\pm$ 10.3	+ 2.2 $\pm$ 7.7
Days 4 - 7	$\bar{X} \pm S.D.$	+ 0.4 $\pm$ 8.4	+ 4.6 $\pm$ 8.8	+ 2.7 $\pm$ 7.2	+ 1.2 $\pm$ 5.5
Days 7 - 14	$\bar{X} \pm S.D.$	+15.6 $\pm$ 12.3	+12.6 $\pm$ 8.7	+15.0 $\pm$ 9.8	+ 9.2 $\pm$ 8.2
Days 14 - 20	$\bar{X} \pm S.D.$	-13.2 $\pm$ 7.9	- 9.6 $\pm$ 8.9	-14.4 $\pm$ 9.1	-13.1 $\pm$ 11.2
Days 0 - 20	$\bar{X} \pm S.D.$	+ 8.2 $\pm$ 18.6	+11.3 $\pm$ 15.8	+ 5.8 $\pm$ 17.1	- 0.5 $\pm$ 12.3

^a. Excludes animal #6968 that was sacrificed moribund on F2B study day 22.

^b. Excludes animals #6952 and #7032. Deliveries not observed; pregnancy was confirmed in uteroplacental.

** Significantly different from vehicle control (P<0.01).

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