Study of Mutagenic Effects of **Monosodium Glutamate** 4/74

MUTAGENIC EFFECTS OF

MONOSODIUM GLUTAMATE

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STUDY OF MUTAGENIC EFFECTS OF MONOSODIUM GLUTAMATE (FDA No. 71-69) Revised

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INTRODUCTION

Under contract to the Food and Drug Administration, SRI is examining the mutagenicity of five selected chemical compounds (Contract No. FDA 73-215). This report describes the results of tests conducted on monosodium glutamate (FDA no. 71-69). It presents detailed descriptions of the methodologies used, which will not be noted in future reports unless significant changes are made in the experimental procedures.

Three methods were used for evaluating the genetic hazards of the test compounds. These were: (1) host-mediated assay, (2) *in vitro* microbial assay, and (3) dominant lethal test. Each procedure is described in detail below.

For the compound under consideration in this report--and as will be the case for the remaining compounds--single and repeated oral administrations were performed at three concentrations. The amounts were: (1) a maximum level--the calculated LD_5 or 5 g/kg (whichever was lower); (2) an intermediate level--1/10 of the LD_5 or 1 g/kg (whichever was lower); and, (3) a low level--1/100 of the LD_5 or 200 mg/kg (whichever was lower).

SUMMARY

Host-Mediated Assay

Monosodium glutamate was not mutagenic in the host-mediated assay using *Salmonella typhimurium* TA1530, nor did it increase the mitotic recombination frequency in the host-mediated assay *Saccharomyces cerevisiae* D3.

In vitro Assay

In the *in vitro* assays, monosodium glutamate was not mutagenic when tested with *S. typhimurium* TA1530, TA1535, TA1536, TA1537, and TA1538, nor did it increase the mitotic recombination frequency of *S. cerevisiae* D3.

Dominant Lethal Test

This experimental procedure produced no consistent responses to suggest that monosodium glutamate (FDA no. 71-69) is mutagenic to the rat. The positive reference compound, TEM, a known mutagen, generally produced mutagenic responses from the first through the fifth weeks of the experiment, as expected. Mathematical treatment of the dominant lethal data, conducted according to a statistical program outlined by FDA, failed to show consistent significant differences (that could be attributed to an effect of monosodium glutamate) at $P < 0.01$ or $P < 0.05$.

HOST-MEDIATED ASSAY

Introduction

The host-mediated assay combines the advantages of the mammalian metabolic system with those of microbial systems for detecting mutagens or metabolites of chemicals that are not mutagenic. Microbial assays allow both the exposure of large cell populations to the chemical being tested and the determination of mutation frequencies. In addition, microbial assays are relatively inexpensive compared with other systems of detecting carcinogens. The mammalian organisms provide the metabolic activities present in mammals that are absent in microorganisms. For example, dimethylnitrosamine and 2-naphthylamine are not mutagenic on direct exposure to bacteria but are mutagenic in the host-mediated assay.

In the host-mediated assay, the indicator microorganism is injected into the host's peritoneal cavity at the same time the host receives the test compound by some other route, such as oral intubation or intramuscular injection. The microorganism is allowed to incubate while the animal metabolizes the compound. After the organism has had a chance to incubate, it is removed from the animal and assayed for mutations. Theoretically, during the incubation period, the organism is then exposed to whatever metabolite normally might reach the various tissues in the animal. By comparing the mutagenicity of the compound *in vitro* with that obtained in the host-mediated assay, it is possible to determine if any activation or deactivation of the test compound has occurred during metabolism in the animal. For this initial report, a detailed description of the methodology has been provided even though it has been generally outlined in the literature (e.g., E. Zeiger and D. Brusick. The host-mediated assay--a protocol for *Salmonella* and *Saccharomyces*. Newsletter of the Environmental Mutagen Society 5, 32-34, 1971).

Materials and Methods

Microorganisms

A histine auxotroph of *Salmonella typhimurium* TA1530 was used in these studies to measure biochemical reversion mutations. The yeast *Saccharomyces cerevisiae* D3 which is a diploid organism heterozygous for two linked genes (*ade2* and *his8*), was used to measure for mitotic recombination.

Animals

Male Swiss albino mice, weighing an average of 28-30 g, were used for this study and maintained on a diet of Purina Lab Chow. The mice were obtained from Simonsen Laboratories, Gilroy, California.

Preparation of Microorganisms for Inoculation

The *Salmonella* strains were maintained on tryptone-yeast extract agar slants. To prepare the organism for inoculation into mice, a small inoculum from an agar slant was added to a broth consisting of 1.0% tryptone and 0.5% yeast extract. This culture was incubated for 24 hr at 37°C. The resulting suspension of cells was then adjusted to a concentration of 3-5 X 10^8 viable cells/ml using a spectrophotometer.

The yeast strain was maintained on yeast extract (0.5%) glucose (5.0%) agar slants. To prepare the yeast for inoculation into mice, a small inoculum from the agar slant was added to a broth consisting of 5% glucose, 0.5% yeast extract, and 0.2% peptone. This culture was incubated on a rotary shaker at 30°C for 24 hr. The cell concentration was adjusted spectrophotometrically to a concentration of 1-3 X 10^8 viable cells/ml before inoculating the animals.

Inoculation of the Mice

Two ml of the appropriate organism was inoculated into the peritoneal cavities of the mice using a 23-gauge needle. The area of inoculation was washed with ethanol before injection. The test compound was administered simultaneously with the inoculation.

Administration of Test Compound

The test compounds were administered by oral intubation using an 18-gauge intubating needle. The compound was dissolved in water or suspended in Mazola pure corn oil to a concentration requiring a 0.4 ml volume for each intubation.

The positive control compound for Salmonella, dimethylnitrosamine (DMNA), was dissolved in 10% ethanol to a concentration that would provide a 30-g mouse with a dose of 100 mg/kg. The positive control for the yeast, ethyl methane sulfonate (EMS), was dissolved in sterile saline to give a dose of 350 mg/kg/mouse. Positive control compounds were administered in 0.10 ml volumes by intramuscular injection.

Negative controls were run in all experiments. The negative control consisted of administering the solvent used for the test compound by oral intubation.

Autopsy and Recovery of Organisms

All test groups were sacrificed 4 hr after inoculation of the organism and administration of the test compound. The mice were sacrificed by cervical dislocation, their exterior abdominal regions were washed with ethanol, and 2 ml of sterile saline were injected into the peritoneal cavity of each mouse. The peritoneal cavity was opened aseptically, and the exudate withdrawn using a tuberculin syringe without a needle. The peritoneal exudates from each mouse were treated individually. They were placed in sterile tubes and immediately put in an ice bath. All plating of the samples was begun immediately after removal from the mouse.

Enumeration of Total Viable and Mutant Cells

Tenfold serial dilutions were made for each peritoneal exudate by serially adding 0.5 ml of sample to 4.5 ml of sterile saline. For the bacteria, a concentration series from 10^0 to 10^{-7} was prepared and for the yeast a series from 10^0 to 10^{-5}.

To enumerate the total viable bacteria, the 10^{-6} and 10^{-7} dilutions were plated by adding 0.2 ml of sample/plate to 3 separate plates. Each sample was spread over the surface of the plate using a sterile, bent glass rod. The medium used to enumerate total viable cells was as follows:

Bacteria Complete Medium

Tryptone	1.0%
Yeast extract	0.5%
Agar	2.0%
Dist. H_2O	to desired volume

To enumerate the revertant mutant bacterial cells, the 10^0 (and the 10^{-1} dilution if a large number of revertants were expected) dilutions were plated as described for enumerating the total bacteria. Six plates were used for each sample. The medium used for enumerating mutants was as follows:

Bacteria Minimal Medium

$(NH_4)_2SO_4$	0.2%
K_2HPO_4	1.4%
KH_2PO_4	0.6%
Na citrate	0.1%
$MgSO_4$	0.02%
Biotin	0.5 μg/ml
Glucose	0.5%
Agar	2.5%
Dist. H_2O	to volume

The glucose and biotin were sterilized separately and added to the autoclaved salt solution.

All bacteria were incubated at 37°C, the bacteria complete plates for 18 hr, and the bacteria minimal for 40 hr. If the plates could not be counted at this time, they were refrigerated.

To enumerate the yeast (both total viable cells and mitotic recombinants), samples from the 10^{-2} to 10^{-5} dilutions were plated on a yeast complete medium. They were plated in the same manner as described for the enumeration of the total bacteria. Total viable counts were

usually obtained by counting the 10^{-5} or 10^{-4} plates. The number of mitotic recombinant colonies was usually obtained by scanning the 10^{-3} or 10^{-2} plates with a dissecting scope at 10 X. The mitotic recombinants were seen as either red colonies or as red sectors on a normally white yeast colony. The prominence of the mitotic recombinants was enhanced by refrigerating for several days following the normal incubation of the yeast at 30°C for 48 hr.

The medium used for plating yeast was as follows:

Yeast Complete Medium	
Yeast extract	0.5%
Peptone	0.35%
Glucose	2.0%
Agar	2.5%
KH_2PO_4	0.15%
$MgSO_4 \cdot 7H_2O$	0.05%
$(NH_4)_2SO_4$	0.45%
Dist. H_2O	to desired volume

Data Handling

The data from all mice were used unless a great deal of contamination occurred or low recovery rates were obtained, possibly because the organism might have been injected into some organ rather than the peritoneal cavity. The number of colony forming units (CFU) or mitotic recombinants was determined by:

$$\frac{\text{No. CFU/plate}}{\text{No. plates}} \times \frac{1}{0.2} \times \frac{1}{\text{dilution factor}} = \text{CFU/ml in undiluted exudate}$$

The mutation frequency (MF) was calculated by:

$$MF = \frac{\text{total mutant cells}}{\text{total population}}$$

Treatment Groups

All treatment groups, including the positive and negative controls, consisted of 10 mice. The method used to determine concentrations of test compound is described in the section on the dominant lethal test.

The following groups were tested for all three organisms:

Group	Treatment	Day of Treatment on which Test Organism was Injected
1	Maximum tolerated dose	1
2	Intermediate dose	1
3	Low dose	1
4	Appropriate positive control	1
5	Appropriate negative control	1
6	Maximum tolerated dose	5
7	Intermediate dose	5
8	Low dose	5
9	Appropriate negative control	5

For testing FDA no. 71-69, the following doses were used:

Maximum dose - 5 g/kg
Intermediate dose - 1 g/kg
Low dose - 200 mg/kg

In vitro Tests

The method described by Ames was used to determine *in vitro* mutagenicity for the bacteria (B. N. Ames, W. E. Durston, E. Yamasaki, and F. D. Lee. Proc. Nat. Acad. Sci. U.S.A. 70, 2281-2285, 1973).

To determine the *in vitro* mitotic recombination frequency of the test compound on the yeast, it was first necessary to determine what level of the test compound gave a 50% survival of the organism after a 4-hr exposure at 30°C. If the compound showed no lethal effects, a concentration of 5.0% w/v was used. In the actual test for mitotic recombination, the yeast (approximately 5 X 10^7 cells/ml) was exposed to the appropriate concentration of compound for 4 hr, and then samples were plated as described for determining mitotic recombitants in the section on host-mediated assay. The mitotic recombination frequency is expressed as sectors per 10^4 survivors. This was compared with a negative control.

In the yeast *in vitro* studies, EMS was employed as the positive control. In the bacterial *in vitro* assays, 2-fluorenamine was employed as the positive control for metabolic activation.

Results and Discussion

Tables 1 and 2 present summaries of the host-mediated assay results for FDA no. 71-69. Tables 3 - 6 present data obtained on each individual mouse. We obtained data on at least seven mice in each treatment group. Data on individual mice were excluded only when major contamination occurred, or there was a poor recovery of microorganisms from the peritoneal cavity.

As can be seen in the summary data of Tables 1 and 2, FDA no. 71-69 has approximately the same mutation frequency and mitotic recombination frequency as the negative control in the host-mediated assay. This result is in contrast to the increased mutagenic frequency and increased mitotic recombination frequency obtained with the positive controls.

In the *in vitro* assays, monosodium glutamate was not mutagenic to *S. typhimurium* either in the presence or absence of a metabolic activation system (Table 7). At a concentration of 5%, the compound was not toxic to, nor did it increase, the mitotic recombination frequency of *S. cerevisiae* D3 (Table 8).

We therefore conclude that FDA no. 71-69, monosodium glutamate, is not mutagenic toward the *S. typhimurium* strains we have tested, nor does it increase the mitotic recombination frequency of *S. cerevisiae* D3.

DOMINANT LETHAL TEST

Introduction

Dominant lethal assays of compounds suspected of causing major genetic damage in animals have been carried out, for the most part, in mice. One exception was a comparative study by Bateman with mice and rats to evaluate the dominant lethal effect of triethylenemelamine (Genet. Res. Camb. 1, 381-392, 1960). Although there are cost savings in using the mouse rather than the rat, the latter has experimental advantages in providing more definitive information when attempting to assess the incidence of early fetal deaths. Also, corpora lutea counts in the mouse are difficult and relatively imprecise (S. S. Epstein and G. Rohrborn, Nature 230, 469-470, 1971). For this project, adult Sprague-Dawley-derived rats, from a closed random-bred colony, were used for the acute toxicity determinations as well as the dominant lethal assay.

In the mammalian test procedure, the compound under investigation was administered orally either once or on five successive days to proven male breeders. Following dosing, each male was mated with two adult female rats for seven days. The females were then removed, and new females again were added for another week of breeding. This sequence continued for eight weeks. Thus, the procedure is designed to indicate possible mutagenic effects on the male sperm, with the normal female acting as a carrier to demonstrate abnormalities that may have occurred in the male. Effects were evaluated by examining the state of fetal development during the middle to latter stages of gestation.

The experimental approach is presented below in a step-by-step manner to ensure clarity and an understanding of the preciseness of procedures used in this phase of the program.

Materials and Methods

Animals

Adult male and female Sprague-Dawley-derived rats were supplied by Simonsen Laboratories, Gilroy, California. The males were proven breeders, while the females were of virgin stock. Purina Lab Chow and water were available at all times.

Chemical Supply

All compounds or natural materials were supplied by the Food and Drug Administration. Each compound or natural material was provided in a ready-to-use form and was identified by both name and FDA code number. Sufficient quantities to complete all aspects of the experimental program were received. Excess supplies were placed in storage, should they be needed for future reference.

Solubility Studies

Solubility of each compound or natural material was investigated using such agents as water, propylene glycol, polyethylene glycol, corn oil, tricaprylin, carboxymethylcellulose, or methylcellulose (Methocel) to determine the most appropriate vehicle for administration. Because of the low toxicity of most materials and the consequent high dosages required, many of the test materials were administered as suspensions.

Acute Toxicity (Single and Multiple Dose)

Although acute toxicity information on some of the compounds was available in the literature, confirmatory tests were done to obtain an LD_{50} under our laboratory conditions and for this strain of rat. If no data were available, a broad, range-finding dose regimen was conducted, followed by an accurate determination of the oral LD_{50}.

A range-finding dose regimen was conducted using the acute data to determine an accurate multiple dose LD_{50}. Nonstarved animals were used throughout this part of the study because of the multiple dosing regimen.

Dosage Selection

In selecting the three dosage levels for the experimental study, two approaches were used:

(1) If a finite LD_{50} was obtained, the highest dose level was the calculated LD_5. The intermediate dose was 1/10 of the calculated LD_5, and the lowest dose was 1/100 of the calculated LD_5.

(2) If the LD_{50} was greater than 10 g/kg (a mutually agreed on upper limit), the highest dose was 5 g/kg; the lowest dose was 200 mg/kg; and the intermediate dose was 1 g/kg. These guidelines were used for both single and multiple dose experimental study groups.

Control Groups (Vehicle and Positive)

A vehicle control group (corn oil, water, Methocel, etc.) was included in each experimental study. Vehicle control animals were included in both the acute and subacute studies. In this manner, breeding and implant data were obtained for each vehicle control and were used as reference comparisons for the experimentally treated animals, both the single and multiple treatment groups. The positive reference control was the known mutagen, triethylene melamine (TEM), given at a dose of 0.2 mg/kg as a single i.p. injection. Breeding and implant data were obtained for eight weeks.

Acute Studies (Single Dose)

In an acute study, ten experienced breeder male rats per treatment group were administered a single oral dose of test compound. Controls were treated as previously described. Within two or three hours of dosing, each male was presented with two virgins of breeding age for a period of seven days. Females were replaced weekly over a total mating period of eight weeks.

Subacute Studies (Multiple Dose)

For the subacute assay, the experimental parameters used in the acute test were employed, with three exceptions: (1) five dosings

were given at 24-hour intervals; (2) weekly mating periods lasted for seven rather than eight weeks; and (3) the same positive control group used for the acute dosing also served as the reference group for the subacute assay.

Necropsy

Starting two weeks after the first day of breeding, one-fourth of the pregnant females in each group were sacrificed on four successive days. This schedule allowed for sacrifice of females between 11 and 18 days of pregnancy. A complete autopsy of each female was done to determine if there was intercurrent infection, since such a condition can induce preimplantation loss and early fetal deaths (G. Rhorborn, Humangenetik 6, 345, 1968).

Observations

At time of sacrifice, each female was scored for early fetal deaths, late fetal deaths, living fetuses (all of which provide a total implant score), corpora lutea, and pre-implantation loss (determined by subtracting the total implant score from the total corpora lutea score).

Evaluation

The following parameters indicate effects in dominant lethal studies: total implants (live fetuses plus early and late fetal deaths), total dead (early and late fetal deaths), dead implants per total implants, and pre-implantation loss (calculated as the difference between the total corpora lutea and total implant counts). We also evaluated total corpora lutea because a significant change of this parameter could influence the significance of the pre-implantation loss. Total implants, total dead, total corpora lutea, and pre-implantation loss parameters were analyzed for significance by the t-test.

The index of dead implants per total implants was analyzed statistically by the t-test on arcsine (or angular) transformed data, as described in Experimental Design (Theory and Application),

by Walter T. Federer, The Macmillan Company, 1955. This index was computed for each female.

The assumptions underlying the analysis of variance and the usual tests of significance are discussed by C. Eisenhart (Biometrics 3, 1-21, 1947); W. G. Cochran (Biometrics 3, 22-38, 1947) discusses the consequences when the assumptions underlying the analysis of variance are not fulfilled. These two papers, plus one by Bartlett (The use of transformations. Biometrics 3, 39-52 and 96, 1947), provide background information on this subject.

Results and Discussion

Single and multiple dose toxicity data are presented below.

Oral Toxicity - Rat and Mouse

Compound: Monosodium Glutamate

FDA No.: 71-69

Single Dose[a]	> 10 g/kg
Multiple Dose[b]	> 5 g/kg

[a]Ten male, Sprague-Dawley rats, weighing 278-344 grams each, and ten male, Swiss Webster mice, weighing 20-22 grams each, were fasted overnight and then administered orally specified amounts of the candidate compound dissolved or suspended in water.

[b]Ten male, nonfasted Sprague-Dawley rats, weighing 293-317 grams each, and five male, nonfasted Swiss Webster mice, weighing 17-25 grams each, were administered orally specified amounts of the candidate compound dissolved or suspended in water.

After an evaluation of the toxicity data, dosage levels for the mutagenesis assays were selected as follows:

Single dose--5 g/kg, 1 g/kg, and 200 mg/kg

Multiple dose--5 g/kg, 1 g/kg, and 200 mg/kg.

Throughout the experiment, the biological criteria used to evaluate mutagenic effects in the rat showed no consistent responses

that could be attributed to treatment. There were occasional statistical differences between control and monosodium glutamate-dosed groups, but they were random and did not suggest a time or dose-response effect.

Table 9 presents summary data on the implantations per pregnant female, Table 10 summarizes dead implants per pregnant female, Table 11 summarizes dead implants per total implants, Table 12 summarizes corpora lutea per pregnant female, and Table 13 summarizes pre-implantation loss per pregnant female.

Appendix A presents a description of the statistical analysis procedures used for dominant lethal tests with an explanation of the computer printouts.

Appendix B contains computer printouts of the raw data and the statistical analyses.

Careful review and statistical evaluation of the data do not show monosodium glutamate to be a mutagen in the rat by the dominant lethal test.

Table 1

SUMMARY OF HOST-MEDIATED ASSAYS WITH
SALMONELLA TYPHIMURIUM TA1530

The values are the averages for
at least 7 mice.

Regimen	Compound	Dose per kg	Avg CFU per ml ($\times 10^9$)	Avg His^+ revertants per ml	His^+ revertants per 10^8 cfu
Single treatment					
	Negative control		1.52	56.0	3.68
	DMNA (Positive control)	100 mg	1.14	1011.5	88.7
	Monosodium glutamate	200 mg	2.48	54.9	2.21
		1 g	1.39	61.7	4.44
		5 g	1.14	35.3	3.10
Multiple treatment (5 doses)					
	Negative control		3.62	62.7	1.73
	Monosodium glutamate	200 mg	3.79	44.6	1.18
		1 g	3.67	52.2	1.42
		5 g	2.58	37.0	1.43

Table 2

HOST-MEDIATED ASSAYS WITH SACCHAROMYCES CEREVISIAE D3

The values are the averages for at least 7 mice.

Regimen	Compound	Dose per kg	Avg CFU per ml ($\times 10^7$)	Avg Ade$^-$ recombinants per ml ($\times 10^3$)	Ade$^-$ recombinants per 10^4 cfu
Single treatment					
	Negative control		1.56	1.71	1.10
	EMS (Positive control)	350 mg	2.45	12.61	5.15
	Monosodium glutamate	200 mg	1.62	1.28	0.79
		1 g	1.54	1.86	1.21
		5 g	1.43	1.35	0.94
Multiple treatment					
	Negative control		2.03	1.95	0.96
	Monosodium glutamate	200 mg	2.14	1.71	0.80
		1 g	1.17	1.43	1.22
		5 g	3.53	2.64	0.75

Table 3

HOST-MEDIATED ASSAY WITH SALMONELLA TYPHIMURIUM TA1530

The mice were given a single oral dose of monosodium glutamate. The positive control, DMNA, was given intramuscularly. .

Compound	Dose/kg	Mouse Number	CFU/ml (x 10^9)	His^+ revertants per ml	His^+ revertants per 10^8 cfu
Negative control		1	1.03	25	2.43
		2	0.86	55	6.37
		3	1.85	49	2.66
		4	2.07	97	4.68
		5	1.36	24	1.77
		6	1.75	113	6.46
		7	1.92	75	3.91
		8	1.52	42	2.75
		9	1.36	24	1.77
DMNA (Positive control)	100 mg	1	0.97	1319	136
		2	1.32	580	44
		3	2.4	3460	144
		4	1.06	442	42
		5	0.48	1190	248
		6	1.22	226	18.6
		7	0.73	658	91
		8	0.92	217	23.7
Monosodium glutamate	200 mg	1	4.20	27	0.64
		2	1.37	109	7.96
		3	1.18	70	5.96
		4	1.32	83	6.26
		5	1.15	15	1.30
		6	0.55	45	8.13
		7	0.62	48	7.79
		8	9.43	42	4.50
	1 g	1	1.88	61	3.23
		2	2.13	74	3.46
		3	0.54	32	6.02
		4	1.47	45	3.07
		5	1.33	113	8.53
		6	0.96	57	6.01
		7	1.42	50	3.53
	5 g	1	1.07	16	1.48
		2	1.62	17	1.08
		3	1.47	10	0.68
		4	1.23	40	3.24
		5	0.77	31	4.10
		6	1.17	70	5.95
		7	0.73	42	5.69
		8	1.10	45	4.09
		9	1.07	47	4.37

Table 4

HOST-MEDIATED ASSAY WITH SALMONELLA TYPHIMURIUM TA1530

The mice were given monosodium glutamate at the doses indicated for five consecutive days.

Compound	Dose/kg	Mouse Number	CFU/ml (x 10^9)	His^+ revertants per ml	His^+ revertants per 10^8 cfu
Negative control		1	3.75	82	2.19
		2	2.87	70	2.44
		3	5.65	92	1.63
		4	1.56	38	2.44
		5	3.68	47	1.28
		6	4.36	43	0.99
		7	3.47	67	1.93
Monosodium glutamate	200 mg	1	3.55	50	1.41
		2	2.25	56	2.49
		3	1.04	34	3.27
		4	6.75	67	0.99
		5	3.40	37	1.09
		6	3.18	61	1.92
		7	2.46	35	1.42
		8	6.80	15	0.22
		9	4.70	46	0.98
	1 g	1	0.60	21	3.50
		2	9.68	84	0.86
		3	4.23	42	0.99
		4	2.57	62	2.41
		5	4.75	47	0.99
		6	1.53	45	2.94
		7	3.97	47	1.18
		8	2.18	46	2.11
		9	3.48	76	2.18
	5 g	1	1.68	18	1.07
		2	4.70	59	1.26
		3	5.72	52	0.91
		4	1.42	14	0.99
		5	2.25	50	2.22
		6	1.68	21	1.25
		7	2.50	50	2.04
		8	1.45	14	0.97
		9	1.78	54	3.03

Table 5

HOST-MEDIATED ASSAY WITH SACCHAROMYCES CEREVISIAE D3

The mice were given a single oral dose of monosodium glutamate. The positive control, EMS, was given intramuscularly.

Compound	Dose/kg	Mouse Number	CFU/ml ($\times 10^7$)	Ade^- recombinants per ml ($\times 10^3$)	Ade^- recombinants per 10^4 cfu
Negative control		1	1.67	2.5	1.50
		2	2.15	1.5	0.70
		3	0.31	0.5	1.64
		4	0.15	0.5	3.41
		5	0.99	1.5	1.51
		6	1.43	2.0	1.40
		7	4.25	3.5	0.82
EMS (Positive control)	350 mg	1	0.92	5.5	5.96
		2	3.07	21.0	6.85
		3	2.20	11.0	5.00
		4	1.68	6.0	3.55
		5	1.9	5.0	2.63
		6	2.48	20.5	8.27
		7	3.38	13.0	3.85
		8	3.37	22.5	6.68
		9	3.05	9	2.95
Monosodium glutamate	200 mg	1	2.43	1.0	0.41
		2	1.75	1.0	0.57
		3	2.15	1.5	0.70
		4	0.59	0.5	0.85
		5	0.47	1.5	3.15
		6	1.62	1.5	0.93
		7	1.75	1.5	0.86
		8	1.93	1.0	5.17
		9	1.90	2.0	1.05
	1 g	1	1.58	1.0	0.63
		2	1.01	2.5	2.47
		3	2.00	1.0	0.50
		4	1.83	2.0	1.09
		5	1.46	3.0	2.05
		6	0.87	1.5	1.73
		7	2.03	2.0	0.98
	5 g	1	0.76	0.5	0.66
		2	1.05	2.5	2.39
		3	1.57	1.0	0.64
		4	0.83	1.5	1.80
		5	0.23	0.5	2.19
		6	0.68	3.0	4.38
		7	4.55	2.5	5.49
		8	0.54	0.5	0.92
		9	3.53	0.5	1.42
		10	0.56	1.0	1.78

Table 6

HOST-MEDIATED ASSAY WITH SACCHAROMYCES CEREVISIAE D3

The mice were given monosodium glutamate at the doses indicated for five consecutive days.

Compound	Dose/kg	Mouse Number	CFU/ml ($\times 10^7$)	Ade^- recombinants per ml ($\times 10^3$)	Ade^- recombinants per 10^4 cfu
Negative control		1	5.42	2.0	0.37
		2	1.82	1.5	0.82
		3	0.48	2.0	4.12
		4	0.21	0.5	2.42
		5	3.83	3.5	0.91
		6	0.67	2.0	2.98
		7	0.51	0.5	0.98
		8	3.43	3.0	0.87
		9	1.97	2.0	1.02
		10	1.95	2.5	1.28
Monosodium	200 mg	1	1.12	0	
		2	2.70	1.5	0.56
		3	3.22	3.0	0.93
		4	5.05	3.0	0.59
		5	0.42	0	
		6	2.20	3.5	1.59
		7	0.28	1.0	3.50
	1 g	1	1.03	2.5	2.43
		2	2.00	1.0	0.50
		3	0.48	1.0	2.10
		4	0.79	1.5	1.90
		5	1.77	1.0	0.57
		6	1.22	2.0	1.64
		7	0.93	1.0	1.08
	5 g	1	1.63	3.5	2.14
		2	0.69	2.5	3.66
		3	4.88	2.5	0.51
		4	6.13	3.0	0.49
		5	6.27	3.0	0.48
		6	3.92	3.0	0.77
		7	1.16	1.0	0.86

Table 7

IN VITRO ASSAY OF MONOSODIUM GLUTAMATE WITH 5 STRAINS OF SALMONELLA TYPHIMURIUM

Compound added/plate	Metabolic Activation	His^+ Revertants per Plate				
		TA1530	TA1535	TA1536	TA1537	TA1538
Negative control	-	48	16	0	4	14
	+	40	9	0	3	11
Monosodium glutamate 71-69 5%	-	50	23	0	7	20
	+	53	20	2	4	17
2-Fluorenamine 5 µg (Positive control)	-					31
	+					1300

Table 8

IN VITRO ASSAY OF MONOSODIUM GLUTAMATE WITH SACCHAROMYCES CEREVISIAE D3

Compound	Percent Concentration (w/v or v/v)	Total Population per ml ($\times 10^7$)	Mitotic Recombinants per ml ($\times 10^3$)	Percent Survivors	Mitotic Recombinants per 10^4 Survivors
Negative control	-	8.17	4.5	100	0.55
Monosodium glutamate	5	8.83	6.0	108	0.68
EMS (Positive control)	1	4.80	119	59	24.8

DOMINANT LETHAL STUDY - RAT

TABLE 9

AVERAGE IMPLANTATIONS PER PREGNANT FEMALE

		COMPOUND FDA NO	MONOSODIUM GLUTAMATE 71-69		
WEEK	CONTROL	71-69 200 MG/KG	71-69 1 G/KG	71-69 5 G/KG	TEM .2 MG/KG
			SINGLE TREATMENT		
1	177/ 15=11.80	206/ 17=12.12	197/ 17=11.59	204/ 17=12.00	201/ 17=11.82
2	214/ 20=10.70	211/ 19=11.11	238/ 20=11.90	256/ 20=12.80 ** I	202/ 20=10.10
3	245/ 20=12.25	192/ 18=10.67 *	222/ 19=11.68	244/ 20=12.20	147/ 20= 7.35 **
4	237/ 20=11.85	244/ 20=12.20	237/ 20=11.85	226/ 20=11.30	103/ 17= 6.06 **
5	245/ 20=12.30	215/ 18=11.94	230/ 20=11.50	251/ 20=12.55	226/ 20=11.30
6	230/ 20=11.50	211/ 19=11.11	228/ 20=11.40	239/ 20=11.95	253/ 20=12.65 *
7	226/ 20=11.30	244/ 20=12.20	248/ 20=12.40	257/ 20=12.85	261/ 20=13.05
8	249/ 20=12.45	220/ 17=12.94	240/ 20=12.00	256/ 20=12.80	247/ 20=12.35
			MULTIPLE TREATMENT		
1	223/ 20=11.15	241/ 20=12.05	209/ 17=12.29	204/ 19=10.74	
2	249/ 20=12.45	234/ 20=11.70	229/ 20=11.45	205/ 18=11.39	
3	235/ 20=11.75	248/ 20=12.40	243/ 19=12.79	221/ 18=12.28	
4	248/ 20=12.40	251/ 20=12.55	229/ 20=11.45	259/ 20=12.95	
5	214/ 18=11.89	214/ 19=11.26	273/ 20=13.65	230/ 18=12.78	
6	244/ 20=12.20	257/ 20=12.85	281/ 20=14.05 ** I	225/ 18=12.50	
7	237/ 20=11.85	252/ 20=12.60	246/ 20=12.30	232/ 19=12.21	

* SIGNIFICANT AT P LT 0.05
** SIGNIFICANT AT P LT 0.01
I INCREASED ABOVE CONTROL

DOMINANT LETHAL STUDY - RAT

TABLE 10

AVERAGE DEAD IMPLANTS PER PREGNANT FEMALE

WEEK	CONTROL	71-69 200 MG/KG	71-69 1 G/KG	COMPOUND FDA NO 71-69 5 G/KG	MONOSODIUM GLUTAMATE TEM .2 MG/KG
			SINGLE TREATMENT		
1	6/ 15= .40	13/ 17= .76	8/ 17= .47	6/ 17= .35	55/ 17= 3.24 **
2	8/ 20= .40	11/ 19= .58	2/ 20= .10	18/ 20= .90	133/ 20= 6.65 **
3	16/ 20= .80	17/ 18= .94	11/ 19= .58	14/ 20= .70	119/ 20= 5.95 **
4	9/ 20= .45	32/ 20= 1.60 *	16/ 20= .80	17/ 20= .85	92/ 17= 5.41 **
5	24/ 20= 1.20	9/ 18= .50	12/ 20= .60	16/ 20= .80	60/ 20= 3.00 **
6	15/ 20= .75	24/ 19= 1.26	16/ 20= .80	23/ 20= 1.15	7/ 20= .35
7	7/ 20= .35	22/ 20= 1.10	15/ 20= .75	17/ 20= .85	14/ 20= .70
8	23/ 20= 1.15	21/ 17= 1.24	16/ 20= .80	17/ 20= .85	18/ 20= .90
			MULTIPLE TREATMENT		
1	35/ 20= 1.75	7/ 20= .35 ** D	3/ 17= .18 ** D	10/ 19= .53 * D	
2	22/ 20= 1.10	13/ 20= .65	11/ 20= .55	9/ 18= .50	
3	18/ 20= .90	28/ 20= 1.40	15/ 19= .79	12/ 18= .67	
4	29/ 20= 1.45	16/ 20= .80	31/ 20= 1.55	16/ 20= .80	
5	15/ 18= .83	9/ 19= .47	22/ 20= 1.10	15/ 18= .83	
6	10/ 20= .50	15/ 20= .75	9/ 20= .45	12/ 18= .67	
7	21/ 20= 1.05	10/ 20= .50	19/ 20= .95	15/ 19= .79	

* SIGNIFICANT AT P LT 0.05
** SIGNIFICANT AT P LT 0.01
D DECREASED BELOW CONTROL

DOMINANT LETHAL STUDY - RAT

TABLE 11

DEAD IMPLANTS/TOTAL IMPLANTS

		COMPOUND FDA NO	MONOSODIUM GLUTAMATE 71-69		
WEEK	CONTROL	71-69 200 MG/KG	71-69 1 G/KG	71-69 5 G/KG	TEM .2 MG/KG
			SINGLE TREATMENT		
1	6/ 177= .03	13/ 206= .06	8/ 197= .04	6/ 204= .03	55/ 201= .27**
2	8/ 214= .04	11/ 211= .05	2/ 238= .01	18/ 256= .07	133/ 202= .66**
3	16/ 245= .07	17/ 192= .09	11/ 222= .05	14/ 244= .06	119/ 147= .81**
4	9/ 237= .04	32/ 244= .13**	16/ 237= .07	17/ 226= .08	92/ 103= .89**
5	24/ 246= .10	9/ 215= .04	12/ 230= .05	16/ 251= .06	60/ 226= .27**
6	15/ 230= .07	24/ 211= .11	16/ 228= .07	23/ 239= .10	7/ 253= .03*D
7	7/ 226= .03	22/ 244= .09	15/ 248= .06	17/ 257= .07	14/ 261= .05
8	23/ 249= .09	21/ 220= .10	16/ 240= .07	17/ 256= .07	18/ 247= .07
			MULTIPLE TREATMENT		
1	35/ 223= .16	7/ 241= .03**D	3/ 209= .01**D	10/ 204= .05*D	
2	22/ 249= .09	13/ 234= .06	11/ 229= .05	9/ 205= .04	
3	18/ 235= .08	28/ 248= .11	15/ 243= .06	12/ 221= .05	
4	29/ 248= .12	16/ 251= .06	31/ 229= .14	16/ 259= .06	
5	15/ 214= .07	9/ 214= .04	22/ 273= .08	15/ 230= .07	
6	11/ 244= .04	15/ 257= .06	9/ 281= .03	12/ 225= .05	
7	21/ 237= .09	10/ 252= .04	19/ 246= .08	15/ 232= .06	

* SIGNIFICANT AT P LT 0.05
** SIGNIFICANT AT P LT 0.01
D DECREASED BELOW CONTROL

DOMINANT LETHAL STUDY - RAT

TABLE 12

AVERAGE CORPORA LUTEA PER PREGNANT FEMALE

WEEK	CONTROL	71-69 200 MG/KG	71-69 1 G/KG	COMPOUND FDA NO 71-69 5 G/KG	MONOSODIUM GLUTAMATE TEM .2 MG/KG
			SINGLE TREATMENT		
1	194/ 15=12.93	235/ 17=13.82	237/ 17=13.94	227/ 17=13.35	226/ 17=13.29
2	245/ 20=12.25	225/ 19=11.84	263/ 20=13.15 *I	263/ 20=13.15	255/ 20=12.75
3	256/ 20=12.80	223/ 18=12.39	240/ 19=12.63	261/ 20=13.05	221/ 20=11.05 **
4	250/ 20=12.50	264/ 20=13.20	255/ 20=12.75	255/ 20=12.75	205/ 17=12.06
5	274/ 20=13.70	231/ 18=12.83	269/ 20=13.45	270/ 20=13.50	250/ 20=12.50 *
6	250/ 20=12.50	241/ 19=12.68	254/ 20=12.70	280/ 20=14.00	265/ 20=13.25
7	262/ 20=13.10	280/ 20=14.00	286/ 20=14.30	291/ 20=14.55	274/ 20=13.70
8	259/ 20=12.95	230/ 17=13.53	263/ 20=13.15	266/ 20=13.30	269/ 20=13.45
			MULTIPLE TREATMENT		
1	254/ 20=12.70	260/ 20=13.00	224/ 17=13.18	245/ 19=12.89	
2	265/ 20=13.25	262/ 20=13.10	260/ 20=13.00	231/ 18=12.83	
3	256/ 20=12.80	288/ 20=14.40 *I	261/ 19=13.74 **I	237/ 18=13.17	
4	296/ 20=14.80	280/ 20=14.00	267/ 20=13.35	277/ 20=13.85	
5	256/ 18=14.33	252/ 19=13.26	284/ 20=14.20	260/ 18=14.44	
6	266/ 20=13.30	280/ 20=14.00	306/ 20=15.30 **I	252/ 18=14.00	
7	260/ 20=13.00	270/ 20=13.50	267/ 20=13.35	239/ 19=12.58	

* SIGNIFICANT AT P LT 0.05
** SIGNIFICANT AT P LT 0.01
I INCREASED ABOVE CONTROL

DOMINANT LETHAL STUDY - RAT

TABLE 13

AVERAGE PREIMPLANTATION LOSS PER PREGNANT FEMALE

WEEK	CONTROL	71-69 200 MG/KG	71-69 1 G/KG	COMPOUND FDA NO 71-69 5 G/KG	MONOSODIUM GLUTAMATE TEM .2 MG/KG
			SINGLE TREATMENT		
1	17/ 15= 1.13	29/ 17= 1.71	40/ 17= 2.35	23/ 17= 1.35	25/ 17= 1.47
2	31/ 20= 1.55	14/ 19= .74	25/ 20= 1.25	7/ 20= .35 **D	53/ 20= 2.65 *
3	11/ 20= .55	31/ 18= 1.72	18/ 19= .95	17/ 20= .85	74/ 20= 3.70 **
4	13/ 20= .65	20/ 20= 1.00	16/ 20= .90	29/ 20= 1.45	102/ 17= 6.00 **
5	29/ 20= 1.46	16/ 18= .89	39/ 20= 1.95	19/ 20= .95	24/ 20= 1.20
6	20/ 20= 1.00	30/ 19= 1.58	26/ 20= 1.30	41/ 20= 2.05	12/ 20= .60
7	36/ 20= 1.80	36/ 20= 1.80	38/ 20= 1.90	34/ 20= 1.70	13/ 20= .65
8	9/ 20= .45	10/ 17= .59	23/ 20= 1.15	10/ 20= .50	22/ 20= 1.10
			MULTIPLE TREATMENT		
1	31/ 20= 1.55	19/ 20= .95	15/ 17= .88	41/ 19= 2.16	
2	16/ 20= .80	28/ 20= 1.40	31/ 20= 1.55	26/ 18= 1.44	
3	21/ 20= 1.05	40/ 20= 2.00	18/ 19= .95	16/ 18= .89	
4	48/ 20= 2.40	29/ 20= 1.45	38/ 20= 1.90	18/ 20= .90	
5	44/ 18= 2.44	38/ 19= 2.00	11/ 20= .55 *D	30/ 18= 1.67	
6	22/ 20= 1.10	23/ 20= 1.15	25/ 20= 1.25	27/ 18= 1.50	
7	23/ 20= 1.15	18/ 20= .90	21/ 20= 1.05	7/ 19= .37	

* SIGNIFICANT AT P LT 0.05
** SIGNIFICANT AT P LT 0.01
D DECREASED BELOW CONTROL

DOMINANT LETHAL STUDY OF COMPOUND 71-69 MONOSODIUM GLUTAMATE

TABLE 14

CHI-SQUARE TEST OF THE FERTILITY INDEX (1 DEGREE OF FREEDOM)

WEEK	VEHICLE CONTROL				71-69 200 MG/KG				71-69 1 G/KG				71-69 5 G/KG				TEM .2 MG/KG			
	N PRG	N MTD	FERT. INDEX	CHISQ	N PRG	N MTD	FERT. INDEX	CHISQ	N PRG	N MTD	FERT. INDEX	CHISQ	N PRG	N MTD	FERT. INDEX	CHISQ	N PRG	N MTD	FERT. INDEX	CHISQ
									SINGLE TREATMENT											
1	15	20	.75	0.00	17	20	.85	.16	17	20	.85	.16	17	20	.85	.16	17	20	.85	.16
2	20	20	1.00	0.00	19	20	.95	0.00	20	20	1.00	0.00	20	20	1.00	0.00	20	20	1.00	0.00
3	20	20	1.00	0.00	18	20	.90	.53	19	20	.95	0.00	20	20	1.00	0.00	20	20	1.00	0.00
4	20	20	1.00	0.00	20	20	1.00	0.00	20	20	1.00	0.00	20	20	1.00	0.00	17	20	.85	1.44
5	20	20	1.00	0.00	18	20	.90	.53	20	20	1.00	0.00	20	20	1.00	0.00	20	20	1.00	0.00
6	20	20	1.00	0.00	19	20	.95	0.00	20	20	1.00	0.00	20	20	1.00	0.00	20	20	1.00	0.00
7	20	20	1.00	0.00	20	20	1.00	0.00	20	20	1.00	0.00	20	20	1.00	0.00	20	20	1.00	0.00
8	20	20	1.00	0.00	17	20	.85	1.44	20	20	1.00	0.00	20	20	1.00	0.00	20	20	1.00	0.00
									MULTIPLE TREATMENT											
1	20	20	1.00	0.00	20	20	1.00	0.00	17	20	.85	1.44	19	20	.95	0.00				
2	20	20	1.00	0.00	20	20	1.00	0.00	20	20	1.00	0.00	18	20	.90	.53				
3	20	20	1.00	0.00	20	20	1.00	0.00	19	20	.95	0.00	18	20	.90	.53				
4	20	20	1.00	0.00	20	20	1.00	0.00	20	20	1.00	0.00	20	20	1.00	0.00				
5	18	20	.90	0.00	19	20	.95	0.00	20	20	1.00	.53	18	20	.90	.28				
6	20	20	1.00	0.00	20	20	1.00	0.00	20	20	1.00	0.00	18	20	.90	.53				
7	20	20	1.00	0.00	20	20	1.00	0.00	20	20	1.00	0.00	19	20	.95	0.00				

DOMINANT LETHAL STUDY OF COMPOUND 71-69 MONOSODIUM GLUTAMATE

TABLE 15

CHI-SQUARE TEST OF THE DEATH INDEX (1 DEGREE OF FREEDOM)

WEEK	VEHICLE CONTROL				71-69 200 MG/KG				71-69 1 G/KG				71-69 5 G/KG				TEM .2 MG/KG			
	N WDI	N PRG	DEATH INDEX	CHISQ	N WDI	N PRG	DEATH INDEX	CHISQ	N WDI	N PRG	DEATH INDEX	CHISQ	N WDI	N PRG	DEATH INDEX	CHISQ	N WDI	N PRG	DEATH INDEX	CHISQ
SINGLE TREATMENT																				
1	4	15	.27	0.00	6	17	.35	.02	7	17	.41	.24	5	17	.29	.05	13	17	.76	6.06*
2	5	20	.25	0.00	5	19	.26	.07	2	20	.10	.69	11	20	.55	2.60	16	20	.80	10.03**
3	7	20	.35	0.00	11	18	.61	1.65	8	19	.42	.02	6	20	.30	0.00	18	20	.90	10.67**
4	8	20	.40	0.00	14	20	.70	2.53	7	20	.35	0.00	7	20	.35	0.00	17	17	1.00	12.48**
5	11	20	.55	0.00	6	18	.33	1.03	9	20	.45	.10	6	20	.30	1.64	16	20	.80	1.82
6	11	20	.55	0.00	11	19	.58	.02	10	20	.50	0.00	11	20	.55	.10	5	20	.25	2.60
7	7	20	.35	0.00	10	20	.50	.41	7	20	.35	.11	11	20	.55	.91	10	20	.50	.41
8	10	20	.50	0.00	8	17	.47	.02	8	20	.40	.10	9	20	.45	0.00	10	20	.50	.10
MULTIPLE TREATMENT																				
1	15	20	.75	0.00	3	20	.15	12.22**D	2	17	.12	12.36**D	6	19	.32	5.75*D				
2	13	20	.65	0.00	11	20	.55	.10	7	20	.35	2.50	7	18	.39	1.65				
3	8	20	.40	0.00	14	20	.70	2.53	10	19	.53	.22	7	18	.39	.07				
4	12	20	.60	0.00	8	20	.40	.90	11	20	.55	0.00	6	20	.30	2.53				
5	8	18	.44	0.00	8	19	.42	.04	11	20	.55	.11	6	18	.33	.12				
6	6	20	.30	0.00	8	20	.40	.11	8	20	.40	.11	8	18	.44	.34				
7	9	20	.45	0.00	7	20	.35	.10	9	20	.45	.10	11	19	.58	.24				

* Significant at P LT 0.05
** Significant at P LT 0.01
D Decreased below control

APPENDIX A

STATISTICAL PROCEDURE FOR EVALUATION OF DOMINANT LETHAL DATA WITH A DESCRIPTION AND EXPLANATION OF THE COMPUTER PRINTOUTS

Program Abstract

1.	Serial Number:	KSH009
	Title:	Chemical Mutagenicity Study
	Deck Name:	KLUTE
2.	Abstract:	This program performs statistical calculations to determine the mutagenicity of certain chemical compounds.
3.	Originator:	Jim Eusebio June 1972
	Revised:	Kathleen S. Himmelberger
4.	Date:	February 8, 1974
5.	Memory Requirements:	134236_8
6.	Input:	Data deck
7.	Output:	Printed output listing input data and results of several statistical tests (CHI-SQUARE test, ARMITAGE test, T-test, regression fits, PROBIT analysis, analysis of variance.
8.	System:	CDC 6400 Scope 3.3 FORTRAN IV

Program Description

The program which performs statistical calculations using the autopsy data of female rats is called KLUTE. KLUTE is written in FORTRAN IV for use on the CDC 6400. Because storage requirements of the program exceeded available memory, it was necessary to use overlays (see SCOPE Reference Manual, 6000 Version 3.3, pp 6-14 to 6-18). Therefore, card decks must be loaded in a specific order.

Although KLUTE was designed to allow as much flexibility in experimentation as possible, there are some criteria which must be satisfied:

1. The maximum number of test groups is included in the first week. After the first week, groups may be terminated. (Some studies mate the single-dose groups for eight weeks and multiple-dose groups for only seven.)

2. There are at most five single-dose groups and five multiple-dose groups. The program will handle experiments using only single-dose groups or multiple-dose groups.

3. A control group exists for single-dose and/or multiple-dose groups.

4. All males in the control group are mated in the first week. If a male should die during or after the first week, no data cards appear for him from that time on; however, there must be at least one data card for him in week one. Control group males are numbered consecutively beginning with 1.

5. Number of each variable should not exceed the following:

Variable	Maximum
Males	20/group
Females	100/week
Weeks in study	8
Females mated to each male	80/8 week period

STATISTICAL PROCEDURE
FOR EVALUATION OF DOMINANT LETHAL DATA

Introduction

In order to determine the mutagenic potential of selected food additives and chemicals, Stanford Research Institute has conducted several dominant lethal tests in mice and rats. Although individual tests differed slightly in details, basic test procedures were to administer compounds orally at different dose levels and frequency to groups of males. These males, as well as control group males for both the single and multiple-dose groups, were mated with two virgin females.

In studies using mice, females were examined daily for the presence of a mating plug (readily detectable in the mouse). When a plug was found, the female was replaced with a new virgin female. Fourteen days after identifying the mating plug, the females were sacrificed, and total implants, early deaths, and late deaths were counted. This continuous breeding and examination procedure was continued for seven weeks.

In studies using rats, females were removed after seven days of cohabitation with the males and replaced with new virgin females. Fourteen to eighteen days after first day of breeding, females were sacrificed and total implants, early deaths, late deaths, and total corpora lutea were counted. This procedure was repeated for eight weeks in the single dose groups and seven weeks in the multiple dose groups.

Autopsy data for each female was coded on work sheets and then punched on computer cards. These data cards, as well as a few cards describing the particulars of the project (duration, number of test groups, number of mated females, etc.), comprise the input to the KLUTE program.

Input

Input to the KLUTE program is a card deck, which was briefly described in the introduction.

Output

Output from KLUTE includes a printed list of the input data and results of several statistical tests.

KLUTE performs the following operations (where each statistical calculation is done once for each week's data):

1. The data cards are read and stored in central memory while a check is made to verify that the number of corpora lutea is greater than or equal to the number of implants. If any data fail this check, the run is aborted and the data are returned for review. The entire set of input data is printed out.

2. The fertility index (the number of pregnant females divided by the number of mated females) is calculated.

3. The chi-square test is done to compare each dosage level to the control on fertility. Let:

N_i = no. of mated females at dose level i,

n_i = no. of pregnant females at dose level i.

Then the chi-square 2 x 2 tables are of the form:

$$\begin{bmatrix} n_o & n_i \\ N_o - n_o & N_i - n_i \end{bmatrix}$$

and chi-squared (with 1 degree of freedom) is:

$$X_i^2 = \frac{(N_o+N_i)(|n_o(N_i-n_i)-n_i(N_o-n_o)|-(N_o+N_i)/2)^2}{(n_o+n_i)(N_o-n_o+N_i-n_i)(N_o)(N_i)} \quad \text{(corrected for continuity)}$$

where the subscript o represents the control group.*

For each dosage group (including the control group and TEM), the following is printed out: the number of pregnant females (N PRG), the number of mated females (N MTD), the fertility index and X^2.

4. Armitage's test for a linear trend in proportions is applied to the fertility index. The formula for this calculation is found on pages 246-248 of "Statistical Calculations" by Snedecor and Cochran, 6th Edition, Iowa State University Press, 1967. Using the notation of (3) above, we have a 2 x 3 contingency table of the form:

	dose 1	dose 2	dose 3	row totals
	n_1	n_2	n_3	t
	N_1-n_1	N_2-n_2	N_3-n_3	T-t
Column Totals	N_1	N_2	N_3	T

Armitage's "chi-square" is given as $X^2_{(C-1)} - X^2_1$, where C=3 and

$$X_1^2 = \frac{T(T\Sigma nx - t\Sigma Nx)^2}{t(T-t)(T\Sigma Nx^2-(\Sigma Nx)^2)}, \quad X^2_{(C-1)} = \frac{T^2(\Sigma\frac{n^2}{N} - \frac{t^2}{T})}{t(T-t)},$$

*In all tests, the single-dose treatment groups are compared with the single-dose control group and the multiple-dose treatment groups compared with the multiple-dose control group.

where Σnx stands for $\sum_{i=1}^{3} n_i x_i$, $\Sigma \frac{n^2}{N}$ for $\sum_{i=1}^{3} \frac{n_i^2}{N_i}$, etc., and the x_i are the dosage levels.

This calculation is then repeated with x replaced by log x. The Armitage test is also applied to the following 2 x 4 contingency table:

Control	dose 1	dose 2	dose 3
n_o	n_1	n_2	n_3
N_o-n_o	N_1-n_1	N_2-n_2	N_3-n_3

In this case, C=4.

The printout for the Armitage tests includes the degrees of freedom, the number pregnant (N PRG) and the number mated (N MTD) for each of the 3 or 4 groups included in the tests, plus $X^2_{(C-1)}$, X^2_1 and their difference (labeled ARMTG CHISQ).

5. The t-test is applied to determine significant differences between the average number of implantations per pregnant female at a dose level, and the average for the control. Let

n_i = no. of pregnant females at dose level i.

u_{ij} = total no. of implantations for pregnant female j of dose i.

Then,

$$\bar{u}_i = \frac{1}{n_i} \sum_{j=1}^{n_i} u_{ij}$$

$$S_i^2 = \sum_{j=1}^{n_i} (u_{ij}-\bar{u}_i)^2$$

The T-statistic for dose i has $n_o + n_i - 2$ degrees of freedom, and is equal to:

$$t_i = \frac{\bar{u}_o - \bar{u}_i}{\left[\frac{S_o^2 + S_i^2}{n_o + n_i - 2}\left(\frac{1}{n_o} + \frac{1}{n_i}\right)\right]^{1/2}}$$

The t-test printout gives, for each group: the number pregnant (N PRG), the mean and standard deviation of the number of implantations. The absolute value of T and the degrees of freedom (DF) are given for each treatment group and for TEM.

6. A regression fit of the average number of implantations, $\bar{u}_i$, is made for both the arithmetic and logarithmic dose $\left(X_i \text{ and } \log X_i\right)$ to see which is better.

These two fits include the data from the three treatment groups only. A third regression using the X_i as independent variables includes data from the three treatment groups and the control group.

The regressions are computed as follows:

Let N = the number of observations, i.e., the total number of pregnant females in the groups used in the regression.

X_i = the value of the independent variable (dose or log dose) for the i-th female.

U_i = the value of the dependent variable (number of implantations) for the i-th female.

Then,

$$\text{XBAR} = \bar{X} = \frac{1}{N} \sum_{i=1}^{N} X_i$$

$$\text{SD X} = \text{standard deviation of the } X_i$$

$$= \left[\frac{1}{N-1} \; SS_X \right]^{1/2},$$

$$\text{where } SS_X = \sum_{i=1}^{N} (X_i - \bar{X})^2$$

$$\text{UBAR} = \bar{U} = \frac{1}{N} \sum_{i=1}^{N} U_i,$$

$$\text{SD U} = \text{standard deviation of the } U_i$$

$$= \left[\frac{1}{N-1} \; SS_U \right]^{1/2},$$

$$\text{where } SS_U = \sum_{i=1}^{N} (U_i - \bar{U})^2,$$

$$\text{and } S_{XU} = \sum_{i=1}^{N} (X_i - \bar{X})(U_i - \bar{U}).$$

From these quantities, we compute:

$$B = \text{estimate of the slope of the regression line}$$

$$= S_{XU}/SS_X,$$

$$A = \text{estimate of the intercept of the regression line}$$

$$= \bar{U} - B\bar{X},$$

Also,

$$\text{VARU.X} = \text{variance of U about the regression line}$$

$$= \frac{SS_U - \left(S_{XU}\right)^2 / SS_X}{N-2}$$

and from this is computed,

$$\text{VARB} = \text{variance of the estimate, B}$$

$$= \frac{\text{VARU.X}}{SS_X}$$

$$\text{VARA} = \text{variance of the estimate, A}$$

$$= \text{VARU.X}\left[\frac{1}{N} + \frac{\bar{X}^2}{SS_X}\right]$$

$$\text{VARUBAR} = \text{variance of } \bar{U},$$

$$= \frac{\text{VARU.X}}{N}$$

and

$$\text{CV U.X} = \text{coefficient of variation of U about X}$$

$$= \frac{(\text{VARU.X})^{1/2}}{\bar{U}}$$

And finally we have:

TB = the t-statistic for testing the hypothesis that the regression slope is zero

$$= \frac{B}{\sqrt{\text{VARB}}}$$

DF = number of degrees of freedom for TB

$$= N - 2$$

7. The preimplantation loss, y_{ij} is calculated for each pregnant female, j, as the number of corpora lutea, v_{ij}, minus the number of implantations, u_{ij}. Then the Freeman-Tukey transformation is applied to y_{ij} as follows:

$$f_{ij} = \sin^{-1}\sqrt{\frac{y_{ij}}{v_{ij}+1}} + \sin^{-1}\sqrt{\frac{y_{ij}+1}{v_{ij}+1}}$$

The t-test is then applied to the f's. Let

$$\bar{f}_i = \frac{1}{n_i}\sum_{j=1}^{n_i} f_{ij}$$

$$S_i^2 = \sum_{j=1}^{n_i} (f_{ij}-\bar{f}_i)^2,$$

where n_i, and n_o are defined above (step 3).

Then $$t_i = \frac{\bar{f}_o - \bar{f}_i}{\left[\frac{S_o^2 + S_i^2}{n_o + n_i - 2}\left(\frac{1}{n_o} + \frac{1}{n_i}\right)\right]^{1/2}}$$

The printout gives, for each group, the number of pregnant females (N PRG), the mean and standard deviation of the f_{ij}'s. For each treatment group and for TEM, the absolute value of t_i (T), and its degrees of freedom (DF) are given.

8. The number of dead implants, z_{ij}, for each female, j, is the sum of the early and late deaths. The t-test is applied to determine significant differences between the average number of dead implants per pregnant female at a dose level and the average for the control by repeating step 5 above with z_{ij} substituted for u_{ij}.

9. The number of pregnant females with one or more dead implants, m_i, is calculated. In the printout, the m_i are referred to as N WDI (i.e., "number with dead implants").

10. The chi-square test and Armitage's test for a linear trend is calculated for the proportion of pregnant females with one or more dead implants,

$$p_i = \frac{m_i}{n_i}$$

by repeating steps 3 and 4, above, with m_i substituted for n_i, and n_i substituted for N_i.

In the printout, the ratio, p_i, is called the "death index", in analogy with the fertility index.

11. The ratios, p_i, computed above, undergo a probit analysis to determine whether the probit of this proportion is linearly related to the log dose. Computer subroutine PROBT, from the IBM System/360 Scientific Subroutine Package Version III, is used to compute A and B and the X^2 statistic for the regression equation,

$$P_i = A + B*\log x_i$$

where P_i is derived by the program from

$$\int_{-\infty}^{P_i - 5} N_x(0,1)dx = p_i.$$

($N_x(0,1)$ is the normal curve, with a mean of 0 and a standard deviation of 1).

12. The number of dead implants, z_{ij}, and the number of total implants, u_{ij}, are calculated for each pregnant female, j. The Freeman-Tukey transformation and subsequent t-test is applied to this data by repeating step 7, above, as follows:

$$f_{ij} = \sin^{-1} \sqrt{\frac{z_{ij}}{u_{ij}+1}} + \sin^{-1} \sqrt{\frac{z_{ij}+1}{u_{ij}+1}}$$

$$\bar{f}_i = \frac{1}{n_i} \sum_{j=1}^{n_i} f_{ij}$$

$$S_i^2 = \sum_{j=1}^{n_i} (f_{ij} - \bar{f}_i)^2$$

$$t_i = \frac{\bar{f}_o - \bar{f}_i}{\left[\frac{S_o^2 + S_i^2}{n_o + n_i - 2} \left(\frac{1}{n_o} + \frac{1}{n_i}\right)\right]^{1/2}}$$

13. Five one-way analyses of variance are performed on the control groups' data. The five variables analyzed are:

a. Number of pregnant females,

b. Number of implantations per pregnant female,

c. The pre-implantation loss (as defined in Step 7) per pregnant female,

d. The number of dead implants per pregnant female,

e. The ratio of dead implants to the total implants per pregnant female.

In view of the fact that none of the variables on which the one-way analysis of variance have been performed is even approximately normal in distribution, the probability levels associated with these analyses of variances are necessarily approximate.

For case a., R_{kj} equals 1 if female j assigned to male k became pregnant; otherwise R_{kj} equals zero. For cases b. through e. the tabulation is limited to data for pregnant females; i.e., R_{kj} equals the value of the specified variable for female j assigned to male k if the female was pregnant; data for non-pregnant females are excluded.

For case a., l_k equals the number of females assigned to male k. For cases b. through e., l_k equals the number of females assigned to male k that became pregnant.

For each of these variables the ANOVA calculations are as follows:

M is the number of males

$$\bar{R}_k = \frac{1}{L_k} \sum_{j=1}^{L_k} R_{kj}$$

$$\bar{R} = \frac{1}{M} \sum_{k=1}^{M} \bar{R}_k$$

Then, the sum-of-squares-within-males = $SUMSQ_w$

$$= \sum_{k=1}^{M} = \sum_{j=1}^{L_k} (R_{kj} - \bar{R}_k)^2,$$

the degrees-of-freedom-within-males = DF_w

$$= \sum_{k=1}^{M} (L_k - 1),$$

and the mean-square-within-males = $MEANSQ_w = \frac{SUMSQ_w}{DF_w}$.

Similarly, the sum-of-squares-between-males = $SUMSQ_B = \sum_{k=1}^{M} L_k (\bar{R}_k - \bar{R})^2$,

the degrees-of-freedom-between-males = $DF_B = M-1$,

and the mean-square-between-males = $MEANSQ_B = \frac{SUMSQ_B}{DF_B}$.

Finally, the F-ratio is $F = \frac{MEANSQ_B}{MEANSQ_W}$.

In the printout, these quantities are labeled without the subscripts, but the "within" and "between" quantities are identified by the page heading. Also, the total-sum-of-squares = $SUMSQ_W + SUMSQ_B$

and its degrees-of-freedom

$$\sum_{k=1}^{M} L_k - 1,$$

are printed.

14. The t-test is applied to determine significant differences between the average number of corpora lutea per pregnant female at a dose level, and the average for the control. Let

n_i = no. of pregnant females at dose level i.

C_{ij} = total no. of corpora lutea for pregnant female j of dose i.

Then,

$$\bar{C}_i = \frac{1}{n_i} \sum_{j=1}^{n_i} C_{ij}$$

$$S_i^2 = \sum_{j=1}^{n_i} (C_{ij} - \bar{C}_i)^2$$

The T-statistic for dose i has $n_o + n_1 - 2$ degrees of freedom, and is equal to:

$$t_i = \frac{\bar{C}_o - \bar{C}_i}{\left[\frac{S_o^2 + S_i^2}{n_o + n_i - 2}\left(\frac{1}{n_o} + \frac{1}{n_i}\right)\right]^{1/2}}$$

The t-test printout gives, for each group: the number pregnant (N PRG), the mean and standard deviation of the number of corpora lutea. The <u>absolute value</u> of T and the degrees of freedom (DF) are given for each treatment group and for TEM.

APPENDIX B

RAW DATA AND STATISTICAL ANALYSES

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DOMINANT LETHAL STUDY OF COMPOUND 71-69 MONOSODIUM GLUTAMATE

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
CONTROL	1	S	0.00000	1	1	Y	5	7	0	0	0	0	5	7
CONTROL	1	S	0.00000	1	2	N	0	0	0	0	0	0	0	0
CONTROL	1	S	0.00000	2	3	N	0	0	0	0	0	0	0	0
CONTROL	1	S	0.00000	2	4	Y	6	9	0	0	0	0	6	9
CONTROL	1	S	0.00000	3	5	Y	6	8	0	0	0	0	6	8
CONTROL	1	S	0.00000	3	6	Y	5	6	0	0	0	0	5	9
CONTROL	1	S	0.00000	4	7	N	0	0	0	0	0	0	0	0
CONTROL	1	S	0.00000	4	8	Y	9	6	1	0	1	1	9	6
CONTROL	1	S	0.00000	5	9	Y	4	8	0	0	0	1	5	8
CONTROL	1	S	0.00000	5	10	N	0	0	0	0	0	0	0	0
CONTROL	1	S	0.00000	6	11	Y	7	7	0	0	0	0	7	7
CONTROL	1	S	0.00000	6	12	Y	8	4	0	0	0	0	8	4
CONTROL	1	S	0.00000	7	13	Y	4	5	0	0	0	0	4	5
CONTROL	1	S	0.00000	7	14	Y	5	6	0	0	0	0	5	6
CONTROL	1	S	0.00000	8	15	Y	5	5	0	0	0	0	6	5
CONTROL	1	S	0.00000	8	16	Y	0	1	0	0	0	0	9	4
CONTROL	1	S	0.00000	9	17	Y	7	6	0	0	1	0	7	6
CONTROL	1	S	0.00000	9	18	Y	7	8	0	0	0	0	7	8
CONTROL	1	S	0.00000	10	19	N	0	0	0	0	0	0	0	0
CONTROL	1	S	0.00000	10	20	Y	6	7	0	0	1	0	6	7
71-69	1	S	.20000	51	101	Y	6	7	0	0	0	0	6	7
71-69	1	S	.20000	51	102	Y	6	7	0	0	0	0	8	7
71-69	1	S	.20000	52	103	Y	8	7	0	0	0	0	8	8
71-69	1	S	.20000	52	104	Y	6	5	0	0	0	0	6	7
71-69	1	S	.20000	53	105	Y	6	5	0	0	5	2	10	6
71-69	1	S	.20000	53	106	N	0	0	0	0	0	0	0	0
71-69	1	S	.20000	54	107	Y	4	8	0	0	0	0	5	9
71-69	1	S	.20000	54	108	Y	7	5	0	0	0	0	7	5
71-69	1	S	.20000	55	109	Y	6	4	0	0	1	0	6	4
71-69	1	S	.20000	55	110	Y	5	7	0	0	0	0	6	7
71-69	1	S	.20000	56	111	Y	4	9	1	1	0	0	6	10
71-69	1	S	.20000	56	112	Y	6	7	1	0	0	0	6	7
71-69	1	S	.20000	57	113	Y	6	7	0	0	0	1	6	7
71-69	1	S	.20000	57	114	N	0	0	0	0	0	0	0	0
71-69	1	S	.20000	58	115	N	0	0	0	0	0	0	0	0
71-69	1	S	.20000	58	116	Y	7	2	0	0	1	0	9	4
71-69	1	S	.20000	59	117	Y	5	8	0	0	0	0	7	9
71-69	1	S	.20000	59	118	Y	6	7	0	0	0	0	6	8
71-69	1	S	.20000	60	119	Y	8	3	0	0	0	0	8	5
71-69	1	S	.20000	60	120	Y	6	6	0	0	0	0	9	6

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
71-69	1	S	1.00000	61	121	Y	6	5	0	0	0	0	8	8
71-69	1	S	1.00000	61	122	Y	0	8	0	0	0	0	7	8
71-69	1	S	1.00000	62	123	Y	10	3	0	0	0	1	12	5
71-69	1	S	1.00000	62	124	Y	5	5	1	0	0	0	5	6
71-69	1	S	1.00000	63	125	Y	5	5	0	0	0	0	8	6
71-69	1	S	1.00000	63	126	Y	6	5	0	0	0	0	7	5
71-69	1	S	1.00000	64	127	Y	7	5	0	1	0	0	7	5
71-69	1	S	1.00000	64	128	Y	6	8	1	0	0	0	6	8
71-69	1	S	1.00000	65	129	Y	2	10	0	1	0	1	2	12
71-69	1	S	1.00000	65	130	N	0	0	0	0	0	0	0	0
71-69	1	S	1.00000	66	131	Y	5	6	0	0	1	0	5	8
71-69	1	S	1.00000	66	132	Y	5	7	0	0	0	0	5	7
71-69	1	S	1.00000	67	133	Y	5	10	0	0	0	0	6	10
71-69	1	S	1.00000	67	134	N	0	0	0	0	0	0	0	0
71-69	1	S	1.00000	68	135	Y	4	8	0	0	0	0	5	10
71-69	1	S	1.00000	68	136	Y	8	4	0	1	0	0	9	4
71-69	1	S	1.00000	69	137	N	0	0	0	0	0	0	0	0
71-69	1	S	1.00000	69	138	Y	5	8	0	0	0	0	5	8
71-69	1	S	1.00000	70	139	Y	6	7	0	0	0	0	7	8
71-69	1	S	1.00000	70	140	Y	0	8	0	0	0	0	7	8
71-69	1	S	5.00000	71	141	Y	7	6	0	0	0	0	8	6
71-69	1	S	5.00000	71	142	Y	3	4	0	0	0	0	3	5
71-69	1	S	5.00000	72	143	Y	6	5	0	0	0	0	6	5
71-69	1	S	5.00000	72	144	N	0	0	0	0	0	0	0	0
71-69	1	S	5.00000	73	145	Y	2	5	0	1	0	0	4	15
71-69	1	S	5.00000	73	146	Y	10	4	1	0	0	0	13	4
71-69	1	S	5.00000	74	147	Y	9	5	0	0	2	0	9	5
71-69	1	S	5.00000	74	148	Y	10	3	0	0	0	0	10	3
71-69	1	S	5.00000	75	149	Y	6	6	0	0	0	0	7	6
71-69	1	S	5.00000	75	150	Y	6	6	1	0	0	0	6	7
71-69	1	S	5.00000	76	151	Y	5	7	0	0	0	0	5	10
71-69	1	S	5.00000	76	152	Y	6	7	0	0	0	0	6	7
71-69	1	S	5.00000	77	153	N	0	0	0	0	0	0	0	0
71-69	1	S	5.00000	77	154	N	0	0	0	0	0	0	0	0
71-69	1	S	5.00000	78	155	Y	4	9	0	0	0	0	4	9
71-69	1	S	5.00000	78	156	Y	9	4	0	0	1	0	10	4
71-69	1	S	5.00000	79	157	Y	3	9	0	0	0	0	3	9
71-69	1	S	5.00000	79	158	Y	6	7	0	0	0	0	6	7
71-69	1	S	5.00000	80	159	Y	6	6	0	0	0	0	6	6
71-69	1	S	5.00000	80	160	Y	6	7	0	0	0	0	6	7

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
TEM	1	S	.00020	11	21	Y	6	5	0	0	0	0	8	7
TEM	1	S	.00020	11	22	Y	5	7	0	0	2	1	5	7
TEM	1	S	.00020	12	23	Y	5	4	0	0	0	0	5	4
TEM	1	S	.00020	12	24	Y	5	7	0	0	0	0	6	7
TEM	1	S	.00020	13	25	Y	9	5	2	1	0	0	9	5
TEM	1	S	.00020	13	26	Y	9	4	0	0	3	0	9	4
TEM	1	S	.00020	14	27	Y	5	6	0	0	0	0	5	6
TEM	1	S	.00020	14	28	Y	5	6	0	0	1	3	7	6
TEM	1	S	.00020	15	29	Y	6	7	0	0	3	2	6	7
TEM	1	S	.00020	15	30	Y	6	6	0	0	2	2	6	7
TEM	1	S	.00020	16	31	N	0	0	0	0	0	0	0	0
TEM	1	S	.00020	16	32	Y	8	6	0	0	3	3	8	6
TEM	1	S	.00020	17	33	Y	9	3	0	0	5	0	9	5
TEM	1	S	.00020	17	34	N	0	0	0	0	0	0	0	0
TEM	1	S	.00020	18	35	Y	4	5	0	0	0	1	7	8
TEM	1	S	.00020	18	36	Y	6	5	0	0	3	3	6	7
TEM	1	S	.00020	19	37	Y	7	5	3	2	0	0	9	6
TEM	1	S	.00020	19	38	Y	7	4	0	0	6	3	7	7
TEM	1	S	.00020	20	39	Y	6	8	0	0	0	1	7	8
TEM	1	S	.00020	20	40	N	0	0	0	0	0	0	0	0
CONTROL	1	M	0.00000	1	1	Y	8	4	1	0	0	0	10	7
CONTROL	1	M	0.00000	1	2	Y	8	5	0	0	0	0	8	5
CONTROL	1	M	0.00000	2	3	Y	3	8	1	1	0	1	3	8
CONTROL	1	M	0.00000	2	4	Y	6	3	2	0	1	3	7	4
CONTROL	1	M	0.00000	3	5	Y	3	9	1	2	0	0	3	9
CONTROL	1	M	0.00000	3	6	Y	4	7	0	0	0	1	5	7
CONTROL	1	M	0.00000	4	7	Y	5	7	2	1	0	0	5	7
CONTROL	1	M	0.00000	4	8	Y	7	5	0	2	0	0	7	6
CONTROL	1	M	0.00000	5	9	Y	10	4	0	1	0	0	11	4
CONTROL	1	M	0.00000	5	10	Y	4	8	0	0	0	0	4	8
CONTROL	1	M	0.00000	6	11	Y	5	1	1	0	4	1	10	4
CONTROL	1	M	0.00000	6	12	Y	5	7	1	0	0	0	6	7
CONTROL	1	M	0.00000	7	13	Y	4	9	0	2	0	0	4	10
CONTROL	1	M	0.00000	7	14	Y	7	7	1	0	0	0	7	7
CONTROL	1	M	0.00000	8	15	Y	4	6	0	0	0	2	5	7
CONTROL	1	M	0.00000	8	16	Y	7	5	2	0	0	0	7	5
CONTROL	1	M	0.00000	9	17	Y	6	4	0	0	0	0	6	5
CONTROL	1	M	0.00000	9	18	Y	10	4	0	0	0	1	10	4
CONTROL	1	M	0.00000	10	19	Y	0	3	0	0	0	0	4	7
CONTROL	1	M	0.00000	10	20	Y	3	8	0	0	0	0	3	8

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
71-69	1	M	.20000	41	81	Y	7	5	0	0	0	0	7	5
71-69	1	M	.20000	41	82	Y	4	5	1	0	0	0	4	5
71-69	1	M	.20000	42	83	Y	7	6	0	0	0	0	9	6
71-69	1	M	.20000	42	84	Y	3	8	0	0	0	0	3	8
71-69	1	M	.20000	43	85	Y	6	9	0	0	0	0	6	9
71-69	1	M	.20000	43	86	Y	2	9	0	0	0	0	4	9
71-69	1	M	.20000	44	87	Y	8	4	0	0	0	0	8	4
71-69	1	M	.20000	44	88	Y	4	6	0	0	0	0	4	7
71-69	1	M	.20000	45	89	Y	9	4	0	0	0	0	9	5
71-69	1	M	.20000	45	90	Y	8	8	0	0	0	0	8	8
71-69	1	M	.20000	46	91	Y	5	7	0	0	0	0	7	7
71-69	1	M	.20000	46	92	Y	8	4	0	0	0	0	8	4
71-69	1	M	.20000	47	93	Y	7	4	0	0	0	0	7	4
71-69	1	M	.20000	47	94	Y	8	5	0	0	0	0	8	5
71-69	1	M	.20000	48	95	Y	10	4	0	0	0	0	10	4
71-69	1	M	.20000	48	96	Y	1	7	0	0	0	0	5	10
71-69	1	M	.20000	49	97	Y	7	6	0	0	2	3	8	6
71-69	1	M	.20000	49	98	Y	3	7	1	0	0	0	4	8
71-69	1	M	.20000	50	99	Y	8	5	0	0	0	0	8	5
71-69	1	M	.20000	50	100	Y	3	10	0	0	0	0	4	10
71-69	1	M	1.00000	51	101	Y	7	4	0	0	0	0	7	5
71-69	1	M	1.00000	51	102	Y	7	5	0	0	0	0	7	5
71-69	1	M	1.00000	52	103	Y	6	6	0	0	0	0	6	6
71-69	1	M	1.00000	52	104	Y	7	6	0	0	0	0	7	6
71-69	1	M	1.00000	53	105	Y	6	8	0	0	0	0	6	8
71-69	1	M	1.00000	53	106	Y	6	6	0	0	0	0	6	6
71-69	1	M	1.00000	54	107	Y	3	4	0	0	0	0	8	4
71-69	1	M	1.00000	54	108	Y	6	5	0	0	0	0	8	5
71-69	1	M	1.00000	55	109	Y	6	7	0	0	0	0	7	7
71-69	1	M	1.00000	55	110	Y	8	7	0	0	0	2	8	7
71-69	1	M	1.00000	56	111	Y	7	6	0	0	0	0	7	6
71-69	1	M	1.00000	56	112	Y	3	8	0	0	0	0	4	8
71-69	1	M	1.00000	57	113	Y	4	8	0	0	0	0	4	9
71-69	1	M	1.00000	57	114	N	0	0	0	0	0	0	0	0
71-69	1	M	1.00000	58	115	Y	6	8	0	0	0	0	5	8
71-69	1	M	1.00000	58	116	N	0	0	0	0	0	0	0	0
71-69	1	M	1.00000	59	117	Y	8	6	0	0	0	0	9	6
71-69	1	M	1.00000	59	118	N	0	0	0	0	0	0	0	0
71-69	1	M	1.00000	60	119	Y	7	6	0	0	0	0	8	7
71-69	1	M	1.00000	60	120	Y	6	6	0	0	1	0	7	6

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
71-69	1	M	5.00000	61	121	Y	6	5	1	0	0	0	6	5
71-69	1	M	5.00000	61	122	Y	5	8	0	0	0	0	6	9
71-69	1	M	5.00000	62	123	Y	8	5	0	0	0	0	9	5
71-69	1	M	5.00000	62	124	Y	5	6	0	0	0	0	6	8
71-69	1	M	5.00000	63	125	Y	2	2	0	0	0	0	6	4
71-69	1	M	5.00000	63	126	Y	5	6	1	3	0	0	5	7
71-69	1	M	5.00000	64	127	Y	4	7	0	1	0	0	4	8
71-69	1	M	5.00000	64	128	Y	7	6	0	0	0	0	7	6
71-69	1	M	5.00000	65	129	Y	6	9	0	0	0	0	6	9
71-69	1	M	5.00000	65	130	Y	4	0	0	0	0	0	4	8
71-69	1	M	5.00000	66	131	Y	8	5	0	0	0	0	8	6
71-69	1	M	5.00000	66	132	Y	7	4	0	0	0	0	7	4
71-69	1	M	5.00000	67	133	Y	6	2	0	0	0	0	6	5
71-69	1	M	5.00000	67	134	Y	5	6	0	0	0	0	5	6
71-69	1	M	5.00000	68	135	Y	5	6	0	0	0	0	6	6
71-69	1	M	5.00000	68	136	Y	7	6	0	0	1	0	7	6
71-69	1	M	5.00000	69	137	N	0	0	0	0	0	0	0	0
71-69	1	M	5.00000	69	138	Y	7	4	1	1	0	0	7	4
71-69	1	M	5.00000	70	139	Y	6	8	0	0	0	0	8	14
71-69	1	M	5.00000	70	140	Y	0	6	0	1	0	0	6	6

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
CONTROL	2	S	0.00000	1	1	Y	5	6	0	1	0	0	5	7
CONTROL	2	S	0.00000	1	2	Y	5	7	0	0	0	0	5	7
CONTROL	2	S	0.00000	2	3	Y	1	6	0	0	0	0	6	6
CONTROL	2	S	0.00000	2	4	Y	3	6	0	1	0	0	3	8
CONTROL	2	S	0.00000	3	5	Y	6	6	0	0	0	0	6	6
CONTROL	2	S	0.00000	3	6	Y	5	5	0	0	0	0	5	7
CONTROL	2	S	0.00000	4	7	Y	6	4	0	0	0	0	6	4
CONTROL	2	S	0.00000	4	8	Y	5	7	0	0	0	0	5	7
CONTROL	2	S	0.00000	5	9	Y	2	5	0	0	1	1	6	5
CONTROL	2	S	0.00000	5	10	Y	4	8	0	0	1	1	5	8
CONTROL	2	S	0.00000	6	11	Y	4	6	0	0	0	0	5	6
CONTROL	2	S	0.00000	6	12	Y	4	5	0	0	0	0	4	6
CONTROL	2	S	0.00000	7	13	Y	6	8	0	0	0	0	7	8
CONTROL	2	S	0.00000	7	14	Y	7	6	0	0	0	0	7	6
CONTROL	2	S	0.00000	8	15	Y	1	9	0	0	0	0	2	12
CONTROL	2	S	0.00000	8	16	Y	6	6	0	0	0	0	6	6
CONTROL	2	S	0.00000	9	17	Y	5	7	0	0	0	0	6	7
CONTROL	2	S	0.00000	9	18	Y	5	7	1	0	0	1	5	9
CONTROL	2	S	0.00000	10	19	Y	7	6	0	0	0	0	7	7
CONTROL	2	S	0.00000	10	20	Y	2	5	0	0	0	0	3	9
71-69	2	S	.20000	51	101	Y	7	6	0	0	0	0	7	6
71-69	2	S	.20000	51	102	Y	6	6	0	0	0	0	6	6
71-69	2	S	.20000	52	103	Y	8	6	0	0	0	0	9	6
71-69	2	S	.20000	52	104	Y	0	1	0	0	0	0	5	2
71-69	2	S	.20000	53	105	Y	5	6	0	0	0	0	5	6
71-69	2	S	.20000	53	106	Y	5	5	0	0	0	0	5	5
71-69	2	S	.20000	54	107	Y	4	8	0	0	0	1	4	10
71-69	2	S	.20000	54	108	Y	7	5	0	0	0	0	7	6
71-69	2	S	.20000	55	109	Y	6	8	0	0	0	0	6	9
71-69	2	S	.20000	55	110	Y	4	7	0	0	0	0	4	7
71-69	2	S	.20000	56	111	Y	9	4	0	0	0	0	9	4
71-69	2	S	.20000	56	112	Y	6	6	0	0	0	0	6	7
71-69	2	S	.20000	57	113	Y	6	4	0	0	0	1	6	4
71-69	2	S	.20000	57	114	Y	6	6	0	0	0	0	6	6
71-69	2	S	.20000	58	115	Y	8	4	1	1	1	1	8	4
71-69	2	S	.20000	58	116	Y	6	5	0	0	2	1	6	5
71-69	2	S	.20000	59	117	Y	6	4	0	0	0	0	7	4
71-69	2	S	.20000	59	118	Y	4	6	1	1	0	0	4	7
71-69	2	S	.20000	60	119	Y	7	4	0	0	0	0	7	4
71-69	2	S	.20000	60	120	N	0	0	0	0	0	0	0	0

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
71-69	2	S	1.00000	61	121	Y	5	5	0	0	0	0	5	8
71-69	2	S	1.00000	61	122	Y	7	6	0	0	0	0	7	6
71-69	2	S	1.00000	62	123	Y	6	6	0	0	0	0	7	7
71-69	2	S	1.00000	62	124	Y	8	5	0	0	0	0	9	5
71-69	2	S	1.00000	63	125	Y	8	6	0	0	0	0	10	6
71-69	2	S	1.00000	63	126	Y	9	6	0	0	0	0	9	6
71-69	2	S	1.00000	64	127	Y	9	5	0	1	0	0	9	6
71-69	2	S	1.00000	64	128	Y	8	5	0	0	0	0	9	6
71-69	2	S	1.00000	65	129	Y	6	6	0	0	0	0	6	6
71-69	2	S	1.00000	65	130	Y	7	6	0	0	0	0	7	6
71-69	2	S	1.00000	66	131	Y	6	4	0	0	0	0	6	4
71-69	2	S	1.00000	66	132	Y	5	5	0	0	0	0	6	5
71-69	2	S	1.00000	67	133	Y	6	6	0	0	0	0	6	6
71-69	2	S	1.00000	67	134	Y	3	9	0	0	0	0	3	10
71-69	2	S	1.00000	68	135	Y	4	9	0	1	0	0	4	10
71-69	2	S	1.00000	68	136	Y	0	6	0	0	0	0	7	6
71-69	2	S	1.00000	69	137	Y	5	8	0	0	0	0	5	8
71-69	2	S	1.00000	69	138	Y	7	5	0	0	0	0	7	5
71-69	2	S	1.00000	70	139	Y	6	6	0	0	0	0	6	7
71-69	2	S	1.00000	70	140	Y	3	6	0	0	0	0	3	9
71-69	2	S	5.00000	71	141	Y	7	6	0	1	1	1	7	6
71-69	2	S	5.00000	71	142	Y	6	8	1	0	0	0	6	8
71-69	2	S	5.00000	72	143	Y	6	5	0	0	0	0	6	6
71-69	2	S	5.00000	72	144	Y	5	8	0	0	0	0	6	8
71-69	2	S	5.00000	73	145	Y	6	7	0	0	0	0	7	7
71-69	2	S	5.00000	73	146	Y	10	5	2	0	0	0	10	5
71-69	2	S	5.00000	74	147	Y	6	7	0	0	0	0	8	7
71-69	2	S	5.00000	74	148	Y	4	7	1	0	0	1	5	7
71-69	2	S	5.00000	75	149	Y	7	4	0	0	0	0	8	4
71-69	2	S	5.00000	75	150	Y	5	8	0	0	0	0	5	9
71-69	2	S	5.00000	76	151	Y	9	4	1	0	0	0	9	4
71-69	2	S	5.00000	76	152	Y	6	5	0	0	1	0	6	5
71-69	2	S	5.00000	77	153	Y	5	6	0	1	0	0	5	6
71-69	2	S	5.00000	77	154	Y	4	7	1	1	0	0	4	7
71-69	2	S	5.00000	78	155	Y	5	9	0	1	1	0	5	9
71-69	2	S	5.00000	78	156	Y	3	8	0	1	0	0	3	8
71-69	2	S	5.00000	79	157	Y	11	5	2	0	0	0	11	5
71-69	2	S	5.00000	79	158	Y	7	5	0	0	0	0	7	5
71-69	2	S	5.00000	80	159	Y	9	6	0	0	0	0	9	6
71-69	2	S	5.00000	80	160	Y	4	9	0	0	0	0	4	10

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
TEM	2	S	.00020	11	21	Y	4	7	0	0	0	2	4	9
TEM	2	S	.00020	11	22	Y	7	4	5	4	1	0	7	4
TEM	2	S	.00020	12	23	Y	5	4	2	3	1	0	8	6
TEM	2	S	.00020	12	24	Y	6	5	0	0	0	0	7	5
TEM	2	S	.00020	13	25	Y	4	4	4	4	0	0	7	6
TEM	2	S	.00020	13	26	Y	4	9	0	0	0	0	5	9
TEM	2	S	.00020	14	27	Y	1	8	1	7	0	0	2	10
TEM	2	S	.00020	14	28	Y	1	5	1	1	0	4	4	7
TEM	2	S	.00020	15	29	Y	4	5	3	2	0	1	6	6
TEM	2	S	.00020	15	30	Y	4	7	4	6	0	1	4	10
TEM	2	S	.00020	16	31	Y	5	5	0	0	0	0	6	5
TEM	2	S	.00020	16	32	Y	4	3	4	3	0	0	7	3
TEM	2	S	.00020	17	33	Y	8	5	1	0	4	4	10	5
TEM	2	S	.00020	17	34	Y	5	4	4	3	0	0	12	5
TEM	2	S	.00020	18	35	Y	6	5	4	3	2	1	7	7
TEM	2	S	.00020	18	36	Y	6	4	0	0	0	0	7	6
TEM	2	S	.00020	19	37	Y	8	2	8	2	0	0	8	3
TEM	2	S	.00020	19	38	Y	8	6	7	6	0	0	8	7
TEM	2	S	.00020	20	39	Y	7	5	7	5	0	0	7	6
TEM	2	S	.00020	20	40	Y	2	6	2	4	0	2	3	7
CONTROL	2	M	0.00000	1	1	Y	3	10	0	1	0	0	3	10
CONTROL	2	M	0.00000	1	2	Y	5	8	0	0	0	0	5	9
CONTROL	2	M	0.00000	2	3	Y	7	6	1	0	0	0	7	6
CONTROL	2	M	0.00000	2	4	Y	4	7	0	0	0	0	4	7
CONTROL	2	M	0.00000	3	5	Y	6	5	1	0	0	0	7	5
CONTROL	2	M	0.00000	3	6	Y	9	3	0	1	0	0	10	3
CONTROL	2	M	0.00000	4	7	Y	6	7	1	0	0	0	6	8
CONTROL	2	M	0.00000	4	8	Y	5	7	0	0	0	0	5	7
CONTROL	2	M	0.00000	5	9	Y	8	7	0	0	0	0	8	7
CONTROL	2	M	0.00000	5	10	Y	8	7	0	2	1	0	8	8
CONTROL	2	M	0.00000	6	11	Y	4	8	0	0	1	0	5	8
CONTROL	2	M	0.00000	6	12	Y	4	8	0	1	1	0	4	8
CONTROL	2	M	0.00000	7	13	Y	8	6	2	0	0	0	8	6
CONTROL	2	M	0.00000	7	14	Y	7	5	1	1	3	0	8	5
CONTROL	2	M	0.00000	8	15	Y	6	7	0	0	0	0	6	7
CONTROL	2	M	0.00000	8	16	Y	6	6	0	0	0	0	6	6
CONTROL	2	M	0.00000	9	17	Y	8	5	1	0	0	0	9	5
CONTROL	2	M	0.00000	9	18	Y	5	3	1	0	0	1	6	9
CONTROL	2	M	0.00000	10	19	Y	5	7	0	1	0	0	5	7
CONTROL	2	M	0.00000	10	20	Y	1	12	0	0	0	0	2	12

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
71-69	2	M	.20000	41	81	Y	5	8	0	0	0	0	5	8
71-69	2	M	.20000	41	82	Y	4	8	1	0	0	0	4	8
71-69	2	M	.20000	42	83	Y	3	10	1	0	1	1	3	13
71-69	2	M	.20000	42	84	Y	7	4	0	1	0	0	7	5
71-69	2	M	.20000	43	85	Y	4	5	0	0	0	0	7	5
71-69	2	M	.20000	43	86	Y	4	8	0	0	1	0	4	8
71-69	2	M	.20000	44	87	Y	6	7	0	0	0	0	6	7
71-69	2	M	.20000	44	88	Y	5	8	1	0	0	0	5	10
71-69	2	M	.20000	45	89	Y	8	5	0	0	0	0	9	5
71-69	2	M	.20000	45	90	Y	6	5	0	1	0	0	7	5
71-69	2	M	.20000	46	91	Y	5	9	0	1	0	0	5	9
71-69	2	M	.20000	46	92	Y	6	7	0	0	0	0	6	7
71-69	2	M	.20000	47	93	Y	3	4	1	0	0	0	5	4
71-69	2	M	.20000	47	94	Y	7	4	0	0	0	0	8	6
71-69	2	M	.20000	48	95	Y	9	5	0	1	0	0	9	6
71-69	2	M	.20000	48	96	Y	6	6	0	0	0	0	8	6
71-69	2	M	.20000	49	97	Y	5	5	0	0	0	0	9	5
71-69	2	M	.20000	49	98	Y	5	9	0	0	0	0	5	9
71-69	2	M	.20000	50	99	Y	6	3	0	0	1	0	7	4
71-69	2	M	.20000	50	100	Y	3	7	0	0	0	1	3	10
71-69	2	M	1.00000	51	101	Y	7	2	0	0	0	0	7	3
71-69	2	M	1.00000	51	102	Y	8	5	0	0	0	1	8	5
71-69	2	M	1.00000	52	103	Y	1	12	0	0	0	0	1	12
71-69	2	M	1.00000	52	104	Y	6	7	0	0	2	3	8	9
71-69	2	M	1.00000	53	105	Y	2	8	0	0	0	0	3	8
71-69	2	M	1.00000	53	106	Y	5	6	0	0	0	0	5	6
71-69	2	M	1.00000	54	107	Y	5	8	1	0	0	0	5	8
71-69	2	M	1.00000	54	108	Y	8	4	0	1	0	0	8	6
71-69	2	M	1.00000	55	109	Y	7	5	0	0	0	0	7	5
71-69	2	M	1.00000	55	110	Y	6	4	0	0	0	0	6	5
71-69	2	M	1.00000	56	111	Y	7	7	0	0	0	0	7	8
71-69	2	M	1.00000	56	112	Y	2	12	0	0	1	0	5	12
71-69	2	M	1.00000	57	113	Y	4	8	0	1	0	0	6	8
71-69	2	M	1.00000	57	114	Y	1	0	0	0	0	0	5	6
71-69	2	M	1.00000	58	115	Y	5	8	0	0	0	0	5	8
71-69	2	M	1.00000	58	116	Y	3	10	0	0	0	0	4	10
71-69	2	M	1.00000	59	117	Y	5	6	0	0	0	0	5	6
71-69	2	M	1.00000	59	118	Y	6	6	0	0	0	1	7	9
71-69	2	M	1.00000	60	119	Y	7	5	0	0	0	0	7	5
71-69	2	M	1.00000	60	120	Y	5	6	0	0	0	0	6	6

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
71-69	2	M	5.00000	61	121	Y	2	0	0	0	0	0	5	6
71-69	2	M	5.00000	61	122	Y	4	5	1	1	0	0	6	5
71-69	2	M	5.00000	62	123	Y	7	10	1	1	0	0	7	10
71-69	2	M	5.00000	62	124	Y	5	4	0	0	0	0	5	4
71-69	2	M	5.00000	63	125	Y	9	4	0	0	0	0	9	4
71-69	2	M	5.00000	63	126	Y	7	5	0	0	0	0	7	5
71-69	2	M	5.00000	64	127	Y	9	2	1	0	0	0	11	3
71-69	2	M	5.00000	64	128	Y	2	9	0	0	0	0	5	9
71-69	2	M	5.00000	65	129	N	0	0	0	0	0	0	0	0
71-69	2	M	5.00000	65	130	Y	7	4	0	0	0	0	7	5
71-69	2	M	5.00000	66	131	Y	5	7	0	0	0	0	6	7
71-69	2	M	5.00000	66	132	Y	6	8	0	0	0	0	6	8
71-69	2	M	5.00000	67	133	N	0	0	0	0	0	0	0	0
71-69	2	M	5.00000	67	134	Y	6	7	1	0	0	0	6	10
71-69	2	M	5.00000	68	135	Y	5	6	0	1	0	0	5	6
71-69	2	M	5.00000	68	136	Y	6	6	0	1	0	0	6	7
71-69	2	M	5.00000	69	137	Y	6	7	0	0	0	0	6	7
71-69	2	M	5.00000	69	138	Y	4	7	0	1	0	0	4	7
71-69	2	M	5.00000	70	139	Y	3	7	0	0	0	0	4	8
71-69	2	M	5.00000	70	140	Y	7	7	0	0	0	0	8	7

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
CONTROL	3	S	0.00000	1	1	Y	7	5	1	0	0	0	8	5
CONTROL	3	S	0.00000	1	2	Y	3	7	0	2	0	0	4	9
CONTROL	3	S	0.00000	2	3	Y	4	10	0	0	0	0	4	10
CONTROL	3	S	0.00000	2	4	Y	3	10	0	0	0	0	4	10
CONTROL	3	S	0.00000	3	5	Y	5	7	0	0	0	0	5	9
CONTROL	3	S	0.00000	3	6	Y	11	3	0	0	0	0	11	3
CONTROL	3	S	0.00000	4	7	Y	7	3	0	0	0	0	7	4
CONTROL	3	S	0.00000	4	8	Y	8	5	0	0	0	0	8	6
CONTROL	3	S	0.00000	5	9	Y	5	7	0	0	0	0	5	7
CONTROL	3	S	0.00000	5	10	Y	8	2	0	0	0	0	8	3
CONTROL	3	S	0.00000	6	11	Y	9	5	0	0	1	1	9	6
CONTROL	3	S	0.00000	6	12	Y	5	7	0	1	0	0	5	7
CONTROL	3	S	0.00000	7	13	Y	5	7	0	0	0	0	5	7
CONTROL	3	S	0.00000	7	14	Y	5	5	0	0	0	0	5	5
CONTROL	3	S	0.00000	8	15	Y	7	4	4	2	0	0	7	4
CONTROL	3	S	0.00000	8	16	Y	7	6	0	0	0	0	7	6
CONTROL	3	S	0.00000	9	17	Y	8	6	0	0	0	0	8	6
CONTROL	3	S	0.00000	9	18	Y	6	4	0	1	0	1	6	4
CONTROL	3	S	0.00000	10	19	Y	9	4	0	0	0	0	9	4
CONTROL	3	S	0.00000	10	20	Y	7	9	0	0	0	2	7	9
71-69	3	S	.20000	51	101	Y	7	4	1	0	0	0	7	4
71-69	3	S	.20000	51	102	Y	8	4	1	0	0	0	8	4
71-69	3	S	.20000	52	103	Y	7	4	0	0	1	0	8	5
71-69	3	S	.20000	52	104	Y	3	7	0	0	0	0	3	7
71-69	3	S	.20000	53	105	Y	6	6	0	1	0	0	6	6
71-69	3	S	.20000	53	106	Y	6	4	0	1	0	0	7	5
71-69	3	S	.20000	54	107	Y	6	7	0	0	0	0	6	7
71-69	3	S	.20000	54	108	N	0	0	0	0	0	0	0	0
71-69	3	S	.20000	55	109	Y	3	9	0	0	0	2	3	9
71-69	3	S	.20000	55	110	Y	4	7	0	0	0	0	4	7
71-69	3	S	.20000	56	111	Y	6	6	0	0	0	0	6	6
71-69	3	S	.20000	56	112	Y	0	3	0	0	0	1	7	4
71-69	3	S	.20000	57	113	Y	7	5	0	1	0	0	7	5
71-69	3	S	.20000	57	114	N	0	0	0	0	0	0	0	0
71-69	3	S	.20000	58	115	Y	9	3	2	2	2	0	10	3
71-69	3	S	.20000	58	116	Y	4	0	1	0	0	0	8	9
71-69	3	S	.20000	59	117	Y	4	6	0	1	0	0	5	7
71-69	3	S	.20000	59	118	Y	7	6	0	0	0	0	9	6
71-69	3	S	.20000	60	119	Y	6	5	0	0	0	0	7	5
71-69	3	S	.20000	60	120	Y	8	5	0	0	0	0	8	5

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
71-69	3	S	1.00000	61	121	Y	6	4	0	0	0	0	6	4
71-69	3	S	1.00000	61	122	Y	5	9	1	1	0	0	5	9
71-69	3	S	1.00000	62	123	Y	6	3	0	0	0	0	6	3
71-69	3	S	1.00000	62	124	Y	6	7	2	0	0	0	6	8
71-69	3	S	1.00000	63	125	Y	6	4	0	0	1	1	6	6
71-69	3	S	1.00000	63	126	Y	8	5	0	0	1	0	9	5
71-69	3	S	1.00000	64	127	Y	7	5	0	0	0	0	7	5
71-69	3	S	1.00000	64	128	Y	7	4	1	0	0	0	7	4
71-69	3	S	1.00000	65	129	Y	6	5	0	0	0	0	6	5
71-69	3	S	1.00000	65	130	Y	2	12	0	0	0	0	2	13
71-69	3	S	1.00000	66	131	Y	5	7	0	1	0	0	6	7
71-69	3	S	1.00000	66	132	Y	8	4	1	0	0	0	11	4
71-69	3	S	1.00000	67	133	Y	5	6	0	1	0	0	5	6
71-69	3	S	1.00000	67	134	Y	7	9	0	0	0	0	8	9
71-69	3	S	1.00000	68	135	N	0	0	0	0	0	0	0	0
71-69	3	S	1.00000	68	136	Y	1	13	0	0	0	0	1	13
71-69	3	S	1.00000	69	137	Y	3	9	0	0	0	0	3	9
71-69	3	S	1.00000	69	138	Y	9	3	0	0	0	0	9	3
71-69	3	S	1.00000	70	139	Y	6	6	0	0	0	0	6	6
71-69	3	S	1.00000	70	140	Y	3	1	0	0	0	0	3	9
71-69	3	S	5.00000	71	141	Y	5	6	0	0	0	0	5	8
71-69	3	S	5.00000	71	142	Y	5	7	0	0	0	0	5	7
71-69	3	S	5.00000	72	143	Y	7	8	0	0	0	0	7	8
71-69	3	S	5.00000	72	144	Y	7	8	0	0	0	0	7	8
71-69	3	S	5.00000	73	145	Y	5	5	0	0	0	0	5	6
71-69	3	S	5.00000	73	146	Y	8	5	0	0	4	1	8	5
71-69	3	S	5.00000	74	147	Y	7	5	0	0	0	0	7	5
71-69	3	S	5.00000	74	148	Y	8	6	2	1	0	2	10	6
71-69	3	S	5.00000	75	149	Y	6	4	0	0	0	0	6	5
71-69	3	S	5.00000	75	150	Y	4	10	0	0	0	0	4	10
71-69	3	S	5.00000	76	151	Y	4	9	0	0	0	0	4	9
71-69	3	S	5.00000	76	152	Y	8	4	0	0	0	0	8	4
71-69	3	S	5.00000	77	153	Y	1	8	0	0	0	0	4	8
71-69	3	S	5.00000	77	154	Y	5	7	0	1	0	0	5	7
71-69	3	S	5.00000	78	155	Y	6	5	0	0	0	0	6	6
71-69	3	S	5.00000	78	156	Y	4	8	0	0	0	0	5	8
71-69	3	S	5.00000	79	157	Y	4	8	0	1	0	0	7	9
71-69	3	S	5.00000	79	158	Y	7	7	1	0	0	0	7	7
71-69	3	S	5.00000	80	159	Y	6	6	0	1	0	0	7	6
71-69	3	S	5.00000	80	160	Y	4	7	0	0	0	0	4	8

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
TEM	3	S	.00020	11	21	Y	5	3	4	3	0	0	7	3
TEM	3	S	.00020	11	22	Y	4	2	4	2	0	0	7	2
TEM	3	S	.00020	12	23	Y	3	7	0	0	0	0	5	8
TEM	3	S	.00020	12	24	Y	6	5	6	4	0	0	7	6
TEM	3	S	.00020	13	25	Y	0	2	0	2	0	0	5	7
TEM	3	S	.00020	13	26	Y	8	4	6	2	1	0	8	5
TEM	3	S	.00020	14	27	Y	4	5	4	5	0	0	5	6
TEM	3	S	.00020	14	28	Y	1	2	0	0	0	0	7	6
TEM	3	S	.00020	15	29	Y	3	4	2	4	0	0	4	4
TEM	3	S	.00020	15	30	Y	4	6	2	5	1	0	5	7
TEM	3	S	.00020	16	31	Y	4	5	4	5	0	0	4	7
TEM	3	S	.00020	16	32	Y	5	3	5	3	0	0	5	4
TEM	3	S	.00020	17	33	Y	0	1	0	1	0	0	4	7
TEM	3	S	.00020	17	34	Y	3	2	3	2	0	0	3	3
TEM	3	S	.00020	18	35	Y	4	5	4	5	0	0	6	5
TEM	3	S	.00020	18	36	Y	2	1	2	1	0	0	7	6
TEM	3	S	.00020	19	37	Y	3	4	2	2	0	0	7	6
TEM	3	S	.00020	19	38	Y	5	5	5	5	0	0	5	5
TEM	3	S	.00020	20	39	Y	4	2	4	2	0	0	6	5
TEM	3	S	.00020	20	40	Y	3	8	2	4	0	1	3	9
CONTROL	3	M	0.00000	1	1	Y	3	0	0	0	0	0	3	8
CONTROL	3	M	0.00000	1	2	Y	5	8	0	0	0	0	5	8
CONTROL	3	M	0.00000	2	3	Y	7	5	0	0	0	0	7	5
CONTROL	3	M	0.00000	2	4	Y	7	8	0	0	0	0	7	8
CONTROL	3	M	0.00000	3	5	Y	6	0	1	0	0	0	6	4
CONTROL	3	M	0.00000	3	6	Y	10	3	1	0	0	0	10	3
CONTROL	3	M	0.00000	4	7	Y	7	6	0	0	0	0	8	6
CONTROL	3	M	0.00000	4	8	Y	6	7	0	0	0	0	6	7
CONTROL	3	M	0.00000	5	9	Y	10	3	3	2	0	0	10	4
CONTROL	3	M	0.00000	5	10	Y	4	9	0	1	0	0	5	9
CONTROL	3	M	0.00000	6	11	Y	3	9	0	0	1	2	3	9
CONTROL	3	M	0.00000	6	12	Y	4	5	2	0	0	0	5	6
CONTROL	3	M	0.00000	7	13	Y	5	7	0	0	0	0	5	7
CONTROL	3	M	0.00000	7	14	Y	6	8	0	0	0	0	6	8
CONTROL	3	M	0.00000	8	15	Y	7	4	0	0	0	0	7	5
CONTROL	3	M	0.00000	8	16	Y	7	5	0	0	0	0	7	5
CONTROL	3	M	0.00000	9	17	Y	5	9	0	0	0	0	5	10
CONTROL	3	M	0.00000	9	18	Y	7	6	0	1	0	1	7	6
CONTROL	3	M	0.00000	10	19	Y	10	4	1	1	0	1	10	4
CONTROL	3	M	0.00000	10	20	Y	6	4	0	0	0	0	8	4

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
71-69	3	M	.20000	41	81	Y	8	6	0	0	0	0	8	6
71-69	3	M	.20000	41	82	Y	6	9	3	4	0	1	11	10
71-69	3	M	.20000	42	83	Y	5	7	0	2	0	1	5	11
71-69	3	M	.20000	42	84	Y	5	5	1	0	0	0	5	5
71-69	3	M	.20000	43	85	Y	8	4	0	0	1	0	8	4
71-69	3	M	.20000	43	86	Y	9	2	1	0	0	0	9	3
71-69	3	M	.20000	44	87	Y	4	8	0	1	0	0	4	8
71-69	3	M	.20000	44	88	Y	3	9	0	0	0	0	5	10
71-69	3	M	.20000	45	89	Y	8	5	0	1	0	0	8	5
71-69	3	M	.20000	45	90	Y	8	6	0	0	0	0	8	6
71-69	3	M	.20000	46	91	Y	6	7	1	0	0	0	7	7
71-69	3	M	.20000	46	92	Y	5	4	0	0	0	0	7	6
71-69	3	M	.20000	47	93	Y	9	5	0	1	0	0	9	7
71-69	3	M	.20000	47	94	Y	9	5	0	0	0	0	9	5
71-69	3	M	.20000	48	95	Y	6	9	0	1	2	3	6	10
71-69	3	M	.20000	48	96	Y	12	3	1	0	0	0	12	3
71-69	3	M	.20000	49	97	Y	8	6	0	1	0	0	8	6
71-69	3	M	.20000	49	98	Y	8	6	0	1	0	0	8	6
71-69	3	M	.20000	50	99	Y	7	4	0	0	0	0	7	7
71-69	3	M	.20000	50	100	Y	3	1	1	0	0	0	8	11
71-69	3	M	1.00000	51	101	Y	3	11	0	0	0	0	4	11
71-69	3	M	1.00000	51	102	Y	7	6	1	0	0	0	9	7
71-69	3	M	1.00000	52	103	Y	6	7	0	0	0	0	6	8
71-69	3	M	1.00000	52	104	Y	5	4	1	0	0	0	5	10
71-69	3	M	1.00000	53	105	Y	6	6	1	0	0	0	6	6
71-69	3	M	1.00000	53	106	Y	7	6	0	0	0	0	7	7
71-69	3	M	1.00000	54	107	Y	8	6	0	0	0	0	8	6
71-69	3	M	1.00000	54	108	Y	5	8	0	0	0	0	5	9
71-69	3	M	1.00000	55	109	Y	3	11	0	1	0	0	3	11
71-69	3	M	1.00000	55	110	N	0	0	0	0	0	0	0	0
71-69	3	M	1.00000	56	111	Y	6	7	0	1	2	2	7	8
71-69	3	M	1.00000	56	112	Y	9	4	0	1	0	1	11	4
71-69	3	M	1.00000	57	113	Y	8	5	0	0	0	0	8	5
71-69	3	M	1.00000	57	114	Y	5	8	0	1	0	0	5	8
71-69	3	M	1.00000	58	115	Y	3	8	0	0	1	0	3	8
71-69	3	M	1.00000	58	116	Y	9	4	0	0	0	0	9	4
71-69	3	M	1.00000	59	117	Y	4	9	0	0	0	0	4	9
71-69	3	M	1.00000	59	118	Y	4	9	0	0	0	1	4	9
71-69	3	M	1.00000	60	119	Y	7	5	0	0	1	0	8	5
71-69	3	M	1.00000	60	120	Y	7	7	0	0	0	0	7	7

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
71-69	3	M	5.00000	61	121	Y	6	5	0	0	0	0	6	6
71-69	3	M	5.00000	61	122	Y	6	5	0	0	0	0	6	5
71-69	3	M	5.00000	62	123	Y	6	7	0	0	0	0	9	7
71-69	3	M	5.00000	62	124	Y	5	9	0	1	0	0	5	9
71-69	3	M	5.00000	63	125	Y	7	4	2	0	0	0	8	4
71-69	3	M	5.00000	63	126	Y	3	8	0	0	0	0	3	10
71-69	3	M	5.00000	64	127	Y	1	11	0	0	0	0	2	12
71-69	3	M	5.00000	64	128	Y	6	8	3	1	0	0	6	8
71-69	3	M	5.00000	65	129	Y	4	8	0	0	0	0	4	8
71-69	3	M	5.00000	65	130	Y	8	5	0	0	0	0	8	6
71-69	3	M	5.00000	66	131	Y	6	7	0	0	0	0	7	7
71-69	3	M	5.00000	66	132	Y	9	4	0	0	0	0	9	4
71-69	3	M	5.00000	67	133	Y	8	6	1	0	0	0	8	6
71-69	3	M	5.00000	67	134	N	0	0	0	0	0	0	0	0
71-69	3	M	5.00000	68	135	Y	8	8	0	0	0	0	8	8
71-69	3	M	5.00000	68	136	Y	2	0	2	0	0	0	2	3
71-69	3	M	5.00000	69	137	N	0	0	0	0	0	0	0	0
71-69	3	M	5.00000	69	138	Y	5	7	0	0	0	0	5	7
71-69	3	M	5.00000	70	139	Y	7	7	1	0	0	0	7	8
71-69	3	M	5.00000	70	140	Y	6	9	0	1	0	0	7	9

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
CONTROL	4	S	0.00000	1	1	Y	7	4	0	0	0	0	7	5
CONTROL	4	S	0.00000	1	2	Y	4	6	0	0	0	0	5	6
CONTROL	4	S	0.00000	2	3	Y	8	5	0	0	0	1	8	6
CONTROL	4	S	0.00000	2	4	Y	5	9	0	1	0	0	5	9
CONTROL	4	S	0.00000	3	5	Y	7	7	0	0	0	0	8	7
CONTROL	4	S	0.00000	3	6	Y	6	4	0	0	0	0	6	4
CONTROL	4	S	0.00000	4	7	Y	5	8	0	0	0	0	5	8
CONTROL	4	S	0.00000	4	8	Y	6	8	0	0	0	0	8	8
CONTROL	4	S	0.00000	5	9	Y	7	6	0	1	0	0	7	6
CONTROL	4	S	0.00000	5	10	Y	4	8	0	0	0	0	6	9
CONTROL	4	S	0.00000	6	11	Y	1	3	0	0	0	0	4	5
CONTROL	4	S	0.00000	6	12	Y	4	9	0	1	0	0	4	9
CONTROL	4	S	0.00000	7	13	Y	7	8	0	1	0	0	7	8
CONTROL	4	S	0.00000	7	14	Y	7	5	1	0	0	0	7	5
CONTROL	4	S	0.00000	8	15	Y	10	3	0	2	0	0	10	4
CONTROL	4	S	0.00000	8	16	Y	3	8	0	0	0	0	3	8
CONTROL	4	S	0.00000	9	17	Y	4	7	0	1	0	0	4	7
CONTROL	4	S	0.00000	9	18	Y	5	4	0	0	0	0	5	4
CONTROL	4	S	0.00000	10	19	Y	3	9	0	0	0	0	3	9
CONTROL	4	S	0.00000	10	20	Y	6	5	0	0	0	0	6	5
71-69	4	S	.20000	51	101	Y	7	6	0	0	0	0	7	6
71-69	4	S	.20000	51	102	Y	6	7	0	0	0	0	7	7
71-69	4	S	.20000	52	103	Y	7	6	1	0	0	0	7	6
71-69	4	S	.20000	52	104	Y	4	8	0	1	0	0	4	8
71-69	4	S	.20000	53	105	Y	7	7	1	0	0	0	7	7
71-69	4	S	.20000	53	106	Y	5	6	0	0	0	0	5	6
71-69	4	S	.20000	54	107	Y	7	5	0	0	1	1	9	6
71-69	4	S	.20000	54	108	Y	8	5	0	0	1	0	8	5
71-69	4	S	.20000	55	109	Y	5	5	0	0	0	0	5	5
71-69	4	S	.20000	55	110	Y	3	1	0	0	2	0	7	8
71-69	4	S	.20000	56	111	Y	6	6	0	0	0	1	7	6
71-69	4	S	.20000	56	112	Y	7	8	0	0	1	1	7	8
71-69	4	S	.20000	57	113	Y	6	4	0	0	3	1	6	6
71-69	4	S	.20000	57	114	Y	7	6	1	1	0	0	7	6
71-69	4	S	.20000	58	115	Y	7	5	3	2	1	1	7	6
71-69	4	S	.20000	58	116	Y	7	8	3	1	0	1	7	8
71-69	4	S	.20000	59	117	Y	9	5	0	0	1	0	9	6
71-69	4	S	.20000	59	118	Y	6	7	0	0	0	0	6	7
71-69	4	S	.20000	60	119	Y	7	5	0	0	0	0	7	5
71-69	4	S	.20000	60	120	Y	7	6	1	0	1	0	7	6

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
71-69	4	S	1.00000	61	121	Y	4	6	0	1	0	0	4	6
71-69	4	S	1.00000	61	122	Y	2	10	0	0	0	1	2	10
71-69	4	S	1.00000	62	123	Y	7	6	0	0	0	0	7	6
71-69	4	S	1.00000	62	124	Y	8	4	0	0	0	0	8	4
71-69	4	S	1.00000	63	125	Y	6	6	0	0	0	0	6	7
71-69	4	S	1.00000	63	126	Y	8	5	0	0	3	2	8	5
71-69	4	S	1.00000	64	127	Y	6	6	0	0	0	0	6	10
71-69	4	S	1.00000	64	128	Y	4	5	0	0	0	0	4	5
71-69	4	S	1.00000	65	129	Y	0	4	0	0	0	0	6	4
71-69	4	S	1.00000	65	130	Y	6	8	0	0	0	0	6	8
71-69	4	S	1.00000	66	131	Y	6	6	0	0	0	0	6	9
71-69	4	S	1.00000	66	132	Y	5	8	0	0	0	1	8	8
71-69	4	S	1.00000	67	133	Y	9	5	1	0	0	0	9	5
71-69	4	S	1.00000	67	134	Y	6	6	0	0	0	0	6	6
71-69	4	S	1.00000	68	135	Y	4	8	0	0	0	0	4	8
71-69	4	S	1.00000	68	136	Y	5	8	0	1	0	0	5	8
71-69	4	S	1.00000	69	137	Y	5	5	2	4	0	0	5	6
71-69	4	S	1.00000	69	138	Y	5	11	0	0	0	0	5	11
71-69	4	S	1.00000	70	139	Y	5	8	0	0	0	0	5	8
71-69	4	S	1.00000	70	140	Y	5	6	0	0	0	0	5	6
71-69	4	S	5.00000	71	141	Y	5	6	0	0	0	0	5	6
71-69	4	S	5.00000	71	142	Y	5	6	1	0	0	0	6	6
71-69	4	S	5.00000	72	143	Y	3	9	0	0	0	0	3	9
71-69	4	S	5.00000	72	144	Y	5	5	0	0	0	0	5	7
71-69	4	S	5.00000	73	145	Y	5	7	2	3	0	0	5	7
71-69	4	S	5.00000	73	146	Y	4	8	0	0	0	1	4	9
71-69	4	S	5.00000	74	147	Y	4	7	0	0	0	0	6	7
71-69	4	S	5.00000	74	148	Y	7	5	2	2	0	0	7	6
71-69	4	S	5.00000	75	149	Y	6	5	0	0	0	0	7	5
71-69	4	S	5.00000	75	150	Y	4	8	0	0	0	0	4	8
71-69	4	S	5.00000	76	151	Y	6	0	0	0	0	0	6	7
71-69	4	S	5.00000	76	152	Y	7	5	1	0	0	0	9	6
71-69	4	S	5.00000	77	153	Y	7	5	1	0	2	0	8	6
71-69	4	S	5.00000	77	154	Y	9	4	0	0	0	0	9	4
71-69	4	S	5.00000	78	155	Y	5	5	0	0	0	0	8	5
71-69	4	S	5.00000	78	156	Y	9	5	0	0	0	0	10	6
71-69	4	S	5.00000	79	157	Y	8	4	0	0	0	0	8	4
71-69	4	S	5.00000	79	158	Y	9	4	0	0	2	0	9	5
71-69	4	S	5.00000	80	159	Y	4	8	0	0	0	0	6	8
71-69	4	S	5.00000	80	160	Y	4	4	0	0	0	0	4	5

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
TEM	4	S	.00020	11	21	Y	6	7	4	1	0	1	7	7
TEM	4	S	.00020	11	22	Y	1	3	1	3	0	0	9	9
TEM	4	S	.00020	12	23	Y	2	2	2	2	0	0	8	4
TEM	4	S	.00020	12	24	Y	4	8	0	0	4	8	5	8
TEM	4	S	.00020	13	25	Y	0	2	0	2	0	0	4	6
TEM	4	S	.00020	13	26	Y	3	3	3	3	0	0	9	5
TEM	4	S	.00020	14	27	N	0	0	0	0	0	0	0	0
TEM	4	S	.00020	14	28	Y	0	2	0	2	0	0	5	6
TEM	4	S	.00020	15	29	Y	3	2	3	2	0	0	5	6
TEM	4	S	.00020	15	30	Y	2	3	2	2	0	1	5	8
TEM	4	S	.00020	16	31	N	0	0	0	0	0	0	0	0
TEM	4	S	.00020	16	32	Y	5	3	4	3	0	0	8	3
TEM	4	S	.00020	17	33	Y	1	1	1	1	0	0	4	3
TEM	4	S	.00020	17	34	Y	5	5	5	5	0	0	8	6
TEM	4	S	.00020	18	35	Y	2	4	2	4	0	0	5	8
TEM	4	S	.00020	18	36	Y	2	1	2	1	0	0	6	4
TEM	4	S	.00020	19	37	N	0	0	0	0	0	0	0	0
TEM	4	S	.00020	19	38	Y	2	4	1	4	0	0	4	7
TEM	4	S	.00020	20	39	Y	3	5	3	5	0	0	5	7
TEM	4	S	.00020	20	40	Y	4	3	3	2	0	0	6	5
CONTROL	4	M	0.00000	1	1	Y	7	4	0	0	1	2	8	4
CONTROL	4	M	0.00000	1	2	Y	0	1	0	0	0	0	6	6
CONTROL	4	M	0.00000	2	3	Y	7	3	0	0	2	1	7	4
CONTROL	4	M	0.00000	2	4	Y	3	0	1	0	0	0	5	5
CONTROL	4	M	0.00000	3	5	Y	10	6	0	0	1	0	10	6
CONTROL	4	M	0.00000	3	6	Y	5	7	0	1	0	0	5	7
CONTROL	4	M	0.00000	4	7	Y	8	5	0	0	0	0	8	5
CONTROL	4	M	0.00000	4	8	Y	7	4	2	0	0	0	8	4
CONTROL	4	M	0.00000	5	9	Y	7	7	0	0	0	0	7	7
CONTROL	4	M	0.00000	5	10	Y	4	9	0	0	0	0	4	9
CONTROL	4	M	0.00000	6	11	Y	5	8	0	0	0	1	6	8
CONTROL	4	M	0.00000	6	12	Y	5	7	0	0	1	2	6	7
CONTROL	4	M	0.00000	7	13	Y	8	7	0	0	0	0	12	9
CONTROL	4	M	0.00000	7	14	Y	9	7	1	0	2	4	9	7
CONTROL	4	M	0.00000	8	15	Y	10	5	1	0	1	0	10	5
CONTROL	4	M	0.00000	8	16	Y	5	9	0	0	0	0	6	10
CONTROL	4	M	0.00000	9	17	Y	11	4	2	0	0	0	14	5
CONTROL	4	M	0.00000	9	18	Y	8	13	0	0	0	0	10	13
CONTROL	4	M	0.00000	10	19	Y	5	6	1	2	0	0	7	6
CONTROL	4	M	0.00000	10	20	Y	2	10	0	0	0	0	7	14

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
71-69	4	M	.20000	41	81	Y	7	6	0	0	0	0	7	6
71-69	4	M	.20000	41	82	Y	8	7	4	3	1	0	11	9
71-69	4	M	.20000	42	83	Y	5	7	0	0	0	0	6	8
71-69	4	M	.20000	42	84	Y	6	9	0	0	0	0	7	9
71-69	4	M	.20000	43	85	Y	6	6	0	0	0	0	5	7
71-69	4	M	.20000	43	86	Y	7	4	0	0	0	0	7	6
71-69	4	M	.20000	44	87	Y	2	9	0	0	0	0	3	10
71-69	4	M	.20000	44	88	Y	10	5	0	0	0	0	11	5
71-69	4	M	.20000	45	89	Y	7	4	0	1	0	0	8	4
71-69	4	M	.20000	45	90	Y	9	7	0	0	0	0	10	8
71-69	4	M	.20000	46	91	Y	6	8	0	0	0	0	6	8
71-69	4	M	.20000	46	92	Y	6	7	1	0	0	0	6	7
71-69	4	M	.20000	47	93	Y	9	6	0	0	1	0	9	7
71-69	4	M	.20000	47	94	Y	6	4	0	0	0	0	8	5
71-69	4	M	.20000	48	95	Y	5	7	0	0	0	0	5	8
71-69	4	M	.20000	48	96	Y	0	6	0	0	0	1	6	8
71-69	4	M	.20000	49	97	Y	6	7	0	0	0	1	6	7
71-69	4	M	.20000	49	98	Y	7	5	0	1	0	0	7	5
71-69	4	M	.20000	50	99	Y	6	4	0	0	0	0	7	4
71-69	4	M	.20000	50	100	Y	10	3	2	0	0	0	10	3
71-69	4	M	1.00000	51	101	Y	7	5	0	0	0	0	7	5
71-69	4	M	1.00000	51	102	Y	8	8	1	1	0	0	8	8
71-69	4	M	1.00000	52	103	Y	4	12	0	0	0	0	4	12
71-69	4	M	1.00000	52	104	Y	1	2	0	0	0	0	5	10
71-69	4	M	1.00000	53	105	Y	7	5	0	0	0	0	7	5
71-69	4	M	1.00000	53	106	Y	5	11	1	0	0	0	5	11
71-69	4	M	1.00000	54	107	Y	8	6	0	0	0	0	8	6
71-69	4	M	1.00000	54	108	Y	6	6	0	0	0	0	6	6
71-69	4	M	1.00000	55	109	Y	7	5	2	0	0	0	8	5
71-69	4	M	1.00000	55	110	Y	9	4	0	0	0	0	9	4
71-69	4	M	1.00000	56	111	Y	1	1	0	1	0	0	4	6
71-69	4	M	1.00000	56	112	Y	6	7	0	0	1	0	6	7
71-69	4	M	1.00000	57	113	Y	7	5	0	0	1	0	8	6
71-69	4	M	1.00000	57	114	Y	3	1	0	0	0	0	6	7
71-69	4	M	1.00000	58	115	Y	7	6	4	3	0	0	7	6
71-69	4	M	1.00000	58	116	Y	4	8	0	0	0	0	4	8
71-69	4	M	1.00000	59	117	Y	4	7	1	3	1	0	5	7
71-69	4	M	1.00000	59	118	Y	4	7	0	1	0	0	4	9
71-69	4	M	1.00000	60	119	Y	6	6	2	2	2	2	6	7
71-69	4	M	1.00000	60	120	Y	7	6	1	0	1	0	7	8

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
71-69	4	M	5.00000	61	121	Y	9	8	0	0	0	0	9	8
71-69	4	M	5.00000	61	122	Y	7	9	0	0	0	0	7	9
71-69	4	M	5.00000	62	123	Y	6	6	1	0	0	0	6	6
71-69	4	M	5.00000	62	124	Y	5	7	0	0	0	0	5	11
71-69	4	M	5.00000	63	125	Y	7	6	1	1	0	1	8	6
71-69	4	M	5.00000	63	126	Y	10	5	0	0	0	0	10	6
71-69	4	M	5.00000	64	127	Y	5	6	0	0	0	0	5	7
71-69	4	M	5.00000	64	128	Y	3	9	0	0	0	0	3	9
71-69	4	M	5.00000	65	129	Y	5	7	2	3	0	0	5	8
71-69	4	M	5.00000	65	130	Y	7	5	0	0	0	0	7	6
71-69	4	M	5.00000	66	131	Y	0	10	0	0	0	0	5	10
71-69	4	M	5.00000	66	132	Y	7	6	0	1	0	0	7	6
71-69	4	M	5.00000	67	133	Y	8	5	0	0	0	0	8	5
71-69	4	M	5.00000	67	134	Y	9	5	0	0	0	0	9	5
71-69	4	M	5.00000	68	135	Y	3	12	2	2	0	1	3	12
71-69	4	M	5.00000	68	136	Y	9	1	1	0	0	0	9	2
71-69	4	M	5.00000	69	137	Y	3	9	0	0	0	0	3	9
71-69	4	M	5.00000	69	138	Y	5	7	0	0	0	0	7	7
71-69	4	M	5.00000	70	139	Y	8	7	0	0	0	0	9	7
71-69	4	M	5.00000	70	140	Y	9	4	0	0	0	0	9	4

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
CONTROL	5	S	0.00000	1	1	Y	5	9	2	1	0	0	6	9
CONTROL	5	S	0.00000	1	2	Y	4	2	0	0	0	0	6	5
CONTROL	5	S	0.00000	2	3	Y	9	6	0	1	0	0	9	6
CONTROL	5	S	0.00000	2	4	Y	5	10	0	0	0	1	5	10
CONTROL	5	S	0.00000	3	5	Y	8	5	0	0	0	0	9	6
CONTROL	5	S	0.00000	3	6	Y	5	9	0	0	0	0	5	9
CONTROL	5	S	0.00000	4	7	Y	4	11	0	0	0	0	4	11
CONTROL	5	S	0.00000	4	8	Y	5	8	0	1	0	1	5	9
CONTROL	5	S	0.00000	5	9	Y	7	3	0	0	0	0	7	4
CONTROL	5	S	0.00000	5	10	Y	7	6	0	1	0	0	7	6
CONTROL	5	S	0.00000	6	11	Y	8	4	0	0	0	0	8	4
CONTROL	5	S	0.00000	6	12	Y	5	8	0	0	1	3	7	10
CONTROL	5	S	0.00000	7	13	Y	4	9	0	0	0	0	4	10
CONTROL	5	S	0.00000	7	14	Y	7	7	0	1	0	0	7	7
CONTROL	5	S	0.00000	8	15	Y	3	8	0	0	0	1	4	9
CONTROL	5	S	0.00000	8	16	Y	7	7	1	1	0	1	7	7
CONTROL	5	S	0.00000	9	17	Y	5	10	1	0	0	0	5	10
CONTROL	5	S	0.00000	9	18	Y	1	0	0	0	0	0	8	3
CONTROL	5	S	0.00000	10	19	Y	6	5	1	2	0	0	6	6
CONTROL	5	S	0.00000	10	20	Y	7	7	2	2	0	0	7	7
71-69	5	S	.20000	51	101	Y	6	7	0	0	0	0	6	7
71-69	5	S	.20000	51	102	Y	6	7	1	0	0	0	7	7
71-69	5	S	.20000	52	103	Y	5	7	0	0	0	0	5	9
71-69	5	S	.20000	52	104	Y	5	5	0	0	0	0	5	7
71-69	5	S	.20000	53	105	Y	5	8	0	0	0	0	5	8
71-69	5	S	.20000	53	106	Y	9	4	0	0	0	0	9	4
71-69	5	S	.20000	54	107	Y	6	5	0	0	0	0	8	6
71-69	5	S	.20000	54	108	N	0	0	0	0	0	0	0	0
71-69	5	S	.20000	55	109	Y	5	6	0	0	0	1	6	7
71-69	5	S	.20000	55	110	Y	12	1	0	0	3	0	12	1
71-69	5	S	.20000	56	111	Y	8	5	0	0	0	1	9	5
71-69	5	S	.20000	56	112	Y	0	4	0	0	0	0	4	6
71-69	5	S	.20000	57	113	Y	6	7	0	0	0	0	6	7
71-69	5	S	.20000	57	114	Y	4	7	0	1	0	0	4	7
71-69	5	S	.20000	58	115	Y	4	9	0	0	0	2	4	9
71-69	5	S	.20000	58	116	Y	7	6	0	0	0	0	7	6
71-69	5	S	.20000	59	117	Y	6	7	0	0	0	0	7	7
71-69	5	S	.20000	59	118	Y	7	6	0	0	0	0	7	6
71-69	5	S	.20000	60	119	N	0	0	0	0	0	0	0	0
71-69	5	S	.20000	60	120	Y	7	4	0	0	0	0	7	4

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
71-69	5	S	1.00000	61	121	Y	5	1	0	0	0	0	7	6
71-69	5	S	1.00000	61	122	Y	4	6	0	0	0	0	7	11
71-69	5	S	1.00000	62	123	Y	7	7	0	0	0	1	7	8
71-69	5	S	1.00000	62	124	Y	6	7	0	1	0	0	8	7
71-69	5	S	1.00000	63	125	Y	6	7	0	0	0	0	6	7
71-69	5	S	1.00000	63	126	Y	7	4	0	0	1	0	7	4
71-69	5	S	1.00000	64	127	Y	6	8	0	0	0	0	7	8
71-69	5	S	1.00000	64	128	Y	9	3	0	0	0	0	10	5
71-69	5	S	1.00000	65	129	Y	6	8	0	1	0	1	6	8
71-69	5	S	1.00000	65	130	Y	6	7	1	0	0	0	6	7
71-69	5	S	1.00000	66	131	Y	8	5	0	0	0	1	8	6
71-69	5	S	1.00000	66	132	Y	9	6	0	0	0	0	12	6
71-69	5	S	1.00000	67	133	Y	10	2	0	0	1	0	10	2
71-69	5	S	1.00000	67	134	Y	7	5	1	1	0	0	8	5
71-69	5	S	1.00000	68	135	Y	3	0	0	0	0	0	6	6
71-69	5	S	1.00000	68	136	Y	4	6	0	0	0	0	6	6
71-69	5	S	1.00000	69	137	Y	6	4	0	0	0	0	6	4
71-69	5	S	1.00000	69	138	Y	6	8	0	1	1	0	6	8
71-69	5	S	1.00000	70	139	Y	6	2	0	0	0	0	6	3
71-69	5	S	1.00000	70	140	Y	10	3	0	0	0	0	10	3
71-69	5	S	5.00000	71	141	Y	5	8	1	0	0	0	5	8
71-69	5	S	5.00000	71	142	Y	4	7	0	0	1	0	5	8
71-69	5	S	5.00000	72	143	Y	4	7	0	3	0	0	4	8
71-69	5	S	5.00000	72	144	Y	4	7	0	0	0	0	7	7
71-69	5	S	5.00000	73	145	Y	9	5	0	0	0	0	9	5
71-69	5	S	5.00000	73	146	Y	7	6	0	0	0	0	7	6
71-69	5	S	5.00000	74	147	Y	6	6	1	0	0	0	6	6
71-69	5	S	5.00000	74	148	Y	6	4	0	0	0	0	7	4
71-69	5	S	5.00000	75	149	Y	8	6	0	0	0	0	8	7
71-69	5	S	5.00000	75	150	Y	5	7	0	0	0	0	5	7
71-69	5	S	5.00000	76	151	Y	6	7	0	0	0	0	8	7
71-69	5	S	5.00000	76	152	Y	3	11	0	0	0	0	3	11
71-69	5	S	5.00000	77	153	Y	7	6	0	0	0	0	7	7
71-69	5	S	5.00000	77	154	Y	6	7	0	0	0	0	7	7
71-69	5	S	5.00000	78	155	Y	7	4	3	4	2	0	7	4
71-69	5	S	5.00000	78	156	Y	9	5	1	0	0	0	9	6
71-69	5	S	5.00000	79	157	Y	4	8	0	0	0	0	5	8
71-69	5	S	5.00000	79	158	Y	5	7	0	0	0	0	5	7
71-69	5	S	5.00000	80	159	Y	10	3	0	0	0	0	10	3
71-69	5	S	5.00000	80	160	Y	5	8	0	0	0	0	7	13

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
TEM	5	S	.00020	11	21	Y	6	6	0	1	0	0	6	6
TEM	5	S	.00020	11	22	Y	7	3	0	0	1	1	8	3
TEM	5	S	.00020	12	23	Y	6	5	0	0	0	0	6	5
TEM	5	S	.00020	12	24	Y	5	8	1	0	1	2	6	8
TEM	5	S	.00020	13	25	Y	6	0	1	0	0	0	6	10
TEM	5	S	.00020	13	26	Y	3	3	3	2	0	0	6	3
TEM	5	S	.00020	14	27	Y	3	8	1	2	0	0	4	8
TEM	5	S	.00020	14	28	Y	6	7	2	1	0	0	6	7
TEM	5	S	.00020	15	29	Y	5	8	2	1	0	0	5	8
TEM	5	S	.00020	15	30	Y	5	10	0	0	0	0	5	10
TEM	5	S	.00020	16	31	Y	9	4	3	1	0	0	9	4
TEM	5	S	.00020	16	32	Y	9	5	0	0	0	0	9	5
TEM	5	S	.00020	17	33	Y	4	6	4	1	0	0	5	9
TEM	5	S	.00020	17	34	Y	4	9	2	3	0	0	4	9
TEM	5	S	.00020	18	35	Y	3	7	0	6	0	0	3	7
TEM	5	S	.00020	18	36	Y	9	5	2	0	1	2	10	5
TEM	5	S	.00020	19	37	Y	8	3	0	0	0	0	8	3
TEM	5	S	.00020	19	38	Y	5	5	2	2	0	0	5	5
TEM	5	S	.00020	20	39	Y	5	7	1	2	0	0	5	8
TEM	5	S	.00020	20	40	Y	7	2	4	0	1	1	8	3
CONTROL	5	M	0.00000	1	1	Y	9	6	0	0	0	0	9	6
CONTROL	5	M	0.00000	1	2	Y	2	2	2	0	0	0	8	3
CONTROL	5	M	0.00000	2	3	Y	8	7	0	0	0	0	8	7
CONTROL	5	M	0.00000	2	4	Y	5	9	0	0	1	0	6	9
CONTROL	5	M	0.00000	3	5	Y	7	5	0	0	0	0	8	5
CONTROL	5	M	0.00000	3	6	Y	7	4	0	0	0	0	8	4
CONTROL	5	M	0.00000	4	7	Y	10	5	0	0	0	0	10	7
CONTROL	5	M	0.00000	4	8	Y	9	5	0	0	1	0	10	5
CONTROL	5	M	0.00000	5	9	Y	7	6	1	0	0	0	8	6
CONTROL	5	M	0.00000	5	10	Y	5	11	0	0	0	0	5	11
CONTROL	5	M	0.00000	6	11	Y	2	0	0	0	0	0	6	6
CONTROL	5	M	0.00000	6	12	Y	4	9	0	1	0	0	4	9
CONTROL	5	M	0.00000	7	13	Y	10	4	4	2	0	0	11	8
CONTROL	5	M	0.00000	7	14	Y	6	2	0	0	0	0	8	6
CONTROL	5	M	0.00000	8	15	N	0	0	0	0	0	0	0	0
CONTROL	5	M	0.00000	8	16	N	0	0	0	0	0	0	0	0
CONTROL	5	M	0.00000	9	17	Y	6	7	0	0	0	0	6	7
CONTROL	5	M	0.00000	9	18	Y	9	6	0	0	2	0	9	6
CONTROL	5	M	0.00000	10	19	Y	7	7	0	0	0	0	7	8
CONTROL	5	M	0.00000	10	20	Y	6	6	1	0	0	0	7	7

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
71-69	5	M	.20000	41	81	Y	5	6	0	0	0	0	5	6
71-69	5	M	.20000	41	82	Y	6	4	0	1	0	0	6	4
71-69	5	M	.20000	42	83	Y	7	6	0	0	0	0	7	6
71-69	5	M	.20000	42	84	Y	6	6	0	1	0	0	7	6
71-69	5	M	.20000	43	85	Y	2	6	0	1	0	0	4	6
71-69	5	M	.20000	43	86	Y	2	10	0	0	0	0	2	10
71-69	5	M	.20000	44	87	Y	4	5	0	0	0	1	5	5
71-69	5	M	.20000	44	88	Y	0	2	0	0	0	0	6	7
71-69	5	M	.20000	45	89	Y	4	10	0	0	1	0	4	11
71-69	5	M	.20000	45	90	Y	5	7	0	0	0	0	6	7
71-69	5	M	.20000	46	91	Y	8	6	0	0	0	0	8	6
71-69	5	M	.20000	46	92	Y	8	6	0	0	0	0	9	6
71-69	5	M	.20000	47	93	Y	11	5	0	0	0	0	11	5
71-69	5	M	.20000	47	94	Y	8	5	0	0	0	0	10	7
71-69	5	M	.20000	48	95	Y	7	7	0	0	0	0	7	7
71-69	5	M	.20000	48	96	N	0	0	0	0	0	0	0	0
71-69	5	M	.20000	49	97	Y	6	8	1	0	0	0	6	8
71-69	5	M	.20000	49	98	Y	4	9	0	1	0	0	4	9
71-69	5	M	.20000	50	99	Y	7	0	2	0	0	0	8	9
71-69	5	M	.20000	50	100	Y	7	5	0	0	0	0	7	5
71-69	5	M	1.00000	51	101	Y	4	7	1	1	0	0	5	7
71-69	5	M	1.00000	51	102	Y	4	10	0	1	0	0	4	10
71-69	5	M	1.00000	52	103	Y	6	5	0	0	0	0	6	5
71-69	5	M	1.00000	52	104	Y	5	7	0	0	0	0	5	7
71-69	5	M	1.00000	53	105	Y	9	10	1	0	0	0	9	11
71-69	5	M	1.00000	53	106	Y	8	6	1	0	0	0	10	6
71-69	5	M	1.00000	54	107	Y	7	9	0	0	0	0	7	9
71-69	5	M	1.00000	54	108	Y	6	8	0	0	0	0	6	8
71-69	5	M	1.00000	55	109	Y	9	5	1	0	0	0	9	5
71-69	5	M	1.00000	55	110	Y	7	4	0	0	1	0	8	6
71-69	5	M	1.00000	56	111	Y	6	8	0	0	0	0	6	8
71-69	5	M	1.00000	56	112	Y	7	7	0	0	0	0	8	7
71-69	5	M	1.00000	57	113	Y	6	7	0	0	0	0	7	7
71-69	5	M	1.00000	57	114	Y	7	8	0	0	3	3	7	8
71-69	5	M	1.00000	58	115	Y	8	5	4	1	0	0	8	5
71-69	5	M	1.00000	58	116	Y	6	9	0	1	0	0	6	9
71-69	5	M	1.00000	59	117	Y	8	6	0	1	0	0	8	6
71-69	5	M	1.00000	59	118	Y	5	9	0	2	0	0	5	9
71-69	5	M	1.00000	60	119	Y	7	6	0	0	0	0	7	8
71-69	5	M	1.00000	60	120	Y	4	8	0	0	0	0	4	8

DOMINANT LETHAL STUDY OF COMPOUND 71-69 MONOSODIUM GLUTAMATE

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
71-69	5	M	5.00000	61	121	Y	8	5	1	0	0	0	10	6
71-69	5	M	5.00000	61	122	Y	9	4	0	0	0	0	9	4
71-69	5	M	5.00000	62	123	Y	6	7	0	0	0	0	7	7
71-69	5	M	5.00000	62	124	Y	7	6	0	0	0	0	7	9
71-69	5	M	5.00000	63	125	Y	5	7	0	0	0	0	7	7
71-69	5	M	5.00000	63	126	Y	5	8	2	1	0	1	5	8
71-69	5	M	5.00000	64	127	Y	6	7	0	0	0	0	6	7
71-69	5	M	5.00000	64	128	Y	7	6	0	0	0	0	8	6
71-69	5	M	5.00000	65	129	Y	5	8	2	1	0	0	5	8
71-69	5	M	5.00000	65	130	Y	9	4	0	0	0	0	9	4
71-69	5	M	5.00000	66	131	Y	5	6	0	0	0	0	9	8
71-69	5	M	5.00000	66	132	Y	8	4	0	0	0	0	8	4
71-69	5	M	5.00000	67	133	N	0	0	0	0	0	0	0	0
71-69	5	M	5.00000	67	134	Y	6	7	0	1	0	0	9	11
71-69	5	M	5.00000	68	135	Y	4	11	0	1	0	0	4	11
71-69	5	M	5.00000	68	136	N	0	0	0	0	0	0	0	0
71-69	5	M	5.00000	69	137	Y	7	7	0	0	0	0	8	7
71-69	5	M	5.00000	69	138	Y	7	6	2	2	0	1	9	10
71-69	5	M	5.00000	70	139	Y	10	3	0	0	0	0	10	3
71-69	5	M	5.00000	70	140	Y	4	6	0	0	0	0	4	6

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
CONTROL	6	S	0.00000	1	1	Y	4	5	0	0	0	0	6	5
CONTROL	6	S	0.00000	1	2	Y	5	3	0	1	0	0	6	6
CONTROL	6	S	0.00000	2	3	Y	6	7	1	0	0	0	6	8
CONTROL	6	S	0.00000	2	4	Y	6	2	1	1	1	0	5	4
CONTROL	6	S	0.00000	3	5	Y	3	7	0	1	0	0	4	8
CONTROL	6	S	0.00000	3	6	Y	6	5	0	0	0	0	6	5
CONTROL	6	S	0.00000	4	7	Y	5	6	1	1	0	0	6	6
CONTROL	6	S	0.00000	4	8	Y	5	9	0	0	0	0	6	9
CONTROL	6	S	0.00000	5	9	Y	6	5	1	0	0	0	6	8
CONTROL	6	S	0.00000	5	10	Y	7	5	0	0	0	0	7	5
CONTROL	6	S	0.00000	6	11	Y	6	4	1	0	0	0	6	4
CONTROL	6	S	0.00000	6	12	Y	7	5	0	0	0	0	7	6
CONTROL	6	S	0.00000	7	13	Y	4	6	0	0	0	0	4	6
CONTROL	6	S	0.00000	7	14	Y	5	8	0	1	0	0	5	9
CONTROL	6	S	0.00000	8	15	Y	8	6	0	0	0	0	8	6
CONTROL	6	S	0.00000	8	16	Y	4	7	0	1	0	0	5	7
CONTROL	6	S	0.00000	9	17	Y	3	8	0	0	0	0	3	8
CONTROL	6	S	0.00000	9	18	Y	8	6	0	0	0	0	8	6
CONTROL	6	S	0.00000	10	19	Y	5	8	1	0	1	0	6	8
CONTROL	6	S	0.00000	10	20	Y	10	4	0	1	0	0	10	4
71-69	6	S	.20000	51	101	Y	6	7	0	0	1	0	7	7
71-69	6	S	.20000	51	102	Y	7	5	1	0	0	0	7	5
71-69	6	S	.20000	52	103	Y	5	7	0	0	0	1	5	7
71-69	6	S	.20000	52	104	Y	4	4	0	0	0	0	4	5
71-69	6	S	.20000	53	105	Y	7	5	0	0	0	0	7	5
71-69	6	S	.20000	53	106	Y	4	8	0	0	0	0	4	8
71-69	6	S	.20000	54	107	Y	5	9	0	0	0	0	8	9
71-69	6	S	.20000	54	108	Y	4	7	0	0	0	0	5	7
71-69	6	S	.20000	55	109	Y	4	6	0	2	0	0	4	6
71-69	6	S	.20000	55	110	Y	4	8	0	0	2	1	5	8
71-69	6	S	.20000	56	111	Y	2	1	0	0	0	1	7	5
71-69	6	S	.20000	56	112	Y	7	7	0	1	0	0	7	7
71-69	6	S	.20000	57	113	Y	7	3	0	0	0	0	7	5
71-69	6	S	.20000	57	114	Y	2	1	1	0	0	0	4	7
71-69	6	S	.20000	58	115	Y	7	6	2	3	0	0	9	6
71-69	6	S	.20000	58	116	Y	7	8	3	3	0	1	8	8
71-69	6	S	.20000	59	117	Y	5	8	1	0	0	0	6	8
71-69	6	S	.20000	59	118	Y	3	8	0	0	0	0	3	8
71-69	6	S	.20000	60	119	Y	8	5	0	0	0	0	8	5
71-69	6	S	.20000	60	120	N	0	0	0	0	0	0	0	0

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
71-69	6	S	1.00000	61	121	Y	5	8	0	0	0	1	5	8
71-69	6	S	1.00000	61	122	Y	3	6	0	2	0	0	8	8
71-69	6	S	1.00000	62	123	Y	6	6	0	0	0	0	6	6
71-69	6	S	1.00000	62	124	Y	5	7	0	0	0	0	7	7
71-69	6	S	1.00000	63	125	Y	6	4	0	0	1	1	6	6
71-69	6	S	1.00000	63	126	Y	4	3	1	1	0	0	7	7
71-69	6	S	1.00000	64	127	Y	6	5	0	0	0	0	6	5
71-69	6	S	1.00000	64	128	Y	4	7	0	1	1	0	4	7
71-69	6	S	1.00000	65	129	Y	4	8	0	0	0	0	5	8
71-69	6	S	1.00000	65	130	Y	4	9	0	0	2	0	5	9
71-69	6	S	1.00000	66	131	Y	5	3	0	0	0	0	6	3
71-69	6	S	1.00000	66	132	Y	9	4	0	0	0	0	9	4
71-69	6	S	1.00000	67	133	Y	8	3	0	0	0	0	8	3
71-69	6	S	1.00000	67	134	Y	8	4	0	0	0	1	8	5
71-69	6	S	1.00000	68	135	Y	8	5	0	0	0	0	9	5
71-69	6	S	1.00000	68	136	Y	5	8	0	2	0	0	5	8
71-69	6	S	1.00000	69	137	Y	4	5	0	0	0	0	6	5
71-69	6	S	1.00000	69	138	Y	5	6	0	0	0	0	6	6
71-69	6	S	1.00000	70	139	Y	6	7	1	0	0	0	6	7
71-69	6	S	1.00000	70	140	Y	9	6	0	0	1	0	9	6
71-69	6	S	5.00000	71	141	Y	7	5	1	0	0	2	7	5
71-69	6	S	5.00000	71	142	Y	6	8	0	0	0	0	6	8
71-69	6	S	5.00000	72	143	Y	4	8	0	0	0	1	6	8
71-69	6	S	5.00000	72	144	Y	7	8	0	0	0	0	8	8
71-69	6	S	5.00000	73	145	Y	3	9	3	5	0	1	5	10
71-69	6	S	5.00000	73	146	Y	9	3	1	0	0	0	9	3
71-69	6	S	5.00000	74	147	Y	5	7	0	1	0	0	7	9
71-69	6	S	5.00000	74	148	Y	1	1	0	1	1	0	7	7
71-69	6	S	5.00000	75	149	Y	6	8	0	0	0	1	6	8
71-69	6	S	5.00000	75	150	Y	8	6	0	0	0	0	8	6
71-69	6	S	5.00000	76	151	Y	8	9	0	1	0	0	8	9
71-69	6	S	5.00000	76	152	Y	8	6	2	0	0	0	8	6
71-69	6	S	5.00000	77	153	Y	6	7	0	0	0	0	6	7
71-69	6	S	5.00000	77	154	Y	8	6	0	0	0	0	8	7
71-69	6	S	5.00000	78	155	Y	7	6	0	0	0	0	7	6
71-69	6	S	5.00000	78	156	Y	9	3	0	0	0	0	9	3
71-69	6	S	5.00000	79	157	Y	5	7	0	0	0	1	5	7
71-69	6	S	5.00000	79	158	Y	10	5	1	0	0	0	11	5
71-69	6	S	5.00000	80	159	Y	9	0	0	0	0	0	10	6
71-69	6	S	5.00000	80	160	Y	0	1	0	0	0	0	5	6

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
TEM	6	S	.00020	11	21	Y	4	8	0	0	0	0	4	8
TEM	6	S	.00020	11	22	Y	8	6	0	0	0	0	8	6
TEM	6	S	.00020	12	23	Y	6	6	1	1	0	0	7	6
TEM	6	S	.00020	12	24	Y	3	8	0	0	1	0	3	8
TEM	6	S	.00020	13	25	Y	6	7	0	0	0	0	6	8
TEM	6	S	.00020	13	26	Y	5	8	0	1	0	0	5	8
TEM	6	S	.00020	14	27	Y	8	6	0	0	0	0	8	7
TEM	6	S	.00020	14	28	Y	7	7	0	0	0	0	8	7
TEM	6	S	.00020	15	29	Y	5	6	0	0	0	0	5	6
TEM	6	S	.00020	15	30	Y	8	7	0	0	0	0	8	7
TEM	6	S	.00020	16	31	Y	3	5	0	0	0	0	3	6
TEM	6	S	.00020	16	32	Y	6	6	0	0	0	0	6	6
TEM	6	S	.00020	17	33	Y	6	7	1	1	0	0	6	7
TEM	6	S	.00020	17	34	Y	7	5	0	0	0	0	8	8
TEM	6	S	.00020	18	35	Y	4	10	0	1	0	0	4	10
TEM	6	S	.00020	18	36	Y	6	6	0	0	0	0	6	6
TEM	6	S	.00020	19	37	Y	8	4	0	0	0	0	8	4
TEM	6	S	.00020	19	38	Y	6	8	0	0	0	0	6	8
TEM	6	S	.00020	20	39	Y	3	9	0	0	0	0	3	11
TEM	6	S	.00020	20	40	Y	7	8	0	0	0	0	7	9
CONTROL	6	M	0.00000	1	1	Y	4	8	0	0	0	0	5	8
CONTROL	6	M	0.00000	1	2	Y	7	5	0	0	1	0	7	5
CONTROL	6	M	0.00000	2	3	Y	10	2	0	0	0	0	10	2
CONTROL	6	M	0.00000	2	4	Y	7	6	0	0	0	0	7	6
CONTROL	6	M	0.00000	3	5	Y	5	6	0	0	0	0	5	7
CONTROL	6	M	0.00000	3	6	Y	7	7	0	0	1	1	8	7
CONTROL	6	M	0.00000	4	7	Y	10	4	0	1	1	0	10	4
CONTROL	6	M	0.00000	4	8	Y	6	5	0	0	0	0	6	5
CONTROL	6	M	0.00000	5	9	Y	10	5	1	0	0	0	10	5
CONTROL	6	M	0.00000	5	10	Y	7	7	0	0	0	0	7	9
CONTROL	6	M	0.00000	6	11	Y	6	4	0	0	0	0	6	4
CONTROL	6	M	0.00000	6	12	Y	6	5	0	0	0	0	6	5
CONTROL	6	M	0.00000	7	13	Y	6	6	0	0	0	0	6	6
CONTROL	6	M	0.00000	7	14	Y	7	4	0	0	0	0	7	6
CONTROL	6	M	0.00000	8	15	Y	9	4	2	1	0	0	9	4
CONTROL	6	M	0.00000	8	16	Y	5	8	0	0	0	0	5	8
CONTROL	6	M	0.00000	9	17	Y	8	6	0	0	0	0	11	6
CONTROL	6	M	0.00000	9	18	Y	6	5	0	0	0	0	9	6
CONTROL	6	M	0.00000	10	19	Y	7	7	0	1	0	0	7	7
CONTROL	6	M	0.00000	10	20	Y	0	7	0	0	0	0	4	11

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
71-69	6	M	.20000	41	81	Y	6	8	0	0	0	0	6	8
71-69	6	M	.20000	41	82	Y	6	5	1	0	0	0	6	5
71-69	6	M	.20000	42	83	Y	0	6	0	0	0	0	4	6
71-69	6	M	.20000	42	84	Y	6	7	0	0	0	0	6	7
71-69	6	M	.20000	43	85	Y	7	4	1	2	0	0	8	4
71-69	6	M	.20000	43	86	Y	10	4	0	0	0	0	10	5
71-69	6	M	.20000	44	87	Y	9	6	0	1	0	0	10	8
71-69	6	M	.20000	44	88	Y	7	7	0	0	0	0	7	7
71-69	6	M	.20000	45	89	Y	6	4	0	0	0	0	7	5
71-69	6	M	.20000	45	90	Y	9	7	0	0	0	0	10	9
71-69	6	M	.20000	46	91	Y	8	5	1	0	0	0	8	5
71-69	6	M	.20000	46	92	Y	6	6	0	0	0	0	6	7
71-69	6	M	.20000	47	93	Y	7	8	0	0	1	0	9	8
71-69	6	M	.20000	47	94	Y	6	6	0	0	0	0	7	6
71-69	6	M	.20000	48	95	Y	6	10	1	1	0	0	6	10
71-69	6	M	.20000	48	96	Y	5	8	0	1	2	2	5	8
71-69	6	M	.20000	49	97	Y	7	6	0	0	0	1	7	7
71-69	6	M	.20000	49	98	Y	5	9	0	0	0	0	8	10
71-69	6	M	.20000	50	99	Y	7	6	0	0	0	0	7	6
71-69	6	M	.20000	50	100	Y	5	7	0	0	0	0	5	7
71-69	6	M	1.00000	51	101	Y	7	9	0	1	0	0	7	9
71-69	6	M	1.00000	51	102	Y	10	6	0	1	0	0	10	6
71-69	6	M	1.00000	52	103	Y	6	6	0	1	0	0	6	6
71-69	6	M	1.00000	52	104	Y	6	5	0	0	0	0	8	5
71-69	6	M	1.00000	53	105	Y	9	6	1	1	0	0	10	6
71-69	6	M	1.00000	53	106	Y	4	8	0	0	0	0	8	8
71-69	6	M	1.00000	54	107	Y	5	8	1	0	0	0	5	8
71-69	6	M	1.00000	54	108	Y	6	10	1	0	0	0	7	10
71-69	6	M	1.00000	55	109	Y	8	4	0	0	0	0	9	4
71-69	6	M	1.00000	55	110	Y	7	9	0	0	0	0	7	9
71-69	6	M	1.00000	56	111	Y	9	6	0	0	0	0	11	7
71-69	6	M	1.00000	56	112	Y	9	7	0	1	0	0	9	7
71-69	6	M	1.00000	57	113	Y	3	11	0	0	0	0	4	11
71-69	6	M	1.00000	57	114	Y	5	9	0	0	0	0	5	9
71-69	6	M	1.00000	58	115	Y	8	7	0	0	0	0	8	8
71-69	6	M	1.00000	58	116	Y	9	6	0	0	0	0	10	6
71-69	6	M	1.00000	59	117	Y	5	8	0	0	0	0	5	8
71-69	6	M	1.00000	59	118	Y	8	4	0	0	0	0	9	4
71-69	6	M	1.00000	60	119	Y	8	8	0	0	0	0	13	9
71-69	6	M	1.00000	60	120	Y	11	1	1	0	0	0	14	1

DOMINANT LETHAL STUDY OF COMPOUND 71-69 MONOSODIUM GLUTAMATE

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
71-69	6	M	5.00000	61	121	Y	7	6	0	0	0	0	10	6
71-69	6	M	5.00000	61	122	Y	6	2	0	0	0	0	11	2
71-69	6	M	5.00000	62	123	Y	6	6	1	1	0	0	9	8
71-69	6	M	5.00000	62	124	Y	8	6	1	0	0	0	8	6
71-69	6	M	5.00000	63	125	Y	7	6	0	0	0	0	7	6
71-69	6	M	5.00000	63	126	Y	6	5	1	0	0	0	6	5
71-69	6	M	5.00000	64	127	Y	3	10	0	2	0	0	3	12
71-69	6	M	5.00000	64	128	Y	8	6	1	0	0	0	8	6
71-69	6	M	5.00000	65	129	Y	7	6	1	0	0	0	7	7
71-69	6	M	5.00000	65	130	Y	6	8	0	0	0	0	6	8
71-69	6	M	5.00000	66	131	Y	3	11	0	0	0	0	3	11
71-69	6	M	5.00000	66	132	Y	5	9	0	0	0	0	5	9
71-69	6	M	5.00000	67	133	Y	6	6	0	0	0	0	8	7
71-69	6	M	5.00000	67	134	Y	3	7	0	0	0	0	4	9
71-69	6	M	5.00000	68	135	Y	4	8	1	0	0	0	4	9
71-69	6	M	5.00000	68	136	Y	7	6	1	2	0	0	8	6
71-69	6	M	5.00000	69	137	Y	10	4	0	0	0	0	10	5
71-69	6	M	5.00000	69	138	N	0	0	0	0	0	0	0	0
71-69	6	M	5.00000	70	139	N	0	0	0	0	0	0	0	0
71-69	6	M	5.00000	70	140	Y	5	6	0	0	0	0	5	8

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
CONTROL	7	S	0.00000	1	1	Y	7	5	0	0	0	0	7	8
CONTROL	7	S	0.00000	1	2	Y	0	1	0	0	0	0	7	2
CONTROL	7	S	0.00000	2	3	Y	6	8	0	0	0	1	6	8
CONTROL	7	S	0.00000	2	4	Y	6	6	0	0	0	0	7	6
CONTROL	7	S	0.00000	3	5	Y	0	3	0	0	0	0	4	3
CONTROL	7	S	0.00000	3	6	Y	5	7	0	0	0	1	5	7
CONTROL	7	S	0.00000	4	7	Y	6	9	0	0	0	1	6	9
CONTROL	7	S	0.00000	4	8	Y	11	5	1	0	0	0	11	5
CONTROL	7	S	0.00000	5	9	Y	8	5	0	0	0	0	10	5
CONTROL	7	S	0.00000	5	10	Y	5	8	0	0	0	0	7	8
CONTROL	7	S	0.00000	6	11	Y	6	5	0	0	1	0	7	5
CONTROL	7	S	0.00000	6	12	Y	8	9	0	0	0	0	8	9
CONTROL	7	S	0.00000	7	13	Y	6	5	0	0	0	0	6	6
CONTROL	7	S	0.00000	7	14	Y	3	8	0	0	0	0	3	8
CONTROL	7	S	0.00000	8	15	Y	6	5	0	0	0	0	7	5
CONTROL	7	S	0.00000	8	16	Y	6	6	1	0	0	0	6	6
CONTROL	7	S	0.00000	9	17	Y	0	1	0	1	0	0	6	7
CONTROL	7	S	0.00000	9	18	Y	9	5	0	0	0	0	9	5
CONTROL	7	S	0.00000	10	19	Y	5	8	0	0	0	0	6	8
CONTROL	7	S	0.00000	10	20	Y	8	6	0	0	0	0	8	6
71-69	7	S	.20000	51	101	Y	5	8	0	0	0	0	7	8
71-69	7	S	.20000	51	102	Y	8	5	0	0	0	0	8	5
71-69	7	S	.20000	52	103	Y	1	2	0	0	0	0	8	8
71-69	7	S	.20000	52	104	Y	5	7	0	0	0	0	5	7
71-69	7	S	.20000	53	105	Y	4	7	0	1	0	0	5	7
71-69	7	S	.20000	53	106	Y	4	11	0	0	0	1	4	11
71-69	7	S	.20000	54	107	Y	7	7	0	0	0	0	7	7
71-69	7	S	.20000	54	108	Y	5	8	0	1	0	0	6	8
71-69	7	S	.20000	55	109	Y	7	4	0	0	0	1	7	4
71-69	7	S	.20000	55	110	Y	6	5	0	0	0	0	6	5
71-69	7	S	.20000	56	111	Y	7	5	0	0	0	0	7	5
71-69	7	S	.20000	56	112	Y	5	7	0	0	0	0	7	9
71-69	7	S	.20000	57	113	Y	4	10	0	0	1	0	7	10
71-69	7	S	.20000	57	114	Y	7	9	0	0	0	0	10	11
71-69	7	S	.20000	58	115	Y	4	7	3	2	1	1	5	7
71-69	7	S	.20000	58	116	Y	5	7	1	2	2	2	5	7
71-69	7	S	.20000	59	117	Y	8	4	1	0	0	0	8	9
71-69	7	S	.20000	59	118	Y	4	8	0	0	0	0	4	8
71-69	7	S	.20000	60	119	Y	7	7	1	0	0	0	7	7
71-69	7	S	.20000	60	120	Y	8	5	0	1	0	0	8	6

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
71-69	7	S	1.00000	61	121	Y	0	11	0	0	0	0	1	11
71-69	7	S	1.00000	61	122	Y	9	5	0	0	0	0	9	5
71-69	7	S	1.00000	62	123	Y	4	1	0	0	0	0	7	13
71-69	7	S	1.00000	62	124	Y	2	10	0	0	0	0	3	11
71-69	7	S	1.00000	63	125	Y	5	8	0	0	0	0	6	9
71-69	7	S	1.00000	63	126	Y	0	10	0	2	0	2	3	10
71-69	7	S	1.00000	64	127	Y	7	7	1	0	0	1	7	8
71-69	7	S	1.00000	64	128	Y	10	5	2	0	0	0	10	6
71-69	7	S	1.00000	65	129	Y	7	6	0	0	0	0	7	6
71-69	7	S	1.00000	65	130	Y	8	5	0	0	0	0	8	5
71-69	7	S	1.00000	66	131	Y	8	2	1	0	0	0	8	7
71-69	7	S	1.00000	66	132	Y	6	9	0	0	0	0	6	9
71-69	7	S	1.00000	67	133	Y	7	7	0	0	0	0	8	7
71-69	7	S	1.00000	67	134	Y	10	5	0	0	0	0	10	6
71-69	7	S	1.00000	68	135	Y	11	3	0	0	0	0	11	3
71-69	7	S	1.00000	68	136	Y	7	8	0	0	1	0	7	8
71-69	7	S	1.00000	69	137	Y	9	4	0	2	1	0	9	4
71-69	7	S	1.00000	69	138	Y	3	6	1	0	1	0	5	7
71-69	7	S	1.00000	70	139	Y	4	7	0	0	0	0	4	7
71-69	7	S	1.00000	70	140	Y	5	7	0	0	0	0	7	8
71-69	7	S	5.00000	71	141	Y	6	6	0	2	0	0	7	6
71-69	7	S	5.00000	71	142	Y	8	8	0	0	0	0	8	8
71-69	7	S	5.00000	72	143	Y	5	8	0	1	0	0	7	8
71-69	7	S	5.00000	72	144	Y	7	9	2	2	1	0	7	9
71-69	7	S	5.00000	73	145	Y	10	7	0	0	0	0	10	7
71-69	7	S	5.00000	73	146	Y	10	3	0	0	0	0	10	4
71-69	7	S	5.00000	74	147	Y	8	6	0	0	0	0	8	6
71-69	7	S	5.00000	74	148	Y	4	7	0	0	0	0	7	12
71-69	7	S	5.00000	75	149	Y	7	7	0	1	0	0	7	8
71-69	7	S	5.00000	75	150	Y	9	6	0	0	1	0	9	6
71-69	7	S	5.00000	76	151	Y	9	2	0	0	0	0	9	5
71-69	7	S	5.00000	76	152	Y	6	8	0	0	0	0	6	8
71-69	7	S	5.00000	77	153	Y	0	1	0	0	0	0	6	7
71-69	7	S	5.00000	77	154	Y	7	7	0	0	1	0	8	7
71-69	7	S	5.00000	78	155	Y	2	8	0	2	0	0	2	8
71-69	7	S	5.00000	78	156	Y	5	10	0	1	0	0	5	11
71-69	7	S	5.00000	79	157	Y	7	5	0	1	0	0	8	5
71-69	7	S	5.00000	79	158	Y	8	5	0	0	0	0	9	5
71-69	7	S	5.00000	80	159	Y	8	4	0	1	0	0	9	5
71-69	7	S	5.00000	80	160	Y	7	7	1	0	0	0	7	7

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
TEM	7	S	.00020	11	21	Y	10	5	0	1	0	0	10	5
TEM	7	S	.00020	11	22	Y	9	2	0	0	0	1	9	2
TEM	7	S	.00020	12	23	Y	4	9	0	1	0	0	4	9
TEM	7	S	.00020	12	24	Y	6	8	0	1	0	0	6	8
TEM	7	S	.00020	13	25	Y	6	5	0	0	0	0	6	7
TEM	7	S	.00020	13	26	Y	11	1	0	0	0	0	11	2
TEM	7	S	.00020	14	27	Y	7	9	0	0	0	0	8	9
TEM	7	S	.00020	14	28	Y	6	5	0	1	0	0	8	5
TEM	7	S	.00020	15	29	Y	6	8	0	0	0	0	6	8
TEM	7	S	.00020	15	30	Y	5	7	0	1	0	0	5	7
TEM	7	S	.00020	16	31	Y	5	8	0	0	0	0	5	8
TEM	7	S	.00020	16	32	Y	8	5	0	0	0	0	8	5
TEM	7	S	.00020	17	33	Y	9	7	0	0	1	0	9	7
TEM	7	S	.00020	17	34	Y	8	6	0	0	3	0	9	6
TEM	7	S	.00020	18	35	Y	8	4	0	0	0	0	9	4
TEM	7	S	.00020	18	36	Y	4	7	0	1	1	1	4	9
TEM	7	S	.00020	19	37	Y	7	7	1	0	0	0	7	7
TEM	7	S	.00020	19	38	Y	1	11	0	0	0	0	1	12
TEM	7	S	.00020	20	39	Y	5	8	0	0	0	0	7	8
TEM	7	S	.00020	20	40	Y	7	7	0	0	0	0	7	7
CONTROL	7	M	0.00000	1	1	Y	6	7	0	0	0	0	6	8
CONTROL	7	M	0.00000	1	2	Y	6	9	0	0	0	0	2	9
CONTROL	7	M	0.00000	2	3	Y	9	8	0	0	0	0	9	8
CONTROL	7	M	0.00000	2	4	Y	5	5	2	2	0	0	8	5
CONTROL	7	M	0.00000	3	5	Y	5	9	1	0	0	1	5	10
CONTROL	7	M	0.00000	3	6	Y	2	0	2	0	0	0	4	6
CONTROL	7	M	0.00000	4	7	Y	4	6	0	0	0	0	5	6
CONTROL	7	M	0.00000	4	8	Y	4	8	1	2	0	0	5	9
CONTROL	7	M	0.00000	5	9	Y	7	5	0	0	0	0	7	5
CONTROL	7	M	0.00000	5	10	Y	7	5	1	0	0	0	8	5
CONTROL	7	M	0.00000	6	11	Y	7	8	0	0	0	0	7	9
CONTROL	7	M	0.00000	6	12	Y	5	7	0	0	0	0	5	7
CONTROL	7	M	0.00000	7	13	Y	7	4	0	0	0	0	7	4
CONTROL	7	M	0.00000	7	14	Y	7	4	2	1	0	0	7	4
CONTROL	7	M	0.00000	8	15	Y	8	5	0	0	0	0	8	6
CONTROL	7	M	0.00000	8	16	Y	6	4	1	1	0	0	6	4
CONTROL	7	M	0.00000	9	17	Y	7	6	0	0	0	0	7	6
CONTROL	7	M	0.00000	9	18	Y	6	9	0	1	0	0	6	10
CONTROL	7	M	0.00000	10	19	Y	6	6	0	0	0	0	6	6
CONTROL	7	M	0.00000	10	20	Y	5	9	1	2	0	0	5	10

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
71-69	7	M	.20000	41	81	Y	7	5	0	0	0	0	7	5
71-69	7	M	.20000	41	82	Y	8	6	0	0	0	0	8	8
71-69	7	M	.20000	42	83	Y	6	7	0	1	0	0	6	9
71-69	7	M	.20000	42	84	Y	6	6	0	0	0	0	6	7
71-69	7	M	.20000	43	85	Y	9	3	1	1	0	0	9	3
71-69	7	M	.20000	43	86	Y	8	6	0	0	0	0	8	6
71-69	7	M	.20000	44	87	Y	8	4	0	0	0	0	10	4
71-69	7	M	.20000	44	88	Y	5	6	0	0	0	0	6	7
71-69	7	M	.20000	45	89	Y	8	5	0	0	1	0	8	5
71-69	7	M	.20000	45	90	Y	7	7	0	0	0	0	7	7
71-69	7	M	.20000	46	91	Y	6	6	0	0	0	0	9	7
71-69	7	M	.20000	46	92	Y	6	7	0	0	0	0	6	7
71-69	7	M	.20000	47	93	Y	7	6	0	0	0	0	7	6
71-69	7	M	.20000	47	94	Y	4	9	0	0	0	0	4	9
71-69	7	M	.20000	48	95	Y	9	4	1	0	1	0	9	4
71-69	7	M	.20000	48	96	Y	8	6	0	0	0	0	9	6
71-69	7	M	.20000	49	97	Y	4	9	0	1	0	1	4	9
71-69	7	M	.20000	49	98	Y	6	6	0	0	0	0	8	6
71-69	7	M	.20000	50	99	Y	3	7	0	1	0	0	5	7
71-69	7	M	.20000	50	100	Y	5	7	0	0	0	1	5	7
71-69	7	M	1.00000	51	101	Y	7	6	0	0	2	0	7	6
71-69	7	M	1.00000	51	102	Y	4	9	0	0	0	2	4	9
71-69	7	M	1.00000	52	103	Y	7	8	1	2	0	0	7	9
71-69	7	M	1.00000	52	104	Y	7	6	0	0	0	0	7	6
71-69	7	M	1.00000	53	105	Y	4	9	0	0	0	0	4	10
71-69	7	M	1.00000	53	106	Y	6	7	0	0	0	0	6	8
71-69	7	M	1.00000	54	107	Y	7	5	0	0	0	0	7	6
71-69	7	M	1.00000	54	108	Y	7	5	0	1	0	0	7	5
71-69	7	M	1.00000	55	109	Y	7	9	0	0	0	0	7	9
71-69	7	M	1.00000	55	110	Y	4	9	0	0	0	0	4	9
71-69	7	M	1.00000	56	111	Y	8	6	1	4	1	0	8	6
71-69	7	M	1.00000	56	112	Y	5	5	0	1	0	0	6	5
71-69	7	M	1.00000	57	113	Y	10	3	0	0	0	0	10	4
71-69	7	M	1.00000	57	114	Y	5	8	0	0	0	0	6	8
71-69	7	M	1.00000	58	115	Y	3	7	0	1	0	0	4	7
71-69	7	M	1.00000	58	116	Y	5	7	0	0	0	0	5	7
71-69	7	M	1.00000	59	117	Y	3	2	0	1	0	0	6	7
71-69	7	M	1.00000	59	118	Y	5	6	0	0	0	0	7	8
71-69	7	M	1.00000	60	119	Y	5	7	0	2	0	0	5	7
71-69	7	M	1.00000	60	120	Y	2	11	0	0	0	0	2	12

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
CONTROL	8	S	0.00000	1	1	Y	4	6	0	0	0	0	5	6
CONTROL	8	S	0.00000	1	2	Y	6	8	0	4	0	0	6	8
CONTROL	8	S	0.00000	2	3	Y	8	3	0	0	0	0	8	4
CONTROL	8	S	0.00000	2	4	Y	9	3	0	0	1	0	9	3
CONTROL	8	S	0.00000	3	5	Y	6	7	0	0	0	0	6	8
CONTROL	8	S	0.00000	3	6	Y	6	7	0	0	0	0	6	7
CONTROL	8	S	0.00000	4	7	Y	5	8	0	2	0	0	5	9
CONTROL	8	S	0.00000	4	8	Y	4	9	0	1	0	0	4	9
CONTROL	8	S	0.00000	5	9	Y	7	6	1	3	0	0	7	6
CONTROL	8	S	0.00000	5	10	Y	11	2	2	0	0	0	12	2
CONTROL	8	S	0.00000	6	11	Y	4	7	0	0	0	0	4	7
CONTROL	8	S	0.00000	6	12	Y	6	5	0	0	0	0	6	6
CONTROL	8	S	0.00000	7	13	Y	10	1	0	0	0	0	10	2
CONTROL	8	S	0.00000	7	14	Y	3	10	0	0	0	0	3	10
CONTROL	8	S	0.00000	8	15	Y	6	8	0	0	0	1	6	8
CONTROL	8	S	0.00000	8	16	Y	5	7	0	0	0	0	6	8
CONTROL	8	S	0.00000	9	17	Y	8	7	1	0	0	0	8	7
CONTROL	8	S	0.00000	9	18	Y	7	7	1	0	0	0	7	7
CONTROL	8	S	0.00000	10	19	Y	3	7	0	0	0	0	3	7
CONTROL	8	S	0.00000	10	20	Y	8	5	4	2	0	0	8	5
71-69	8	S	.20000	51	101	Y	9	2	0	0	0	0	10	3
71-69	8	S	.20000	51	102	Y	9	3	0	0	0	0	9	3
71-69	8	S	.20000	52	103	Y	2	13	0	0	0	0	2	14
71-69	8	S	.20000	52	104	Y	7	6	0	0	0	0	7	7
71-69	8	S	.20000	53	105	N	0	0	0	0	0	0	0	0
71-69	8	S	.20000	53	106	Y	7	8	0	0	0	0	7	9
71-69	8	S	.20000	54	107	N	0	0	0	0	0	0	0	0
71-69	8	S	.20000	54	108	Y	6	6	0	0	0	0	6	6
71-69	8	S	.20000	55	109	Y	7	6	1	0	0	0	7	7
71-69	8	S	.20000	55	110	Y	10	4	1	0	0	0	10	4
71-69	8	S	.20000	56	111	Y	7	7	0	1	1	0	8	7
71-69	8	S	.20000	56	112	Y	6	7	0	0	0	0	6	7
71-69	8	S	.20000	57	113	Y	5	8	1	3	0	0	5	8
71-69	8	S	.20000	57	114	Y	4	10	1	1	0	0	4	10
71-69	8	S	.20000	58	115	Y	3	7	1	4	0	0	4	7
71-69	8	S	.20000	58	116	Y	6	7	3	2	0	0	6	7
71-69	8	S	.20000	59	117	Y	8	4	0	0	1	0	8	5
71-69	8	S	.20000	59	118	Y	4	7	0	0	0	0	4	8
71-69	8	S	.20000	60	119	N	0	0	0	0	0	0	0	0
71-69	8	S	.20000	60	120	Y	6	9	0	0	0	0	6	9

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
71-69	7	M	5.00000	61	121	Y	4	7	1	0	1	0	4	7
71-69	7	M	5.00000	61	122	Y	8	6	0	0	0	0	8	6
71-69	7	M	5.00000	62	123	Y	5	7	0	1	0	0	5	8
71-69	7	M	5.00000	62	124	Y	6	7	0	0	0	0	7	7
71-69	7	M	5.00000	63	125	Y	9	4	0	1	0	0	9	4
71-69	7	M	5.00000	63	126	Y	6	8	0	0	0	1	6	8
71-69	7	M	5.00000	64	127	Y	6	5	1	0	0	0	7	5
71-69	7	M	5.00000	64	128	Y	4	9	0	0	0	0	4	9
71-69	7	M	5.00000	65	129	Y	7	6	1	0	0	0	7	6
71-69	7	M	5.00000	65	130	Y	4	7	0	1	0	0	4	8
71-69	7	M	5.00000	66	131	Y	7	6	0	0	0	0	8	6
71-69	7	M	5.00000	66	132	Y	5	8	0	0	0	0	5	8
71-69	7	M	5.00000	67	133	Y	6	7	3	0	0	0	6	7
71-69	7	M	5.00000	67	134	Y	11	2	1	0	0	0	11	2
71-69	7	M	5.00000	68	135	Y	4	6	0	0	0	0	4	6
71-69	7	M	5.00000	68	136	Y	6	5	1	1	0	0	6	6
71-69	7	M	5.00000	69	137	Y	5	8	1	0	0	0	5	8
71-69	7	M	5.00000	69	138	Y	4	7	0	0	0	0	5	7
71-69	7	M	5.00000	70	139	N	0	0	0	0	0	0	0	0
71-69	7	M	5.00000	70	140	Y	5	5	0	0	0	0	5	5

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
CONTROL	8	S	0.00000	1	1	Y	4	6	0	0	0	0	5	6
CONTROL	8	S	0.00000	1	2	Y	6	8	0	4	0	0	6	8
CONTROL	8	S	0.00000	2	3	Y	8	3	0	0	0	0	8	4
CONTROL	8	S	0.00000	2	4	Y	9	3	0	0	1	0	9	3
CONTROL	8	S	0.00000	3	5	Y	6	7	0	0	0	0	6	8
CONTROL	8	S	0.00000	3	6	Y	6	7	0	0	0	0	6	7
CONTROL	8	S	0.00000	4	7	Y	5	8	0	2	0	0	5	9
CONTROL	8	S	0.00000	4	8	Y	4	9	0	1	0	0	4	9
CONTROL	8	S	0.00000	5	9	Y	7	6	1	3	0	0	7	6
CONTROL	8	S	0.00000	5	10	Y	11	2	2	0	0	0	12	2
CONTROL	8	S	0.00000	6	11	Y	4	7	0	0	0	0	4	7
CONTROL	8	S	0.00000	6	12	Y	6	5	0	0	0	0	6	6
CONTROL	8	S	0.00000	7	13	Y	10	1	0	0	0	0	10	2
CONTROL	8	S	0.00000	7	14	Y	3	10	0	0	0	0	3	10
CONTROL	8	S	0.00000	8	15	Y	6	8	0	0	0	1	6	8
CONTROL	8	S	0.00000	8	16	Y	5	7	0	0	0	0	6	8
CONTROL	8	S	0.00000	9	17	Y	8	7	1	0	0	0	8	7
CONTROL	8	S	0.00000	9	18	Y	7	7	1	0	0	0	7	7
CONTROL	8	S	0.00000	10	19	Y	3	7	0	0	0	0	3	7
CONTROL	8	S	0.00000	10	20	Y	8	5	4	2	0	0	8	5
71-69	8	S	.20000	51	101	Y	9	2	0	0	0	0	10	3
71-69	8	S	.20000	51	102	Y	9	3	0	0	0	0	9	3
71-69	8	S	.20000	52	103	Y	2	13	0	0	0	0	2	14
71-69	8	S	.20000	52	104	Y	7	6	0	0	0	0	7	7
71-69	8	S	.20000	53	105	N	0	0	0	0	0	0	0	0
71-69	8	S	.20000	53	106	Y	7	8	0	0	0	0	7	9
71-69	8	S	.20000	54	107	N	0	0	0	0	0	0	0	0
71-69	8	S	.20000	54	108	Y	6	6	0	0	0	0	6	6
71-69	8	S	.20000	55	109	Y	7	6	1	0	0	0	7	7
71-69	8	S	.20000	55	110	Y	10	4	1	0	0	0	10	4
71-69	8	S	.20000	56	111	Y	7	7	0	1	1	0	8	7
71-69	8	S	.20000	56	112	Y	6	7	0	0	0	0	6	7
71-69	8	S	.20000	57	113	Y	5	8	1	3	0	0	5	8
71-69	8	S	.20000	57	114	Y	4	10	1	1	0	0	4	10
71-69	8	S	.20000	58	115	Y	3	7	1	4	0	0	4	7
71-69	8	S	.20000	58	116	Y	6	7	3	2	0	0	6	7
71-69	8	S	.20000	59	117	Y	8	4	0	0	1	0	8	5
71-69	8	S	.20000	59	118	Y	4	7	0	0	0	0	4	8
71-69	8	S	.20000	60	119	N	0	0	0	0	0	0	0	0
71-69	8	S	.20000	60	120	Y	6	9	0	0	0	0	6	9

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
71-69	8	S	1.00000	61	121	Y	6	6	1	1	0	0	6	6
71-69	8	S	1.00000	61	122	Y	7	5	1	0	0	0	8	5
71-69	8	S	1.00000	62	123	Y	9	6	0	0	0	0	9	6
71-69	8	S	1.00000	62	124	Y	8	3	3	2	0	0	10	3
71-69	8	S	1.00000	63	125	Y	10	6	1	0	0	0	10	6
71-69	8	S	1.00000	63	126	Y	10	5	2	1	1	0	10	6
71-69	8	S	1.00000	64	127	Y	3	8	0	0	0	0	3	8
71-69	8	S	1.00000	64	128	Y	6	6	0	0	0	0	6	7
71-69	8	S	1.00000	65	129	Y	5	6	0	0	0	0	5	7
71-69	8	S	1.00000	65	130	Y	4	8	0	0	0	0	4	8
71-69	8	S	1.00000	66	131	Y	7	5	0	0	0	0	8	5
71-69	8	S	1.00000	66	132	Y	3	8	0	0	0	1	5	9
71-69	8	S	1.00000	67	133	Y	3	8	0	0	0	0	3	8
71-69	8	S	1.00000	67	134	Y	7	5	0	0	1	0	8	5
71-69	8	S	1.00000	68	135	Y	4	10	0	0	0	0	4	10
71-69	8	S	1.00000	68	136	Y	0	2	0	0	0	0	8	3
71-69	8	S	1.00000	69	137	Y	6	6	0	0	0	0	6	7
71-69	8	S	1.00000	69	138	Y	7	8	0	0	0	0	7	9
71-69	8	S	1.00000	70	139	Y	7	7	0	0	0	0	7	7
71-69	8	S	1.00000	70	140	Y	5	5	1	0	0	0	5	6
71-69	8	S	5.00000	71	141	Y	8	4	0	0	0	0	8	5
71-69	8	S	5.00000	71	142	Y	6	6	0	0	0	0	6	6
71-69	8	S	5.00000	72	143	Y	10	5	0	0	0	1	10	6
71-69	8	S	5.00000	72	144	Y	6	6	0	1	0	0	6	6
71-69	8	S	5.00000	73	145	Y	5	10	0	3	0	0	5	11
71-69	8	S	5.00000	73	146	Y	6	6	0	0	0	0	6	6
71-69	8	S	5.00000	74	147	Y	4	6	1	1	1	1	5	7
71-69	8	S	5.00000	74	148	Y	7	6	1	1	0	0	8	8
71-69	8	S	5.00000	75	149	Y	6	10	0	0	0	0	6	10
71-69	8	S	5.00000	75	150	Y	7	8	0	0	0	0	7	8
71-69	8	S	5.00000	76	151	Y	7	7	2	0	0	0	7	7
71-69	8	S	5.00000	76	152	Y	5	7	0	0	0	0	5	8
71-69	8	S	5.00000	77	153	Y	6	5	0	0	0	0	7	5
71-69	8	S	5.00000	77	154	Y	4	8	0	0	1	0	4	8
71-69	8	S	5.00000	78	155	Y	4	8	1	0	0	0	4	8
71-69	8	S	5.00000	78	156	Y	8	4	0	0	0	0	8	4
71-69	8	S	5.00000	79	157	Y	3	9	0	0	0	0	3	9
71-69	8	S	5.00000	79	158	Y	5	7	0	2	0	0	5	7
71-69	8	S	5.00000	80	159	Y	6	9	0	0	0	0	6	9
71-69	8	S	5.00000	80	160	Y	9	3	0	0	0	0	9	3

TEST MATERIAL	WEEK	S/M	DOSE	MALE NO.	FEMALE NO.	PREG.	IMPLANTS L	IMPLANTS R	EARLY DEATHS L	EARLY DEATHS R	LATE DEATHS L	LATE DEATHS R	CORPORA LUTEA L	CORPORA LUTEA R
TEM	8	S	.00020	11	21	Y	6	10	0	0	0	0	8	10
TEM	8	S	.00020	11	22	Y	9	5	0	1	1	0	9	7
TEM	8	S	.00020	12	23	Y	4	9	1	1	0	0	6	9
TEM	8	S	.00020	12	24	Y	4	5	2	0	0	3	6	5
TEM	8	S	.00020	13	25	Y	6	5	0	0	1	1	6	5
TEM	8	S	.00020	13	26	Y	4	9	1	0	0	0	4	9
TEM	8	S	.00020	14	27	Y	9	5	0	0	0	0	9	6
TEM	8	S	.00020	14	28	Y	7	4	0	0	0	0	7	4
TEM	8	S	.00020	15	29	Y	6	4	0	0	0	0	6	4
TEM	8	S	.00020	15	30	Y	7	6	0	1	0	0	7	6
TEM	8	S	.00020	16	31	Y	8	3	0	0	0	0	8	4
TEM	8	S	.00020	16	32	Y	5	8	0	0	0	0	6	9
TEM	8	S	.00020	17	33	Y	7	3	0	0	0	1	7	4
TEM	8	S	.00020	17	34	Y	6	7	0	0	0	0	6	7
TEM	8	S	.00020	18	35	Y	5	8	0	0	0	0	5	8
TEM	8	S	.00020	18	36	Y	3	8	0	0	0	0	3	9
TEM	8	S	.00020	19	37	Y	8	5	0	1	0	0	8	6
TEM	8	S	.00020	19	38	Y	5	9	1	0	0	0	8	13
TEM	8	S	.00020	20	39	Y	8	5	2	0	0	0	8	5
TEM	8	S	.00020	20	40	Y	9	3	0	0	0	0	9	3

ARMITAGE TEST FOR A LINEAR TREND IN PROPORTIONS FOR THE FERTILITY INDEX
(1 DEGREE OF FREEDOM) BASED ON THE DOSE LEVELS

WEEK	200 MG/KG N PRG	200 MG/KG N MTD	1 G/KG N PRG	1 G/KG N MTD	5 G/KG N PRG	5 G/KG N MTD	CHISQ (C-1)	CHISQ (1)	ARMTG CHISQ
								SINGLE TREATMENT	
1	17	20	17	20	17	20	0.00	.00	-.00
2	19	20	20	20	20	20	2.03	.80	1.23
3	18	20	19	20	20	20	2.11	1.83	.27
4	20	20	20	20	20	20	0.00	0.00	0.00
5	18	20	20	20	20	20	4.14	1.64	2.50
6	19	20	20	20	20	20	2.03	.80	1.23
7	20	20	20	20	20	20	0.00	0.00	0.00
8	17	20	20	20	20	20	6.32	2.50	3.82
								MULTIPLE TREATMENT	
1	20	20	17	20	19	20	3.75	.00	3.75
2	20	20	20	20	18	20	4.14	4.04	.10
3	20	20	19	20	18	20	2.11	1.83	.27
4	20	20	20	20	20	20	0.00	0.00	0.00
5	19	20	20	20	18	20	2.11	1.27	.83
6	20	20	20	20	18	20	4.14	4.04	.10
7	20	20	20	20	19	20	2.03	1.98	.05

ARMITAGE TEST FOR A LINEAR TREND IN PROPORTIONS FOR THE FERTILITY INDEX
(1 DEGREE OF FREEDOM) BASED ON THE LOGARITHMS OF THE DOSE LEVELS

	200 MG/KG		1 G/KG		5 G/KG				
WEEK	N PRG	N MTD	N PRG	N MTD	N PRG	N MTD	CHISQ (C-1)	CHISQ (1)	ARMTG CHISQ
								SINGLE TREATMENT	
1	17	20	17	20	17	20	0.00	.00	-.00
2	19	20	20	20	20	20	2.03	1.53	.51
3	18	20	19	20	20	20	2.11	2.11	-.00
4	20	20	20	20	20	20	0.00	0.00	0.00
5	18	20	20	20	20	20	4.14	3.10	1.03
6	19	20	20	20	20	20	2.03	1.53	.51
7	20	20	20	20	20	20	0.00	0.00	0.00
8	17	20	20	20	20	20	6.32	4.74	1.58
								MULTIPLE TREATMENT	
1	20	20	17	20	19	20	3.75	.40	3.35
2	20	20	20	20	18	20	4.14	3.10	1.03
3	20	20	19	20	18	20	2.11	2.11	-.00
4	20	20	20	20	20	20	0.00	0.00	0.00
5	19	20	20	20	18	20	2.11	.53	1.58
6	20	20	20	20	18	20	4.14	3.10	1.03
7	20	20	20	20	19	20	2.03	1.53	.51

ARMITAGE TEST FOR A LINEAR TREND IN PROPORTIONS FOR THE FERTILITY INDEX
(2 DEGREES OF FREEDOM) BASED ON THE DOSE LEVELS AND INCLUDING THE CONTROL GROUP

	CONTROL		200 MG/KG		1 G/KG		5 G/KG				
WEEK	N PRG	N MTD	N PRG	N MTD	N PRG	N MTD	N PRG	N MTD	CHISQ (C-1)	CHISQ (1)	ARMTG CHISQ
							SINGLE TREATMENT				
1	15	20	17	20	17	20	17	20	1.04	.20	.84
2	20	20	19	20	20	20	20	20	3.04	.45	2.59
3	20	20	18	20	19	20	20	20	3.81	.89	2.92
4	20	20	20	20	20	20	20	20	0.00	0.00	0.00
5	20	20	18	20	20	20	20	20	6.15	.91	5.24
6	20	20	19	20	20	20	20	20	3.04	.45	2.59
7	20	20	20	20	20	20	20	20	0.00	0.00	0.00
8	20	20	17	20	20	20	20	20	9.35	1.38	7.97
							MULTIPLE TREATMENT				
1	20	20	20	20	17	20	19	20	6.32	.21	6.11
2	20	20	20	20	20	20	18	20	6.15	5.94	.21
3	20	20	20	20	19	20	18	20	3.81	3.40	.41
4	20	20	20	20	20	20	20	20	0.00	0.00	0.00
5	18	20	19	20	20	20	18	20	2.35	.31	2.03
6	20	20	20	20	20	20	18	20	6.15	5.94	.21
7	20	20	20	20	20	20	19	20	3.04	2.93	.10

T-TEST OF THE NUMBER OF IMPLANTATIONS IN PREGNANT FEMALES

WEEK	CONTROL			71-69 200 MG/KG					71-69 1 G/KG					71-69 5 G/KG					TEM .2 MG/KG				
	N PRG	MEAN	STD DEV	N PRG	MEAN	STD DEV	DF	T	N PRG	MEAN	STD DEV	DF	T	N PRG	MEAN	STD DEV	DF	T	N PRG	MEAN	STD DEV	DF	T
SINGLE TREATMENT																							
1	15	11.80	3.51	17	12.12	1.41	30	.344	17	11.59	1.87	30	.217	17	12.00	2.03	30	.200	17	11.82	1.51	30	.025
2	20	10.70	2.08	19	11.11	2.75	37	.521	20	11.90	2.05	38	1.838	20	12.80	1.64	38	3.544	20	10.10	2.05	38	.919
3	20	12.25	1.71	18	10.67	2.79	36	2.134	19	11.68	2.50	37	.829	20	12.20	1.64	38	.094	20	7.35	3.20	38	6.038
4	20	11.85	2.54	20	12.20	2.35	38	.452	20	11.85	2.41	38	0.000	20	11.30	1.78	38	.793	17	6.06	3.33	35	6.001
5	20	12.30	3.42	18	11.94	2.21	36	.376	20	11.50	3.00	38	.786	20	12.55	1.32	38	.305	20	11.30	2.43	38	1.066
6	20	11.50	1.93	19	11.11	3.28	37	.461	20	11.40	1.96	38	.161	20	11.95	3.94	38	.459	20	12.65	1.63	38	2.033
7	20	11.30	4.49	20	12.20	2.57	38	.779	20	12.40	2.52	38	.956	20	12.85	3.33	38	1.241	20	13.05	1.57	38	1.647
8	20	12.45	1.39	17	12.94	1.48	35	1.039	20	12.00	2.90	38	.625	20	12.80	1.61	38	.735	20	12.35	1.69	38	.204
MULTIPLE TREATMENT																							
1	20	11.15	2.68	20	12.05	1.93	38	1.218	17	12.29	1.79	35	1.496	19	10.74	3.12	37	.444					
2	20	12.45	1.50	20	11.70	1.92	38	1.374	20	11.45	2.80	38	1.407	18	11.39	3.03	36	1.388					
3	20	11.75	2.88	20	12.40	2.60	38	.749	19	12.79	1.18	37	1.459	18	12.28	2.95	36	.558					
4	20	12.40	4.33	20	12.55	2.26	38	.137	20	11.45	3.95	38	.724	20	12.95	1.88	38	.521					
5	18	11.89	4.44	19	11.26	3.49	35	.478	20	13.65	1.87	36	1.621	18	12.78	1.06	34	.825					
6	20	12.20	1.85	20	12.85	2.28	38	.990	20	14.05	1.76	38	3.237	18	12.50	1.65	36	.524					
7	20	11.95	3.05	20	12.60	1.05	38	1.041	20	12.30	2.23	38	.533	19	12.21	1.27	37	.477					

REGRESSION FITS OF THE NUMBER, U, OF IMPLANTATIONS ON DOSE
(PREDICTED U = A + B*X) CONTROL GROUP INCLUDED

WEEK	X	N	XBAR	SD X	UBAR	SD U	B	A	TB	DF	VARU X	CV U	VARB	VARA	VARUBAR
							SINGLE TREATMENT								
1	DOSE	66	1.60	2.05	11.88	2.25	.023	11.843	.164	64	5.1389	.1908	.0187	.1256	.0779
2	DOSE	79	1.57	2.05	11.63	2.27	.367	11.057	3.087	77	4.6266	.1849	.0142	.0933	.0586
3	DOSE	77	1.59	2.07	11.73	2.24	.131	11.518	1.056	75	5.0089	.1908	.0154	.1042	.0651
4	DOSE	80	1.55	2.04	11.80	2.27	-.144	12.024	-1.155	78	5.1277	.1919	.0156	.1016	.0641
5	DOSE	78	1.58	2.05	12.08	2.60	.109	11.905	.750	76	6.8119	.2161	.0210	.1400	.0873
6	DOSE	79	1.57	2.05	11.49	2.87	.129	11.291	.814	77	8.2633	.2501	.0253	.1667	.1046
7	DOSE	80	1.55	2.04	12.19	3.31	.215	11.855	1.180	78	10.8851	.2707	.0331	.2156	.1361
8	DOSE	77	1.60	2.06	12.53	1.96	.054	12.446	.495	75	3.8696	.1570	.0120	.0810	.0503
							MULTIPLE TREATMENTS								
1	DOSE	76	1.53	2.05	11.54	2.49	-.194	11.836	-1.396	74	6.1209	.2144	.0194	.1257	.0805
2	DOSE	78	1.46	1.99	11.76	2.37	-.130	11.946	-.954	76	5.6218	.2017	.0185	.1116	.0721
3	DOSE	77	1.47	2.00	12.30	2.49	.026	12.261	.180	75	6.2657	.2035	.0206	.1258	.0814
4	DOSE	80	1.55	2.04	12.34	3.26	.135	12.128	.747	78	10.7167	.2653	.0326	.2123	.1340
5	DOSE	75	1.52	2.01	12.41	3.08	.178	12.143	.998	73	9.5165	.2485	.0319	.2004	.1269
6	DOSE	78	1.46	1.99	12.91	2.00	-.047	12.979	-.409	76	4.0486	.1559	.0133	.0803	.0519
7	DOSE	79	1.51	2.01	12.24	2.05	-.001	12.242	-.006	77	4.2394	.1682	.0134	.0841	.0537

T-TEST OF THE (TRANSFORMED) PRE-IMPLANTATION LOSSES IN PREGNANT FEMALES
(LOSSES TAKEN AS A SUBSET OF CORPORA LUTEA)

WEEK	CONTROL			71-69 200 MG/KG					71-69 1 G/KG					71-69 5 G/KG					TEM .2 MG/KG				
	N PRG	MEAN	STD DEV	N PRG	MEAN	STD DEV	DF	T	N PRG	MEAN	STD DEV	DF	T	N PRG	MEAN	STD DEV	DF	T	N PRG	MEAN	STD DEV	DF	T
										SINGLE TREATMENT													
1	15	.52	.59	17	.70	.33	30	1.079	17	.80	.40	30	1.588	17	.56	.41	30	.227	17	.64	.36	30	.704
2	20	.72	.36	19	.54	.46	37	1.340	20	.62	.36	38	.876	20	.41	.19	38	3.292	20	.95	.32	38	2.089
3	20	.46	.25	18	.65	.57	36	1.402	19	.53	.40	37	.659	20	.53	.29	38	.853	20	1.20	.59	38	5.196
4	20	.48	.35	20	.50	.43	38	.183	20	.50	.40	38	.187	20	.68	.34	38	1.871	17	1.57	.48	35	7.941
5	20	.63	.54	18	.54	.39	36	.582	20	.71	.51	38	.518	20	.52	.30	38	.757	20	.58	.43	38	.314
6	20	.58	.33	19	.68	.53	37	.697	20	.61	.39	38	.265	20	.69	.67	38	.654	20	.46	.25	38	1.389
7	20	.74	.68	20	.63	.49	38	.599	20	.67	.46	38	.420	20	.65	.53	38	.470	20	.48	.25	38	1.654
8	20	.44	.21	17	.48	.21	35	.574	20	.61	.44	38	1.525	20	.43	.23	38	.143	20	.56	.29	38	1.499
										MULTIPLE TREATMENT													
1	20	.66	.49	20	.53	.34	38	.972	17	.54	.32	35	.856	19	.78	.53	37	.715					
2	20	.50	.30	20	.67	.33	38	1.662	20	.67	.50	38	1.315	18	.66	.48	36	1.203					
3	20	.57	.46	20	.65	.50	38	.509	19	.52	.31	37	.426	18	.58	.38	36	.044					
4	20	.77	.60	20	.64	.35	38	.844	20	.69	.65	38	.451	20	.52	.30	38	1.714					
5	18	.80	.66	19	.69	.60	35	.553	20	.43	.24	36	2.381	18	.60	.39	34	1.103					
6	20	.53	.38	20	.57	.33	38	.400	20	.56	.30	38	.320	18	.64	.36	36	.943					
7	20	.61	.44	20	.52	.29	38	.808	20	.56	.37	38	.425	19	.42	.19	37	1.776					

REGRESSION FITS OF THE NUMBER, U, OF IMPLANTATIONS ON 1) DOSE AND 2) LOG DOSE
(PREDICTED U = A + B*X) CONTROL GROUP EXCLUDED

WEEK	X	N	XBAR	SD X	UBAR	SD U	B	A	TB	DF	VARB X	CV U	VARB	VARA	VARUBAR
							SINGLE TREATMENT								
1	DOSE	51	2.07	2.12	11.90	1.77	.017	11.868	.139	49	3.1928	.1501	.0142	.1233	.0626
	LOG DOSE	51	.00	1.33	11.90	1.77	-.037	11.902	-.192	49	3.1917	.1501	.0362	.0626	.0626
2	DOSE	59	2.10	2.12	11.95	2.25	.310	11.299	2.302	57	4.7329	.1421	.0181	.1601	.0802
	LOG DOSE	59	.03	1.32	11.95	2.25	.527	11.935	2.447	57	4.6812	.1411	.0464	.0794	.0793
3	DOSE	57	2.15	2.14	11.54	2.38	.254	10.997	1.738	55	5.4832	.2028	.0214	.1953	.0962
	LOG DOSE	57	.06	1.32	11.54	2.38	.474	11.517	2.023	55	5.3837	.2010	.0548	.0946	.0945
4	DOSE	60	2.07	2.12	11.78	2.19	-.171	12.137	-1.277	58	4.7658	.1853	.0180	.1564	.0794
	LOG DOSE	60	.00	1.33	11.78	2.19	-.280	11.782	-1.304	58	4.7601	.1852	.0459	.0793	.0793
5	DOSE	56	2.13	2.12	12.00	2.29	.174	11.629	1.227	56	5.1821	.1897	.0201	.1808	.0893
	LOG DOSE	56	.06	1.31	12.00	2.29	.197	11.989	.850	56	5.2536	.1910	.0535	.0907	.0906
6	DOSE	59	2.10	2.12	11.49	3.14	.163	11.149	.837	57	9.8914	.2737	.0379	.3345	.1677
	LOG DOSE	59	.03	1.32	11.49	3.14	.263	11.484	.841	57	9.8904	.2737	.0979	.1677	.1676
7	DOSE	60	2.07	2.12	12.48	2.80	.128	12.219	.742	58	7.8732	.2248	.0298	.2583	.1312
	LOG DOSE	60	.00	1.33	12.48	2.80	.202	12.483	.732	58	7.8751	.2248	.0760	.1313	.1313
8	DOSE	57	2.16	2.13	12.56	2.13	.055	12.443	.407	55	4.6049	.1708	.0182	.1659	.0808
	LOG DOSE	57	.08	1.31	12.56	2.13	-.028	12.564	-.129	55	4.6174	.1711	.0484	.0814	.0810
							MULTIPLE TREATMENTS								
1	DOSE	56	2.07	2.14	11.68	2.43	-.307	12.314	-2.068	54	5.5633	.2020	.0220	.1939	.0993
	LOG DOSE	56	-.03	1.35	11.68	2.43	-.404	11.667	-1.699	54	5.6994	.2044	.0564	.1018	.1018
2	DOSE	58	1.97	2.08	11.52	2.57	-.049	11.614	-.299	56	6.7122	.2249	.0272	.2208	.1157
	LOG DOSE	58	-.06	1.31	11.52	2.57	-.098	11.512	-.374	56	6.7062	.2248	.0683	.1158	.1156
3	DOSE	57	1.98	2.09	12.49	2.33	-.057	12.603	-.378	55	5.5174	.1880	.0224	.1850	.0968
	LOG DOSE	57	-.06	1.32	12.49	2.33	-.033	12.489	-.139	55	5.5298	.1883	.0563	.0972	.0970
4	DOSE	60	2.07	2.12	12.32	2.87	.177	11.950	1.007	58	8.2182	.2328	.0311	.2697	.1370
	LOG DOSE	60	.00	1.33	12.32	2.87	.124	12.317	.438	58	8.3342	.2344	.0804	.1389	.1389
5	DOSE	57	2.00	2.09	12.58	2.54	.141	12.298	.863	55	6.4920	.2026	.0267	.2201	.1139
	LOG DOSE	57	-.03	1.31	12.58	2.54	.480	12.593	1.891	55	6.1784	.1976	.0645	.1084	.1084
6	DOSE	58	1.97	2.08	13.16	2.01	-.171	13.492	-1.351	56	3.9706	.1515	.0161	.1306	.0685
	LOG DOSE	58	-.06	1.31	13.16	2.01	-.093	13.150	-.457	56	4.0848	.1536	.0416	.0706	.0704
7	DOSE	59	2.02	2.10	12.37	1.59	-.062	12.499	-.627	57	2.5403	.1288	.0099	.0835	.0431
	LOG DOSE	59	-.03	1.32	12.37	1.59	-.122	12.370	-.768	57	2.5317	.1285	.0251	.0429	.0429

T-TEST OF THE NUMBER OF DEAD IMPLANTS

WEEK	CONTROL			71-69 200 MG/KG					71-69 1 G/KG					71-69 5 G/KG					TEM .2 MG/KG				
	N PRG	MEAN	STD DEV	N PRG	MEAN	STD DEV	DF	T	N PRG	MEAN	STD DEV	DF	T	N PRG	MEAN	STD DEV	DF	T	N PRG	MEAN	STD DEV	DF	T
SINGLE TREATMENT																							
1	15	.40	.63	17	.76	1.71	30	.749	17	.47	.62	30	.274	17	.35	.61	30	.185	17	3.24	2.63	30	3.991
2	20	.40	.75	19	.58	1.17	37	.571	20	.10	.31	38	1.648	20	.90	.97	38	1.823	20	6.65	4.18	38	6.575
3	20	.90	1.47	18	.94	1.39	36	.310	19	.58	.77	37	.583	20	.70	1.53	38	.211	20	5.95	3.28	38	6.399
4	20	.45	.60	20	1.60	1.85	38	2.647	20	.80	1.67	38	.880	20	.85	1.50	38	1.108	17	5.41	2.74	35	7.894
5	20	1.20	1.44	18	.50	.86	36	1.798	20	.60	.75	38	1.654	20	.80	2.07	38	.711	20	3.00	2.08	38	3.187
6	20	.75	.85	19	1.26	1.88	37	1.107	20	.80	.89	38	.181	20	1.15	2.03	38	.812	20	.35	.67	38	1.651
7	20	.35	.49	20	1.10	2.07	38	1.573	20	.75	1.21	38	1.372	20	.85	1.18	38	1.748	20	.70	.92	38	1.496
8	20	1.15	1.69	17	1.24	1.79	35	.149	20	.80	1.40	38	.712	20	.85	1.18	38	.649	20	.90	1.25	38	.531
MULTIPLE TREATMENT																							
1	20	1.75	1.77	20	.35	1.14	33	2.972	17	.18	.53	35	3.521	19	.53	1.02	37	2.623					
2	20	1.10	1.25	20	.65	.75	38	1.381	20	.55	1.15	38	1.449	18	.50	.71	36	1.790					
3	20	.90	1.41	20	1.40	2.06	38	.895	19	.79	1.18	37	.264	18	.67	1.08	36	.567					
4	20	1.45	1.76	20	.85	1.79	38	1.156	20	1.55	2.37	38	.151	20	.80	1.61	38	1.218					
5	18	.83	1.47	19	.47	.61	35	.984	20	1.10	1.65	36	.524	18	.83	1.54	34	0.000					
6	20	.50	.89	20	.75	1.29	38	.713	20	.45	.60	38	.208	18	.67	.91	36	.572					
7	20	1.05	1.39	20	.50	.76	38	1.582	20	.95	1.50	38	.221	19	.79	.85	37	.713					

ARMITAGE TEST FOR A LINEAR TREND IN PROPORTIONS FOR THE DEATH INDEX
(1 DEGREE OF FREEDOM) BASED ON THE DOSE LEVELS

	200 MG/KG		1 G/KG		5 G/KG				
WEEK	N WDI	N PRG	N WDI	N PRG	N WDI	N PRG	CHISQ (C-1)	CHISQ (1)	ARMTG CHISQ
								SINGLE TREATMENT	
1	6	17	7	17	5	17	.52	.31	.20
2	5	19	2	20	11	20	9.78	7.40	2.39
3	11	18	8	19	6	20	3.76	2.92	.84
4	14	20	7	20	7	20	6.56	2.59	3.97
5	6	18	9	20	6	20	1.07	.35	.72
6	11	19	10	20	11	20	.25	.00	.25
7	10	20	7	20	11	20	1.74	.57	1.17
8	8	17	8	20	9	20	.20	.00	.20
								MULTIPLE TREATMENT	
1	3	20	2	17	6	19	2.66	2.42	.24
2	11	20	7	20	7	18	1.82	.40	1.42
3	14	20	10	19	7	18	3.73	3.06	.67
4	8	20	11	20	6	20	2.61	1.28	1.33
5	8	19	11	20	6	18	1.84	.89	.95
6	8	20	8	20	8	18	.10	.10	.00
7	7	20	9	20	11	19	2.06	1.89	.18

ARMITAGE TEST FOR A LINEAR TREND IN PROPORTIONS FOR THE DEATH INDEX
(1 DEGREE OF FREEDOM) BASED ON THE LOGARITHMS OF THE DOSE LEVELS

WEEK	200 MG/KG N WDI	200 MG/KG N PRG	1 G/KG N WDI	1 G/KG N PRG	5 G/KG N WDI	5 G/KG N PRG	CHISQ (C-1)	CHISQ (1)	ARMTG CHISQ
								SINGLE TREATMENT	
1	6	17	7	17	5	17	.52	.13	.39
2	5	19	2	20	11	20	9.78	3.92	5.86
3	11	18	8	19	6	20	3.76	3.70	.06
4	14	20	7	20	7	20	6.56	4.92	1.64
5	6	18	9	20	6	20	1.07	.06	1.01
6	11	19	10	20	11	20	.25	.03	.22
7	10	20	7	20	11	20	1.74	.10	1.64
8	8	17	8	20	9	20	.20	.01	.19
								MULTIPLE TREATMENT	
1	3	20	2	17	6	19	2.66	1.66	1.00
2	11	20	7	20	7	18	1.82	1.06	.76
3	14	20	10	19	7	18	3.73	3.71	.02
4	8	20	11	20	6	20	2.61	.41	2.19
5	8	19	11	20	6	18	1.84	.27	1.57
6	8	20	8	20	8	18	.10	.07	.03
7	7	20	9	20	11	19	2.06	2.05	.01

ARMITAGE TEST FOR A LINEAR TREND IN PROPORTIONS FOR THE DEATH INDEX
(2 DEGREES OF FREEDOM) BASED ON THE DOSE LEVELS AND INCLUDING THE CONTROL GROUP

	CONTROL		200 MG/KG		1 G/KG		5 G/KG				
WEEK	N WDI	N PRG	N WDI	N PRG	N WDI	N PRG	N WDI	N PRG	CHISQ (C-1)	CHISQ (1)	ARMTG CHISQ
							SINGLE TREATMENT				
1	4	15	6	17	7	17	5	17	.92	.06	.86
2	5	20	5	19	2	20	11	20	10.27	7.15	3.12
3	7	20	11	18	8	19	6	20	4.29	1.47	2.82
4	8	20	14	20	7	20	7	20	6.87	1.49	5.38
5	11	20	6	18	9	20	6	20	3.19	1.40	1.79
6	11	20	11	19	10	20	11	20	.26	.00	.26
7	7	20	10	20	7	20	11	20	2.59	1.18	1.41
8	10	20	8	17	8	20	9	20	.43	.03	.40
							MULTIPLE TREATMENT				
1	15	20	3	20	2	17	6	19	21.93	.71	21.22
2	13	20	11	20	7	20	7	18	4.64	1.69	2.95
3	8	20	14	20	10	19	7	18	4.93	1.17	3.76
4	12	20	8	20	11	20	6	20	4.58	2.66	1.91
5	8	18	8	19	11	20	6	18	1.84	.76	1.08
6	6	20	8	20	8	20	8	18	.92	.46	.46
7	9	20	7	20	9	20	11	19	2.07	1.59	.48

PROBIT ANALYSIS OF THE PROPORTION OF PREGNANT FEMALES WITH ONE OR MORE DEAD IMPLANTS
PROBIT = A + B(LOG DOSE)

WEEK	b	A	CHISQ	DF
	SINGLE TREATMENT			
1	-.114	4.622	.39	1
2	.595	4.457	5.64	1
3	-.576	4.852	.05	1
4	-.649	4.913	1.65	1
5	-.074	4.649	1.01	1
6	-.050	5.107	.22	1
7	.090	4.916	1.64	1
8	-.031	4.847	.19	1
	MULTIPLE TREATMENT			
1	.423	4.125	.86	1
2	-.302	4.817	.75	1
3	-.578	5.102	.02	1
4	-.186	4.788	2.22	1
5	-.155	4.843	1.59	1
6	.080	4.784	.03	1
7	.418	4.896	.01	1

T-TEST OF THE (TRANSFORMED) NUMBER OF DEAD IMPLANTS
(DEAD IMPLANTS TAKEN AS A SUBSET OF IMPLANTS)

WEEK	CONTROL			71-69 200 MG/KG					71-69 1 G/KG					71-69 5 G/KG					TEM .2 MG/KG				
	N PRG	MEAN	STD DEV	N PRG	MEAN	STD DEV	DF	T	N PRG	MEAN	STD DEV	DF	T	N PRG	MEAN	STD DEV	DF	T	N PRG	MEAN	STD DEV	DF	T
SINGLE TREATMENT																							
1	15	.44	.24	17	.51	.41	30	.564	17	.47	.22	30	.370	17	.42	.22	30	.240	17	1.05	.55	30	3.970
2	20	.45	.28	19	.49	.33	37	.407	20	.32	.11	38	1.844	20	.56	.29	38	1.277	20	1.97	.98	38	6.674
3	20	.51	.38	18	.66	.39	36	1.190	19	.50	.25	37	.159	20	.47	.33	38	.415	20	2.27	.72	38	9.643
4	20	.46	.20	20	.75	.44	38	2.725	20	.52	.40	38	.595	20	.53	.37	38	.792	17	2.53	.36	35	22.037
5	20	.63	.34	18	.45	.25	36	1.839	20	.50	.23	38	1.415	20	.49	.47	38	1.095	20	1.09	.54	38	3.212
6	20	.57	.30	19	.69	.44	37	1.055	20	.57	.32	38	.029	20	.70	.60	38	.884	20	.40	.22	38	2.067
7	20	.53	.47	20	.59	.45	38	.429	20	.51	.35	38	.172	20	.56	.28	38	.234	20	.51	.27	38	.203
8	20	.59	.37	17	.60	.43	35	.126	20	.53	.34	38	.497	20	.53	.33	38	.475	20	.57	.36	38	.160
MULTIPLE TREATMENT																							
1	20	.86	.58	20	.38	.27	38	3.337	17	.34	.16	35	3.604	19	.49	.31	37	2.471					
2	20	.43	.32	20	.54	.25	38	.994	20	.48	.28	38	1.542	18	.49	.25	36	1.509					
3	20	.56	.36	20	.68	.38	38	1.024	19	.53	.30	37	.254	18	.57	.56	36	.049					
4	20	.72	.41	20	.50	.35	38	1.795	20	.73	.52	38	.087	20	.48	.37	38	1.964					
5	18	.58	.39	19	.51	.29	35	.587	20	.57	.35	36	.095	18	.49	.36	34	.700					
6	20	.43	.24	20	.50	.32	38	.673	20	.42	.20	38	.211	18	.50	.27	36	.752					
7	20	.67	.58	20	.45	.25	38	1.566	20	.56	.36	38	.686	19	.56	.26	37	.768					

CONTROL GROUP ANOVA FOR THE NUMBER OF PREGNANT FEMALES

WEEK	BETWEEN MALES SUMSQ	DF	MEANSQ	WITHIN MALES SUMSQ	DF	MEANSQ	TOTAL SUMSQ	DF	F
				SINGLE TREATMENT					
1	1.250	9	.139	2.500	10	.250	3.750	19	.556
2	0.000	9	0.000	0.000	10	0.000	0.000	19	I
3	0.000	9	0.000	0.000	10	0.000	0.000	19	I
4	0.000	9	0.000	0.000	10	0.000	0.000	19	I
5	0.000	9	0.000	0.000	10	0.000	0.000	19	I
6	0.000	9	0.000	0.000	10	0.000	0.000	19	I
7	0.000	9	0.000	0.000	10	0.000	0.000	19	I
8	0.000	9	0.000	0.000	10	0.000	0.000	19	I
				MULTIPLE TREATMENT					
1	0.000	9	0.000	0.000	10	0.000	0.000	19	I
2	0.000	9	0.000	0.000	10	0.000	0.000	19	I
3	0.000	9	0.000	0.000	10	0.000	0.000	19	I
4	0.000	9	0.000	0.000	10	0.000	0.000	19	I
5	1.800	9	.200	0.000	10	0.000	1.800	19	R
6	0.000	9	0.000	0.000	10	0.000	0.000	19	I
7	0.000	9	0.000	0.000	10	0.000	0.000	19	I

CONTROL GROUP ANOVA FOR THE NUMBER OF IMPLANTATIONS PER PREGNANT FEMALE

	BETWEEN MALES			WITHIN MALES			TOTAL		
WEEK	SUMSQ	DF	MEANSQ	SUMSQ	DF	MEANSQ	SUMSQ	DF	F
				SINGLE TREATMENT					
1	123.800	9	13.756	51.000	5	10.200	174.800	14	1.349
2	42.200	9	4.689	40.000	10	4.000	82.200	19	1.172
3	26.250	9	2.917	29.500	10	2.950	55.750	19	.989
4	59.050	9	6.561	63.500	10	6.350	122.550	19	1.033
5	75.200	9	8.356	147.000	10	14.700	222.200	19	.568
6	39.000	9	4.333	32.000	10	3.200	71.000	19	1.354
7	175.200	9	19.467	207.000	10	20.700	382.200	19	.940
8	19.450	9	2.161	17.500	10	1.750	36.950	19	1.235
				MULTIPLE TREATMENT					
1	71.050	9	7.894	65.500	10	6.550	136.550	19	1.205
2	24.450	9	2.717	18.500	10	1.850	42.950	19	1.468
3	63.250	9	7.028	94.500	10	9.450	157.750	19	.744
4	251.800	9	27.978	105.000	10	10.500	356.800	19	2.665
5	132.778	8	16.597	203.000	9	22.556	335.778	17	.736
6	25.200	9	2.800	40.000	10	4.000	65.200	19	.700
7	57.050	9	6.339	119.500	10	11.950	176.550	19	.530

CONTROL GROUP ANOVA FOR THE PRE-IMPLANTATION LOSS PER PREGNANT FEMALE

	BETWEEN MALES			WITHIN MALES			TOTAL		
WEEK	SUMSQ	DF	MEANSQ	SUMSQ	DF	MEANSQ	SUMSQ	DF	F
				SINGLE TREATMENT					
1	71.550	9	7.950	65.000	5	13.000	136.550	14	.612
2	24.450	9	2.717	28.500	10	2.850	52.950	19	.953
3	7.450	9	.828	5.500	10	.550	12.950	19	1.505
4	12.050	9	1.339	18.500	10	1.850	30.550	19	.724
5	42.800	9	4.756	72.000	10	7.200	114.800	19	.660
6	14.000	9	1.556	14.000	10	1.400	28.000	19	1.111
7	86.200	9	9.578	95.000	10	9.500	181.200	19	1.008
8	1.450	9	.161	5.500	10	.550	6.950	19	.293
				MULTIPLE TREATMENT					
1	43.450	9	4.828	75.500	10	7.550	118.950	19	.639
2	24.200	9	2.689	21.000	10	2.100	45.200	19	1.280
3	25.450	9	2.828	45.500	10	4.550	70.950	19	.621
4	89.800	9	9.978	115.000	10	11.500	204.800	19	.868
5	123.444	8	15.431	101.000	9	11.222	224.444	17	1.375
6	38.800	9	4.311	37.000	10	3.700	75.800	19	1.165
7	30.050	9	3.339	32.500	10	3.250	62.550	19	1.027

CONTROL GROUP ANOVA FOR THE NUMBER OF DEAD IMPLANTS PER PREGNANT FEMALE

	BETWEEN MALES			WITHIN MALES			TOTAL		
WEEK	SUMSQ	DF	MEANSQ	SUMSQ	DF	MEANSQ	SUMSQ	DF	F
				SINGLE TREATMENT					
1	9.437	9	1.049	.500	5	.100	9.937	14	10.486
2	7.800	9	.867	3.000	10	.300	10.800	19	2.889
3	18.200	9	2.022	23.000	10	2.300	41.200	19	.879
4	3.450	9	.383	3.500	10	.350	6.950	19	1.095
5	20.200	9	2.244	19.000	10	1.900	39.200	19	1.181
6	6.250	9	.694	7.500	10	.750	13.750	19	.926
7	2.050	9	.228	2.500	10	.250	4.550	19	.911
8	25.050	9	2.783	29.500	10	2.950	54.550	19	.944
				MULTIPLE TREATMENT					
1	38.250	9	4.250	21.500	10	2.150	59.750	19	1.977
2	17.800	9	1.978	12.000	10	1.200	29.800	19	1.648
3	22.800	9	2.533	15.000	10	1.500	37.800	19	1.689
4	15.450	9	1.717	43.500	10	4.350	58.950	19	.395
5	12.000	8	1.500	24.500	9	2.722	36.500	17	.551
6	5.000	9	.556	10.000	10	1.000	15.000	19	.556
7	10.450	9	1.161	24.500	10	2.450	34.950	19	.474

CONTROL GROUP ANOVA FOR THE RATIO OF DEAD IMPLANTS TO TOTAL IMPLANTS PER PREGNANT FEMALE

	BETWEEN MALES			WITHIN MALES			TOTAL		
WEEK	SUMSQ	DF	MEANSQ	SUMSQ	DF	MEANSQ	SUMSQ	DF	F
				SINGLE TREATMENT					
1	.045	9	.005	.003	5	.001	.048	14	8.413
2	.093	9	.010	.031	10	.003	.124	19	3.297
3	.147	9	.016	.185	10	.019	.332	19	.883
4	.020	9	.002	.022	10	.002	.042	19	1.001
5	.129	9	.014	.100	10	.010	.229	19	1.434
6	.069	9	.008	.091	10	.009	.159	19	.839
7	.416	9	.046	.514	10	.051	.929	19	.899
8	.146	9	.016	.168	10	.017	.314	19	.964
				MULTIPLE TREATMENT					
1	.627	9	.070	.526	10	.053	1.153	19	1.323
2	.122	9	.014	.088	10	.009	.211	19	1.538
3	.163	9	.018	.087	10	.009	.250	19	2.093
4	.147	9	.016	.220	10	.022	.367	19	.742
5	.125	8	.016	.240	9	.027	.365	17	.584
6	.028	9	.003	.055	10	.006	.083	19	.564
7	.504	9	.056	.564	10	.056	1.069	19	.993

T-TEST OF THE NUMBER OF CORPORA LUTEA IN PREGNANT FEMALES

WEEK	CONTROL			71-69 200 MG/KG					71-69 1 G/KG					71-69 5 G/KG					TEM .2 MG/KG				
	N PRG	MEAN	STD DEV	N PRG	MEAN	STD DEV	DF	T	N PRG	MEAN	STD DEV	DF	T	N PRG	MEAN	STD DEV	DF	T	N PRG	MEAN	STD DEV	DF	T
SINGLE TREATMENT																							
1	15	12.93	1.71	17	13.82	1.67	30	1.489	17	13.94	1.68	30	1.682	17	13.35	2.34	30	.572	17	13.29	1.57	30	.622
2	20	12.25	1.33	19	11.84	1.89	37	.781	20	13.15	1.46	38	2.035	20	13.15	1.57	38	1.958	20	12.75	1.83	38	.987
3	20	12.80	1.64	18	12.39	1.58	36	.785	19	12.63	1.95	37	.292	20	13.05	1.50	38	.502	20	11.05	1.93	38	3.087
4	20	12.50	2.04	20	13.20	1.40	38	1.266	20	12.75	2.02	38	.389	20	12.75	1.48	38	.443	17	12.06	2.36	35	.611
5	20	13.70	1.63	18	12.83	1.15	36	1.877	20	13.45	2.26	38	.402	20	13.50	1.96	38	.351	20	12.50	1.88	38	2.161
6	20	12.50	1.54	19	12.68	1.97	37	.326	20	12.70	1.63	38	.400	20	14.00	1.69	38	2.939	20	13.25	1.80	38	1.415
7	20	13.10	2.36	20	14.00	2.51	38	1.168	20	14.30	1.92	38	1.763	20	14.55	1.82	38	2.176	20	13.70	1.38	38	.982
8	20	12.90	1.29	17	13.53	1.42	35	1.411	20	13.15	1.66	38	.531	20	13.30	1.69	38	.841	20	13.45	2.67	38	.830
MULTIPLE TREATMENT																							
1	20	12.70	1.59	20	13.00	1.75	38	.567	17	13.18	1.13	35	1.031	19	12.89	2.64	37	.280					
2	20	13.25	1.25	20	13.10	1.59	38	.332	20	13.00	2.05	38	.465	18	12.83	1.98	36	.784					
3	20	12.80	1.36	20	14.40	2.46	38	2.547	19	13.74	1.19	37	2.280	18	13.17	2.53	36	.565					
4	20	14.80	3.62	20	14.00	2.18	38	.847	20	13.35	1.60	38	1.638	20	13.85	1.73	38	1.059					
5	18	14.33	1.91	19	13.26	2.16	35	1.595	20	14.20	1.91	36	.215	18	14.44	2.45	34	.152					
6	20	13.30	1.81	20	14.00	2.45	38	1.028	20	15.30	2.27	38	3.078	18	14.00	1.33	36	1.346					
7	20	13.00	2.08	20	13.50	1.24	38	.925	20	13.35	1.39	38	.627	19	12.58	1.22	37	.767					