RALLIS AGROCHEMICAL RESEARCH STATION
Peenya, Bangalore-560 058.

DOMINANT LETHAL TEST IN WISTAR RATS

TEST COMPOUND: GLYPHOSATE TECHNICAL

(FSG 03090 H/05, MARCH 1990)

STUDY No. TOXI: 888-DLT

SPONSORED BY

M/s FEINCHEMIE SCHWEBDA GmbH
BAHNHOF 2, D-3446, MEINHARD-SCHWEBDA
GERMANY

REPORT PREPARED BY

RALLIS INDIA LIMITED
RALLIS AGROCHEMICAL RESEARCH STATION
POST BOX No. 5813, PLOT Nos. 21 & 22
PEENYA II PHASE, BANGALORE - 560 058
INDIA

DATE: NOVEMBER 04, 1992

RALLIS AGROCHEMICAL RESEARCH STATION
Peenya, Bangalore-560 058.

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RALLIS AGROCHEMICAL RESEARCH STATION
Peenya, Bangalore-560 058.

QUALITY ASSURANCE STATEMENT

To the best of my knowledge the Study No. TOXI:888-DLT has been conducted in compliance with OECD (Organization for Economic Co-operation and Development, Paris, 1982) guidelines and Principles of Good Laboratory Practice Regulations/Standards in all aspects with accurate reflection of supportive raw data. Dates of Inspection: 23.8.1991, 3.9.1991, 19.9.1991 and 30.1.1992.

Date: November 03, 1992

[redacted]

Quality Assurance Manager
Rallis Agrochemical Research Station
Post Box No. 5813, Plot Nos. 21 & 22
Peenya II Phase, Bangalore - 560 058
INDIA

RALLIS AGROCHEMICAL RESEARCH STATION
Peenya, Bangalore-560 058.

SCIENTIFIC STATEMENT

To the best of my knowledge the Study No. TOXI: 888-DLT was conducted in compliance with OECD (Organization for Economic Co-operation and Development, Paris, 1982) guidelines, Principles of Good Laboratory Practice Regulations/Standards and this report represents true and accurate record of the results obtained and interpretation.

Date: November 03, 1992

Study Director and
Head, Toxicology Department
Rallis Agrochemical Research Station
Post Box No. 5813, Plot Nos. 21 & 22
Peenya II Phase, Bangalore - 560 058
INDIA

RALLIS AGROCHEMICAL RESEARCH STATION
Peenya, Bangalore-560 058.

MANAGEMENT STATEMENT

This is to certify that Study No. TOXI: 888-DLT (Dominant Lethal Test in Wistar Rats) sponsored by M/s Feinchemie Schwebda GmbH., GERMANY was carried out at the Toxicology Department of Rallis Agrochemical Research Station in compliance with OECD (Organization for Economic Co-operation and Development, Paris, 1982) guidelines, Principles of Good Laboratory Practice Regulations/Standards and mutually agreed protocol.

Date: November 03, 1992

General Manager Research (AGRO)
Rallis Agrochemical Research Station
Post Box No. 5813, Plot Nos. 21 & 22
Peenya II Phase, Bangalore - 560 058
INDIA

STUDY DETAILS

TITLE	:	DOMINANT LETHAL TEST IN WISTAR RATS
TEST COMPOUND	:	GLYPHOSATE TECHNICAL
STUDY NUMBER	:	TOXI: 888-DLT
REPORT SUBMISSION	:	NOVEMBER 04, 1992
STUDY DIRECTOR	:	[redacted]
SPONSOR	:	M/s FEINCHEMIE SCHWEBDA GmbH., BAHNHOF 2, D-3446, MEINHARD-SCHWEBDA, GERMANY
MONITORING SCIENTIST	:	[redacted]
NOMINEE	:	[redacted]

PROJECT STAFF		SIGNATURE
STUDY DIRECTOR	: [redacted]	[redacted] .
TECHNICAL COORDINATOR	:	.
ASSISTANCE	:	.
PATHOLOGIST	:	.
DOCUMENTATION	:	.

TEST FACILITY	:	RALLIS INDIA LIMITED RALLIS AGROCHEMICAL RESEARCH STATION POST BOX No. 5813, PLOT Nos. 21 & 22 PEENYA II PHASE, BANGALORE - 560 058 INDIA
STUDY PERIOD	:	START: 03-09-1991 END : 31-01-1992

RALLIS AGROCHEMICAL RESEARCH STATION
Peenya, Bangalore-560 058.

DOMINANT LETHAL TEST IN WISTAR RATS

WITH GLYPHOSATE TECHNICAL

SUMMARY

Glyphosate Technical manufactured by M/s EPIC-Schwebda Chemicals Private Limited, 514, Persipolis, Vashi, New Bombay - 400 705, INDIA and supplied by M/s Feinchemie Schwebda GmbH, Bahnhof 2, D-3446, Meinhard-Schwebda, GERMANY was studied for its effects on germinal tissue causing embryonic or fetal death due to chromosomal damage (structural and numerical anomalies) by Dominant Lethal test in male Wistar rats.

The test compound, suspended in refined groundnut oil (RGO) was administered as gavage in a single dose to four groups of 30 adult male rats each, respectively at the dosages of 0, 200, 1000 and 5000 mg/kg body weight in an equivolume dose of 10 mL/kg body weight.

Immediately after dosing the males were paired with untreated adult virgin females (mating ratio 1:1); the paired females were separated after 6 days; on the 8th day the males were again paired with fresh batch of adult virgin females in 1:1 ratio. This procedure was repeated for ten consecutive weeks. The females from each week were sacrificed on the 16th day of pairing.

The uteri along with the ovaries were removed and observed for the number of corpora lutea in each ovary and for implantations in uterus.

From each dam the number of implantations, implantation sites (early resorptions), small moles (embryonic resorptions), large moles (fetal resorptions) and live implantations were recorded. From the data obtained the fertility indices like:

i) total pregnancies
ii) number and percentage of implantations
iii) number and percentage of resorptions (small and large moles)
iv) number and percentage of live implantations
v) percentage of pre-implantation loss and
vi) post-implantation loss were calculated group wise for each week. The results were statistically analyzed.

The study has shown that Glyphosate Technical at dosages of 0, 200, 1000 and 5000 mg/kg administered orally in a single dose to males causes:

1. a tendency of decreased incidence of pregnancy at high dose group during week one only which appeared to be due to the acute effect of the test compound.

2. a significant increase in early resorptions in high dose group during week 1; during week 3 in mid and high dose groups and during week 4 in mid dose group. This parameter did not show any dose effect relationship.
3. an increased incidence of small moles in mid and high dose groups during weeks 1 and 7; in mid dose group during week 5; in high dose group during weeks 6 and 8 and in all treatment groups during week 9. The dose relationship was not evident.
4. an increased incidence in the percentage of large moles in high dose group during week 1; in low dose group during weeks 2, 3 and 8; in low and mid dose groups during weeks 4 and 10. These observations appeared to be incidental.
5. an incidence of live implants in treatment groups which varied from no change to an increase or decrease over control groups during the 10 weeks period and did not show consistent treatment or dose related effects.
6. a high incidence of pre-implantation loss during week 1 in the high dose group. It was high in all or majority of treatment groups during weeks 3, 4, 5 and 7 and less in all or majority of the treatment groups during weeks 2, 8, 9 and 10. During no period (week) this parameter showed any dose response relationship.

7. a high post-implantation loss in high dose group during week 1, and the same was not observed in any of the groups during week 10. It was not affected or was less than in control in all or majority of the treatment groups during weeks 2, 3, 8 and 9 and was not affected or increased in all or majority of the treatment groups during weeks 6 and 7. During weeks 4 and 5 there was an incidental increase in the mid dose group. None of these observations showed any relationship with dose or duration of treatment.

The study has shown that at the dosages tested, Glyphosate Technical did not induce Dominant Lethal effect in Wistar rats as most of the changes seen in fertility indices were inconsistent and not related to the dose of the test compound excepting at high dose during the first week when it may cause acute toxicity related effect on incidence of pregnancy, early resorption, pre- and post-implantation losses and the duration after treatment. Under similar conditions the positive control compound - Ethyl Methane Sulphonate induced typical Dominant Lethal effect.

Date: November 03, 1992

Study Director and
Head, Toxicology Department
Rallis Agrochemical Research Station
Post box No. 5813, Plot Nos.21 & 22
Peenya II Phase, Bangalore - 560 058
INDIA

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DOMINANT LETHAL TEST IN WISTAR RATS

WITH GLYPHOSATE TECHNICAL

INTRODUCTION

The objective of this study is to determine the Mutagenic potential of the test compound to induce genetic damage in the germ cells and cause embryonic or fetal death when administered orally to male Wistar rats. The study was conducted as per OECD guidelines for Testing of Chemicals, section 4, Number 478 "Genetic Toxicology: Rodent Dominant Lethal test" adopted on 4th April 1984, Principles of Good Laboratory Practice Regulations/Standards and mutually agreed protocol.

MATERIALS AND METHODS

TEST SYSTEM	: Rat, Wistar (random bred)
SOURCE	: Bred at Toxicology Department, Rallis Agrochemical Research Station, Bangalore - 560058, INDIA.
NUMBER OF GROUPS	: Four groups - one control and three treatment groups.
NUMBER OF ANIMALS PER GROUP	: Males : 30 : Females: 300 (30 per week for 10 weeks)
AGE AT THE START OF STUDY	: Adults: 20 - 24 weeks
BODY WEIGHT AT START OF STUDY	: Males : above 250 g : Females: above 150 g

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IDENTIFICATION : Individual cages were identified by colored cage cards with Study No., Compound code, Group, Animal number and dates of mating. Individual animals were identified by picric acid body markings.

ACCLIMATIZATION : At least 10 days under laboratory conditions, after veterinary examination.

GROUPING

TEST GROUP	DOSE LEVEL @ mg/kg TEST MATERIAL*	DOSE VOLUME mL/kg	NUMBER OF ANIMALS	ANIMAL NUMBERS FROM	TO
G1	Vehicle control	0	10	M 30 F 300	R 9831 - R 9860 R 9951 - R 10250
G2	ES-GPT	200	10	M 30 F 300	R 9861 - R 9890 R 10251 - R 10550
G3	ES-GPT	1000	10	M 30 F 300	R 9891 - R 9920 R 10551 - R 10850
G4	ES-GPT	5000	10	M 30 F 300	R 9921 - R 9950 R 10851 - R 11150

@ These doses were selected after the dose range study
* Administered as suspension in refined groundnut oil.

POSITIVE CONTROL GROUP

TEST SUBSTANCE : Ethyl Methane Sulphonate (received from I.T.R.C Lucknow, India)

DOSE : i) 100 mg/kg Bwt/day for 5 days dissolved in distilled water.

ii) 500 mg/kg as a single dose dissolved in distilled water.

ANIMALS : 5 adult male wistar rats/dose regime

Total: 10 animals

	Animal Nos.
Males (10)	: R 12131 - R 12140
Females (100)	: R 12141 - R 12240

MATING AND SACRIFICE SCHEDULES: As described in Materials and Methods for the main study groups.

HUSBANDRY

ROOM NUMBER : A-3

CONDITIONS : Standard Laboratory conditions (air conditioned with 10-15 air changes per hour. Temperature 22 ± 3 degrees Celsius, relative humidity 52-70%, natural light supplemented with fluorescent light with 12 hours light/ dark cycle.

ACCOMMODATION : Pre-treatment period: In groups of 15-20 of same sex in suspended stainless steel wire mesh cages with separate litter trays and stainless steel top grill having facilities for pellet feed and drinking water in glass bottles; bedding: clean paddy husk in litter trays changed thrice a week.

Mating period: One male + one female in a solid bottom standard polypropylene mice cage (size L 290 x H 220 x W 140 mm) with sterilized paddy husk bedding changed once a week.

Post Mating: After 6 days of pairing the females are housed in groups of five in serial order from the same group in standard solid bottom polypropylene rat cages (size L 430 x H 270 x W 150 mm) with sterilized paddy husk bedding changed thrice a week. Contaminants analysis report for bedding material (paddy husk) is presented in Appendix 48.

DIET : Maintained on ad libitum pelletted rat feed manufactured by M/s Lipton India Ltd., Bangalore, (a subsidiary of Unilever of ENGLAND). Declared rat feed composition is in Appendix 49 and feed analysis report is given in Appendix 50. Analysis report for feed contaminants is enclosed in Appendix 51.

WATER : Protected, deep borewell water, passed through activated charcoal filter and exposed to UV rays in Aquaguard on-line water filter-cum-purifier (manufactured by M/s Eureka Forbes Ltd., Bombay in collaboration with Electrolux of SWEDEN) was provided ad libitum in glass bottles. Analysis report of water sample is enclosed in Appendix 52. Analysis report of water contaminants is presented in Appendix 53.

TEST COMPOUND

COMMON NAME : Glyphosate

CHEMICAL NAME : N-(Phosphonomethyl) glycine

CAS No. : 1071-83-6

CODE : FSG 03090 H/05, MARCH 1990

MANUFACTURED BY : M/s EPIC-Schwebda Chemicals Pvt., Ltd.,
514 Persipolis, Vashi,
New Bombay - 400 705, INDIA.

SUPPLIED BY : M/s Feinchemie Schwebda GmbH
Bahnhof 2, D-3446,
Meinhard-Schwebda,
GERMANY.

BATCH NUMBER : 60

DATE OF MANUFACTURE: August 1990

DATE OF RECEIPT : September 11, 1990

DATE OF EXPIRY : July 1992

PURITY (DECLARED) : 96.8%

DESCRIPTION	:	Odourless, white crystals
PACKING	:	Packed in plastic drums
STORAGE CONDITIONS	:	Stored at ambient temperature in its original container.
STABILITY (DECLARED)	:	More than two years at ambient temperature
SOLUBILITY	:	Not soluble in water

VEHICLE

COMMON NAME	:	"Postman" brand refined groundnut (peanut) oil
PHYSICAL PROPERTY	:	Clear, odourless
MANUFACTURED BY	:	Faruk Anwar Co. Raichur, Karnataka, India Under license from Ahmed Mills Bombay - 400 008, India
BATCH No.	:	L-5
DATE OF MANUFACTURE	:	June 1991
STORAGE	:	Stored in its original plastic container at room temperature.

TEST COMPOUND PREPARATION : A known amount of test compound was weighed, ground using mortar and pestle and suspended in a known volume of refined groundnut (peanut) oil to get the concentrations of 0, 200, 1000 and 5000 mg in 10 mL of the vehicle. The test compound was prepared fresh for each group just before dosing.

TREATMENT

ROUTE OF ADMINISTRATION : Oral, as gavage

MEDICATION : The test compound was administered to males in a single dose.

MATING : Immediately after dosing the males were paired with untreated adult virgin females at 1:1 ratio. The paired females were separated after 6 days. On the 8th day the males were again paired with fresh females and this procedure was repeated for 10 consecutive weeks. The paired females from each group were sacrificed on day 16 of pairing. The males were sacrificed at the end of 10 weeks pairing.

OBSERVATIONS

PHARMACOTOXIC SYMPTOMS AND MORTALITY IN SIRES : Twice daily during the first week and once a day during the remaining period including time of onset, degree and duration. Dead animals were immediately necropsied.

SIRE WEEKLY BODY WEIGHT : Males: on days 0, 1, 2, 4 and 6 post-medication and weekly thereafter.
Females: Initial weight and final weight at sacrifice.

NECROPSY : Females: sacrificed by ether anesthesia. The uterus along with the ovaries was removed and the following were recorded.

i) No. of corpora lutea in each ovary
ii) No. of implantations
iii) No. of early resorptions
iv) No. of small moles/embryonic resorptions
v) No. of large moles/fetal resorptions and
vi) No. of live implants.

The uteri with ovaries were numbered (pooled group and week wise) and preserved in 10% neutral buffered formalin in polyethylene bottles.

Males: sacrificed by ether anesthesia. The gross necropsy changes in the visceral organs were recorded. The following tissues from the sires were collected and preserved in 10 % neutral buffered formalin, individually in labelled polyethylene bottles.
i) Testes ii) Epididymes iii) Seminal vesicles and iv) Prostate .

WEEKLY FERTILITY INDEX : Group wise and week wise fertility indices were calculated using the formulae listed in Appendix 47.

STATISTICAL ANALYSIS

The following data were analyzed by computer statistical programmes (Bartlett's test for Homogeneity, Analysis of Variance and Dunnett's multiple pairwise comparison).

i) Weekly male body weight
ii) Number of corpora lutea
iii) Number of implantations
iv) Number of early resorptions
v) Number and percentage of small moles
vi) Number and percentage of large moles
vii) Number and percentage of live implants
viii) Percent pre-implantation losses
ix) Percent post-implantation losses

Note: The number of early resorptions were compared by Mann Whitney test.

Pregnancy incidences were analyzed by 'Z' test.

Results of these statistical analysis are designated as significantly higher (+)/lower (-) than control group. All analysis and comparisons were carried out at 5% probability level.

ARCHIVING

Specimens from males and females, raw data, draft report and the final report are stored in the archives of the Toxicology Department, Rallis Agrochemical Research Station, Peenya II Phase, Bangalore 560 058, India.

RESULTS AND DISCUSSION

PHARMACOTOXIC SYMPTOMS AND MORTALITY IN SIRES

Table 2; Appendix 1

Common and frequently observed clinical symptoms were: nasal discharge, rough hair coat, snuffling, soft stool/diarrhoea and urine incontinence. The incidence of these symptoms tended to be high in high (5000 mg/kg) dose group. No test compound related mortality occurred in any of the study groups.

One Sire of the positive control group in second dose regime died on week 4 (Table 15).

SIRE WEEKLY BODY WEIGHT

Table 3; Appendices 2 to 5; Figure 1

Starting body weights of all treatment group male rats were significantly ($P \leq 0.05$) higher than control group. This difference continued throughout the experimental period and final sacrifice. Medication caused a decrease in body weight in both mid dose (1000 mg/kg) and high dose (5000 mg/kg) groups; this effect lasted for the initial four days in the two groups.

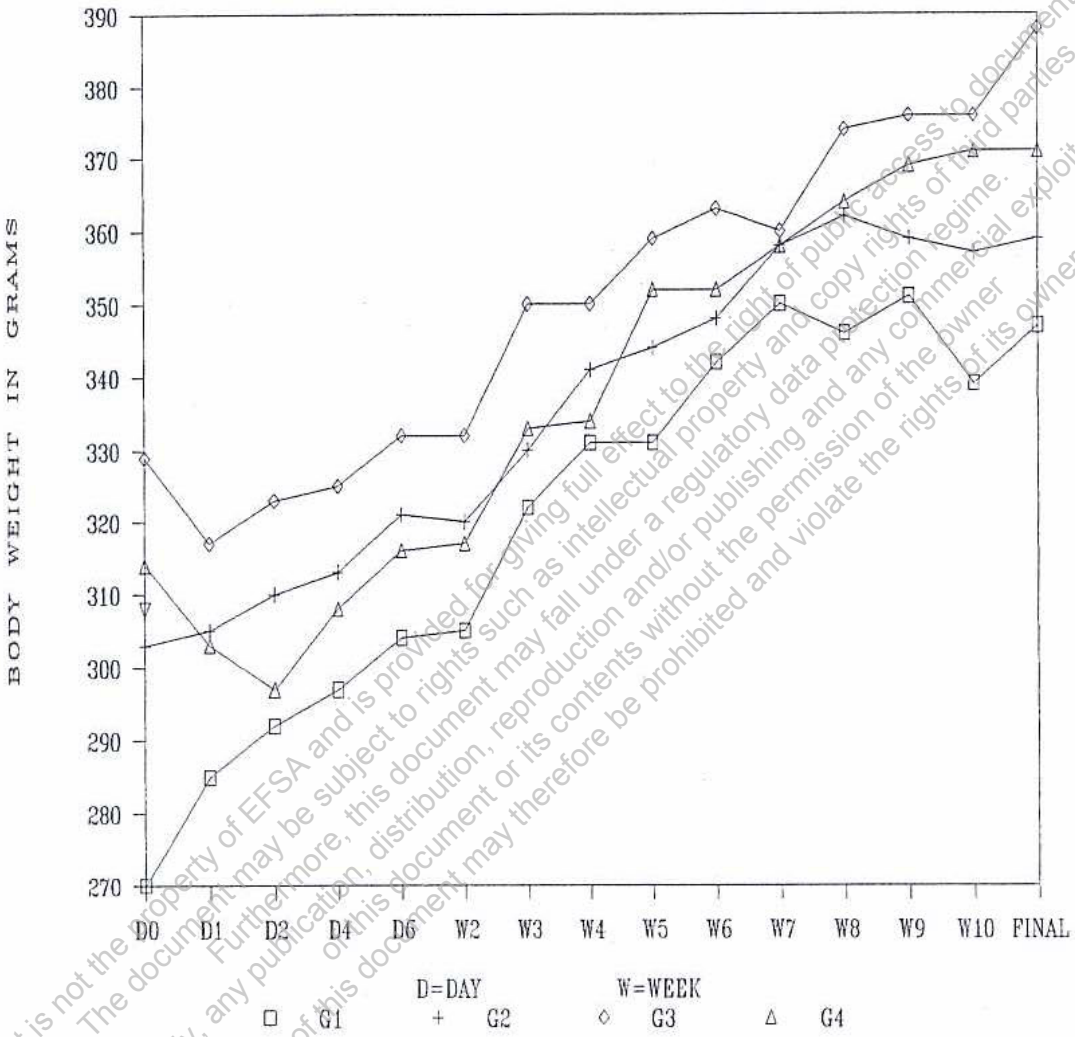

Figure 1: BODY WEIGHT AND GROWTH CURVES

WEEKLY FERTILITY INDEX

Formulae for the derivation of fertility indices are presented in Appendix 47

A. POSITIVE CONTROL GROUP: Table 15

The observations summarized in Table 15 for 10 weeks study on Ethyl Methane Sulphonate positive control group has shown typical Dominant lethal effect of:

1. a decrease in the incidence of pregnancy to zero percent on week 3 and a gradual recovery back to normal by 9 to 10 weeks.
2. increased incidence of small moles during week one which gradually returned to normal level by week 9.

B. STUDY GROUPS

WEEK 1: Table 4; Appendices 6 to 9

Number and percentage of pregnancies were similar in all groups except in high dose group where it was less. The number of corpora lutea and implantations per dam were lower than control ($P \leq 0.05$) in mid and high dose groups, respectively.

Early resorptions were significantly high in high dose group. Incidence and percentage of small moles were significantly high in mid and high dose groups and it

appeared to increase with dose. The percentage of large moles was significantly high in high dose group and significantly low in mid dose group.

Number and percentage of live implants were significantly low and pre- and post-implantation losses were significantly high in the high dose group. This parameter did not show dose relationship.

WEEK 2: Table 5; Appendices 10 to 13

During this week fertility indices parameters did not show any treatment and dose related adverse effects which could be attributed to test compound. The treatment groups fertility parameters were better than control group.

WEEK 3: Table 6; Appendices 14 to 17

During this week the treatment related effect on fertility indices parameters were: slight decrease in pregnancy; significant increase in early resorptions in mid and high dose groups (not dose related) and increased pre-implantation loss was also seen in the same groups. Other findings were decreased post-implantation loss in all treatment groups; decrease in percentage of large moles in mid and high dose groups and decrease in percentage of small moles in low and high dose groups.

WEEK 4: Table 7; Appendices 18 to 21

During this week number of pregnancies in mid and high dose groups inclined to be less. An increase in the pre-implantation loss was seen in all treatment groups ($P \leq 0.05$). Incidence of large moles in low and mid dose groups was also seen. There was no evidence of dose relationship. Few other incidental findings were in percentage of small moles which decreased in low and high dose groups and increased in mid dose group and percentage of post-implantation loss which increased in mid dose group.

WEEK 5: Table 8; Appendices 22 to 25

Incidence of pregnancy was similar in all groups. The treatment groups showed higher percentage of small moles (all groups) and pre-implantation loss (mid and high dose groups) but there was no evidence of dose effect relationship. Other incidental findings were an increase in number of post-implantation loss in mid dose group and a decrease in pre-implantation loss in low dose group.

WEEK 6: Table 9; Appendices 26 to 29

During this week the incidence of pregnancy was similar in all groups. The number and percentage of small moles and post-implantation loss were high in high, mid and high dose groups, respectively. Other incidental findings

were decreased percentage of large moles in low and high dose groups and pre- and post-implantation losses in low dose group.

WEEK 7: Table 10; Appendices 30 to 33

No dose and treatment related changes in the incidence of pregnancies were apparent. During this week all treatment groups showed high incidence of small moles, pre-and post-implantation losses which were also not dose related. Other findings were decreased percentage of large moles in mid and high dose groups and decrease in percentage of live implants in low and mid dose groups.

WEEK 8: Table 11; Appendices 34 to 37

Incidence of pregnancy was similar in all groups. The incidence of small moles was high in high dose group and low in low dose group.

As with other findings, the mid and high dose treatment groups showed lower number of implantations and pre-implantation loss; low and mid dose groups showed decreased post-implantation loss. Incidence of large moles decreased in almost all the treatment groups.

WEEK 9: Table 12; Appendices 38 to 41

Pregnancy incidences were higher in treatment groups. Incidence of small moles was also high in all treatment groups but this incidence did not show dose relationship. Number and percentage of large moles and incidence of pre-and post-implantation losses tended to decrease in all treatment groups.

WEEK 10: Table 13; Appendices 42 to 45

Incidence of pregnancy was high in treatment groups. Incidence of large moles was high in low and mid dose treatment groups. Percentage of small moles was higher in high dose group and lower in low and mid dose groups. The incidence of pre-implantation losses were low in low and high dose groups but high in mid dose group. Here also there was no dose effect relationship.

SIRE GROSS PATHOLOGICAL (NECROPSY) FINDINGS

Table 14; Appendix 46

Terminal sacrifice did not show any major gross lesions in visceral organs and reproductive system except for unilateral testicular atrophy in three sires in high dose group.

CONCLUSIONS

This study was performed to test the mutagenic potency, if any, of Glyphosate Technical by Dominant Lethal test. The test compound was administered as a suspension in refined groundnut oil at dosages of 0, 200, 1000 and 5000 mg/kg body weight, in a single dose as gavage. The concurrent vehicle control group and treatment group males were mated with virgin females every week for 10 weeks. The fertility indices as on day 16 after co-habitation were determined for each week.

The study has shown that at the dosages tested, Glyphosate Technical did not induce Dominant Lethal effect in Wistar rats as most of the changes seen in fertility indices were inconsistent and not related to dose of the test compound and duration after treatment. During the first week at high dose it may cause acute toxicity related effect on incidence of pregnancy, early resorption, pre - and post-implantation losses. Under similar conditions the positive control compound - Ethyl methane sulphonate - induced typical Dominant Lethal effect.

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TABLE 1

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

DETAILS OF EXPERIMENTAL LAYOUT AND MEDICATION SCHEDULE

Dosage: mg/kg body weight Route: Oral

Group & Dose	No. of Male Rats per group	No. of treatment Doses	No. of Females / Week / Group	No. of Weeks	Total	Sacrifice: Females (on day 16 of pairing)	Sacrifice: Males (end of 10th week of pairing)	Male mortality
G1 0	30	1	30	10	300	Yes	Yes	0
G2 200	30	1	30	10	300	Yes	Yes	0
G3 1000	30	1	30	10	300	Yes	Yes	0
G4 5000	30	1	30	10	300	Yes	Yes	0

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TABLE 2

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

SUMMARY OF SIRE PHARMACOTOXIC SYMPTOMS AND PHYSICAL EXAMINATION

Ref.App.: 1

Symptoms	Group	G1	G2	G3	G4
	Dose (mg/kg)	0	200	1000	5000
	No. of rats	30	30	30	30
		INCIDENCE IN			
Dull		1	0	1	0
Epistaxis		1	0	0	0
Ocular discharge -reddish		0	0	0	1
Generalised alopecia		0	0	0	1
Nasal discharge -watery		1	0	2	9
Rough hair coat		0	0	0	4
Snuffling		3	0	0	10
Soft stool/diarrhoea		1	0	1	5
Urine incontinence		0	0	5	1

TABLE 3

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

SUMMARY OF SIRE WEEKLY BODY WEIGHT(g)

Route:Oral Values: Mean ± SD Ref.App.: 2- 5

Group Dose (mg/kg)	Week 1 (Days) 0	1	2	4	6	Week Nos. 2	3	4	5	6	7	8	9	10	Final Bwt. (Sacrifice)
G1	270	285	292	297	304	305	322	331	331	342	350	346	351	339	347
0	26	26	25	26	26	25	27	32	32	34	34	34	35	43	38
	+	+	+	+	+	+	+		+			+	+	+	+
G2	303	305	310	313	321	320	330	341	344	348	358	362	359	357	359
200	11	13	14	14	15	15	18	20	29	25	29	28	30	34	33
	+	+	+	+	+	+	+		+			+	+	+	+
G3	329	317	323	325	332	332	350	350	359	363	360	374	376	376	388
1000	34	34	34	32	32	31	30	33	32	33	32	31	31	34	34
	+	+	+	+	+	+	+		+			+	+	+	+
G4	314	303	297	308	316	317	333	334	352	352	358	364	369	371	371
5000	32	32	30	32	31	32	34	33	35	39	33	35	39	39	40

+/- = Significantly different over control group by Dunnets test

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TABLE 4

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

SUMMARY OF WEEKLY FERTILITY INDICES : WEEK 1

Values: Mean ± SD

Ref.App.: 6-9

Parameter	Group Dose (mg/kg) No. of Sires	G1 0 30	G2 200 30	G3 1000 30	G4 5000 30
Number and (%) Pregnant #		29 (97)	28 (93)	29 (97)	23 (77)
Number of Corpora lutea		12.4 1.66	12.1 1.27	11.1 2.03	- 12.4 3.58
Number of Implantations		11.7 2.39	11.4 1.83	10.8 2.02	- 8.91 3.60
Resorptions:					
1. Early $		0.00	0.00	0.00	+ 25.0
2. Small moles					
a) Number		0.38 0.68	0.29 0.53	+ 0.62 0.86	+ 0.78 1.17
b) Percentage		3.04 5.33	2.48 5.04	+ 5.46 7.54	+ 10.9 18.2
3. Large moles					
a) Number		0.31 0.60	0.36 0.56	0.00 0.00	0.17 0.49
b) Percentage		2.69 5.64	3.31 5.36	- 0.00 0.00	+ 3.35 10.9
Live Implants					
a) Number		11.0 2.38	10.8 1.97	10.2 1.98	- 6.87 5.08
b) Percentage		94.3 7.27	94.3 6.69	94.6 7.53	- 64.9 43.3
Pre-implantation loss (%)		6.21 13.5	5.54 11.7	- 2.37 5.34	+ 24.2 30.2
Post-implantation loss (%)		5.71 7.28	5.76 6.74	5.46 7.54	+ 35.1 43.3

Comparisons by - # `Z' test; $ Mann Whitney's test and the rest by Dunnett's test
+/- Significantly higher (+)/lower (-) than control group

TABLE 5

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

SUMMARY OF WEEKLY FERTILITY INDICES : WEEK 2

Values: Mean + SD Ref.App. 10-13

Parameter	Group	G1	G2	G3	G4
	Dose (mg/kg)	0	200	1000	5000
	No. of Sires	30	30	30	30
Number and (%) Pregnant #		25 (83)	29 (97)	23 (77)	26 (87)
Number of Corpora lutea		11.6	11.5	10.4	12.3
		1.98	1.96	1.41	2.26
Number of Implantations		10.3	11.2	9.70	11.9
		2.94	2.54	2.10	2.41
Resorptions:					
1. Early $		0.00	0.00	0.00	0.00
2. Small moles			-	-	
a) Number		0.92	0.34	0.35	0.88
		2.71	0.67	0.57	1.63
			-	-	-
b) Percentage		11.7	3.05	3.22	7.87
		29.5	5.79	5.30	16.1
3. Large moles				-	-
a) Number		0.52	0.52	0.09	0.12
		0.82	0.74	0.42	0.33
			+	-	-
b) Percentage		5.50	7.09	0.65	1.08
		9.47	18.8	3.13	3.25
Live Implants			+		+
a) Number		8.88	10.3	9.26	10.9
		3.78	2.67	1.89	3.01
			+	+	+
b) Percentage		82.8	89.8	96.1	91.2
		28.7	18.8	6.66	16.0
			-	-	-
Pre-implantation loss (%)		10.6	3.69	7.75	3.98
		20.1	14.1	12.0	7.31
			-	-	-
Post-implantation loss (%)		17.2	10.2	3.89	8.93
		28.8	18.8	6.67	16.0

Comparisons by - # `Z' test; $ Mann Whitney's test and the rest by Dunnett's test
+/- Significantly higher (+)/lower (-) than control group

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TABLE 6

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

SUMMARY OF WEEKLY FERTILITY INDICES : WEEK 3

Values: Mean ± SD

Ref.App. 14-17

Parameter	Group	G1	G2	G3	G4
	Dose (mg/kg)	0	200	1000	5000
	No. of Sires	30	30	30	30
Number and (%) Pregnant #		27 (90)	26 (87)	26 (87)	25 (83)
Number of Corpora lutea		10.9	11.2	9.88	+ 12.4
		1.99	2.54	1.58	1.44
Number of Implantations		10.1	10.5	8.92	11.0
		2.16	2.94	2.37	2.21
Resorptions:					
1. Early $		0.00	0.00	10.0	8.00
2. Small moles			-		
a) Number		0.96	0.58	0.85	0.72
		2.59	1.17	1.32	0.89
b) Percentage			-		-
		10.6	6.22	10.5	8.32
		27.3	12.8	14.4	14.4
3. Large moles					
a) Number		0.37	0.62	0.00	0.00
		0.63	0.98	0.00	0.00
b) Percentage			+	-	-
		3.91	5.54	0.00	0.00
		6.51	9.03	0.00	0.00
Live Implants					
a) Number		8.81	9.35	7.69	9.92
		3.48	3.11	2.96	3.23
b) Percentage		85.4	88.2	85.7	87.7
		26.8	15.1	22.6	23.2
Pre-implantation loss (%)		6.60	6.81	+ 10.1	+ 10.9
		9.65	13.0	17.8	16.5
Post-implantation loss (%)		14.5	- 11.8	14.3	12.3
		26.8	15.1	22.6	23.2

Comparisons by - # `Z' test; $ Mann Whitney's test and the rest by Dunnett's test
+/- Significantly higher (+)/lower (-) than control group

TABLE 7

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

SUMMARY OF WEEKLY FERTILITY INDICES : WEEK 4

Values: Mean ± SD Ref.App. 18-21

Parameter	Group	G1	G2	G3	G4
	Dose (mg/kg)	0	200	1000	5000
	No. of Sires	30	30	30	30
Number and (%) Pregnant #		28 (93)	29 (97)	26 (87)	26 (87)
Number of Corpora lutea		10.3	11.9	12.2	11.7
		1.70	2.01	2.51	2.61
			+		
Number of Implantations		9.39	10.6	9.73	10.2
		2.10	2.40	3.74	3.10
				+	
Resorptions:					
1. Early $		0.00	0.00	24.0	0.00
2. Small moles					
a) Number		0.71	0.55	0.62	0.81
		0.98	0.91	0.90	1.27
			-	+	-
b) Percentage		7.85	5.14	10.1	6.55
		11.3	8.59	21.0	8.97
			+	+	
3. Large moles					
a) Number		0.11	0.38	0.38	0.15
		0.31	0.68	0.98	0.54
			+	+	
b) Percentage		0.91	3.63	3.98	1.38
		2.70	6.33	11.1	5.02
			+		
Live Implants					
a) Number		8.57	9.69	7.81	9.23
		2.15	2.52	5.01	2.42
				-	
b) Percentage		91.4	91.2	71.0	92.1
		10.8	9.58	38.0	9.32
			+	+	+
Pre-implantation loss (%)		8.36	9.97	21.3	12.8
		14.6	14.6	24.7	19.9
				+	
Post-implantation loss (%)		8.76	8.79	29.0	7.93
		10.9	9.58	38.0	9.32

Comparisons by - # `Z' test; $ Mann Whitney's test and the rest by Dunnett's test
+/- Significantly higher (+)/lower (-) than control group

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TABLE 8

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

SUMMARY OF WEEKLY FERTILITY INDICES : WEEK 5

Values: Mean ± SD Ref.App. 22-25

Parameter	Group	G1	G2	G3	G4
	Dose (mg/kg)	0	200	1000	5000
	No. of Sires	30	30	30	30
Number and (%) Pregnant #		27 (90)	29 (97)	28 (93)	27 (90)
Number of Corpora lutea		11.7	10.6	12.4	12.1
		1.54	1.68	2.13	1.40
Number of Implantations		10.8	10.5	11.1	10.7
		1.69	1.81	3.11	3.04
Resorptions:					
1. Early $		0.00	0.00	0.00	1.00
2. Small moles				+	
a) Number		0.59	0.69	0.86	0.59
		0.97	0.81	1.48	1.05
			+	+	+
b) Percentage		5.21	6.34	9.11	7.44
		8.52	7.25	18.4	16.5
3. Large moles			-	-	
a) Number		0.44	0.28	0.25	0.30
		0.97	0.59	0.52	1.35
			-	-	-
b) Percentage		3.84	2.58	2.10	2.52
		8.04	5.43	4.46	11.3
Live Implants					
a) Number		9.74	9.52	9.96	9.78
		1.83	1.60	3.58	3.61
b) Percentage		91.0	91.1	88.8	89.4
		12.4	8.32	18.2	19.0
			-	+	+
Pre-implantation loss (%)		7.57	1.49	11.6	12.1
		10.7	3.82	18.0	21.9
				+	
Post-implantation loss (%)		9.07	8.88	11.2	10.6
		12.4	8.34	18.1	19.0

Comparisons by - # `Z' test; $ Mann Whitney's test and the rest by Dunnett's test
+/- Significantly higher (+)/lower (-) than control group

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TABLE 9

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

SUMMARY OF WEEKLY FERTILITY INDICES : WEEK 6

Values: Mean ± SD

Ref.App. 26-29

Parameter	Group	G1	G2	G3	G4
	Dose (mg/kg)	0	200	1000	5000
	No. of Sires	30	30	30	30
Number and (%) Pregnant #		27 (90)	27 (90)	26 (87)	29 (97)
Number of Corpora lutea		11.4	11.2	11.4	11.7
		2.04	2.27	1.72	2.44
Number of Implantations		10.4	10.4	10.7	10.1
		2.21	2.62	2.79	2.64
Resorptions:					
1. Early $		0.00	0.00	0.00	0.00
2. Small moles					
a) Number		0.37	0.44	0.46	+ 1.10
		0.56	0.80	0.58	1.47
b) Percentage		3.17	3.88	+ 5.45	+ 11.0
		4.79	6.76	10.3	16.7
3. Large moles					
a) Number		0.44	0.19	0.35	0.00
		0.97	0.40	0.80	0.00
b) Percentage		4.25	- 2.13	4.84	- 0.00
		9.45	5.02	15.1	0.00
Live Implants					
a) Number		9.63	9.78	9.92	9.03
		2.17	2.47	2.99	2.86
b) Percentage		92.7	94.1	- 89.7	- 89.0
		10.7	7.47	16.9	16.7
Pre-implantation loss (%)		8.56	- 6.59	7.56	+ 12.5
		10.5	14.6	17.8	18.5
Post-implantation loss (%)		7.43	- 6.03	+ 10.3	+ 11.0
		10.8	7.55	16.9	16.7

Comparisons by - # `Z' test; $ Mann Whitney's test and the rest by Dunnett's test
+/- Significantly higher (+)/lower (-) than control group

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TABLE 10

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

SUMMARY OF WEEKLY FERTILITY INDICES : WEEK 7

Values: Mean ± SD Ref.App. 30-33

Parameter	Group	G1	G2	G3	G4
	Dose (mg/kg)	0	200	1000	5000
	No. of Sires	30	30	30	30
Number and (%) Pregnant #		28 (93)	23 (77)	29 (97)	25 (83)
Number of Corpora lutea		14.6	12.4	12.9	11.3
		1.95	1.78	2.43	1.67
			-	-	-
Number of Implantations		13.5	10.1	11.0	9.88
		2.36	3.50	4.06	2.65
Resorptions:					
1. Early $		0.00	1.00	0.00	0.00
2. Small moles			+	+	
a) Number		0.43	0.48	0.62	1.04
		0.84	0.59	0.98	1.14
			+	+	+
b) Percentage		3.15	10.4	8.30	11.1
		6.18	22.6	19.8	13.6
3. Large moles					-
a) Number		0.75	0.74	0.52	0.00
		0.75	1.18	0.78	0.00
				-	-
b) Percentage		5.90	6.33	4.61	0.00
		6.22	9.44	6.75	0.00
Live Implants					
a) Number		12.3	8.83	9.86	8.84
		2.77	3.52	4.02	2.72
			-	-	
b) Percentage		90.9	82.9	87.1	89.0
		10.2	22.0	19.1	13.5
			+	+	+
Pre-implantation loss (%)		7.79	18.2	15.0	13.1
		11.1	26.4	25.1	19.1
			+	+	+
Post-implantation loss (%)		9.10	17.2	12.9	11.1
		10.2	22.0	19.1	13.6

Comparisons by - # `Z' test; $ Mann Whitney's test and the rest by Dunnett's test
+/- Significantly higher (+)/lower (-) than control group

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TABLE 11

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

SUMMARY OF WEEKLY FERTILITY INDICES : WEEK 8

Values: Mean ± SD Ref.App. 34-37

Parameter	Group	G1	G2	G3	G4
	Dose (mg/kg)	0	200	1000	5000
	No. of Sires	30	30	30	30
Number and (%) Pregnant #		28 (93)	26 (87)	27 (90)	29 (97)
Number of Corpora lutea		13.2	13.8	11.0	10.6
		2.11	2.26	1.34	2.01
				-	-
Number of Implantations		11.7	12.0	10.4	9.41
		3.40	3.19	1.42	2.29
Resorptions:					
1. Early $		0.00	0.00	0.00	0.00
2. Small moles			-		+
a) Number		0.57	0.12	0.67	1.00
		1.26	0.33	0.88	1.25
			-		+
b) Percentage		6.05	0.87	6.15	13.0
		14.0	2.45	7.97	21.0
3. Large moles			-	-	-
a) Number		0.79	0.62	0.26	0.03
		0.88	0.80	0.53	0.19
			-	-	-
b) Percentage		7.18	9.48	2.57	0.45
		9.69	20.7	5.40	2.41
Live Implants					-
a) Number		10.4	11.3	9.48	8.38
		3.87	3.53	1.63	2.78
				+	
b) Percentage		87.7	89.7	91.3	86.6
		16.4	20.4	10.3	20.8
			+	-	-
Pre-implantation loss (%)		12.1	13.8	5.62	9.72
		18.9	19.8	6.59	18.9
			-	-	
Post-implantation loss (%)		13.2	10.3	8.71	13.4
		15.9	20.5	10.3	20.8

Comparisons by - # `Z' test; $ Mann Whitney's test and the rest by Dunnett's test
+/- Significantly higher (+)/lower (-) than control group

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Peenya, Bangalore-560 058.

TABLE 12

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

SUMMARY OF WEEKLY FERTILITY INDICES : WEEK 9

Values: Mean ± SD Ref.App. 38-41

Parameter	Group Dose (mg/kg) No. of Sires	G1 0 30	G2 200 30	G3 1000 30	G4 5000 30
Number and (%) Pregnant #		24 (80)	26 (87)	28 (93)	30 (100)
Number of Corpora lutea		14.2 2.53	12.0 2.16	10.6 1.67 -	12.1 1.53
Number of Implantations		12.0 3.75	11.0 2.51	9.57 2.10	11.1 2.83
Resorptions:					
1. Early $		0.00	0.00	0.00	0.00
2. Small moles			+	+	+
a) Number		0.13 0.34	0.81 1.39 +	0.32 0.67 +	0.87 0.97 +
b) Percentage		0.99 2.67	8.87 18.2	3.58 8.03	7.72 8.74
3. Large moles				-	-
a) Number		1.46 1.56	0.69 0.97 -	0.29 0.53 -	0.00 0.00 -
b) Percentage		12.1 12.5	7.08 9.45	3.01 5.53	0.00 0.00
Live Implants					
a) Number		10.4 3.59	9.46 3.42 -	8.96 2.24 +	10.2 2.85 +
b) Percentage		86.9 12.6	84.1 23.4 -	93.5 8.92 -	92.3 8.74 -
Pre-implantation loss (%)		16.8 21.4	8.12 13.9	9.47 14.6	9.20 18.7
Post-implantation loss (%)		13.1 12.6	16.0 + 23.4	6.59 - 8.95	7.72 - 8.74

Comparisons by - # `Z' test; $ Mann Whitney's test and the rest by Dunnett's test
+/- Significantly higher (+)/lower (-) than control group

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TABLE 13

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

SUMMARY OF WEEKLY FERTILITY INDICES : WEEK 10

Values: Mean ± SD

Ref.App. 42-45

Parameter	Group	G1	G2	G3	G4
	Dose (mg/kg)	0	200	1000	5000
	No. of Sires	30	30	30	30
Number and (%) Pregnant #		25 (83)	29 (97)	28 (93)	29 (97)
Number of Corpora lutea		12.1	12.1	12.8	13.0
		2.15	1.98	2.38	1.77
Number of Implantations		10.8	11.3	10.9	12.3
		2.66	2.90	3.38	2.75
Resorptions:					
1. Early $		0.00	0.00	0.00	0.00
2. Small moles					
a) Number			-	-	
		0.52	0.21	0.07	0.45
		0.77	0.41	0.26	0.57
b) Percentage			-	-	+
		4.41	2.39	0.60	5.11
		6.15	5.52	2.21	9.88
3. Large moles			+	+	
a) Number		0.16	0.38	0.36	0.17
		0.47	0.73	0.62	0.38
b) Percentage			+	+	
		1.36	3.78	3.01	1.25
		3.88	7.58	5.17	2.80
Live Implants					
a) Number		10.1	10.7	10.5	11.7
		2.49	2.93	3.32	2.77
b) Percentage		94.2	93.9	96.4	93.7
		6.86	8.73	6.64	9.98
Pre-implantation loss (%)			-	+	-
		11.3	7.20	14.8	6.17
		14.3	16.4	24.5	17.5
Post-implantation loss (%)		5.77	6.17	3.59	6.34
		6.86	8.74	6.62	9.98

Comparisons by - # `Z' test; $ Mann Whitney's test and the rest by Dunnett's test
+/- Significantly higher (+)/lower (-) than control group

TABLE 14

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

SUMMARY OF GROSS PATHOLOGICAL (NECROPSY) FINDINGS IN SIRES

Route: Oral Ref.App.: 46

Parameters	Group Dose (mg/kg)	G1 0	G2 200	G3 1000	G4 5000
1. Total No.of Sires		30	30	30	30
2. Number dead		0	0	0	0
3. No. finally sacrificed		30	30	30	30
4. No. showing Gross Pathology					
A. Visible External Pathology:		Nil			
B. Visceral Organ Pathology :					
Lungs :Petechiae		0	0	0	1
Focal consolidation		0	0	0	1
Testis:(right) Atrophy		0	0	0	3

TABLE 15

DOMINANT LETHAL TEST IN WISTAR RATS WITH ETHYL METHANE SULPHONATE (POSITIVE CONTROL)

SUMMARY OF WEEKLY FERTILITY INDICES

Values: Mean ± SD

No.of Sires: 10

PARAMETERS	WEEK NUMBERS									
	1	2	3	4*	5*	6*	7*	8*	9*	10*
No. and (%) pregnant	10(100)	8(80)	0(0)	2(22)	6(67)	7(78)	7(78)	8(89)	8(89)	9(100)
	-			+			-		-	
No. of Corpora lutea	11	12.0	0.00	12.0	12.3	10.7	12.7	12.3	11.6	12.6
	2.14	6.65	0.00	5.08	6.74	5.32	6.23	5.29	5.17	4.45
	-	-		-	-	-	-	-		
Number of implantations	9.10	2.63	0.00	2.00	4.83	7.57	11.4	10.0	11.1	11.9
	3.17	2.42	0.00	0.97	3.90	4.62	6.22	5.12	5.13	4.19
RESORPTIONS										
1. Early	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	+			+						
2. Small moles (a)Number	2.80	1.80	0.00	2.00	0.83	1.00	0.71	0.50	0.25	0.56
	2.71	1.72	0.00	0.97	1.58	1.25	1.08	0.70	0.42	0.85
	+	+		+	+	+	+	-	+	
(b)percentage	33.5	82.3	0.00	100	16.7	12.2	10.0	4.30	2.34	4.26
	34.7	42.1	0.00	42.2	31.6	13.5	16.4	5.98	4.02	6.77
3. Large moles (a) Number	0.60	0.50	0.00	0.00	1.17	0.43	1.14	1.00	0.50	0.44
	1.50	0.84	0.00	0.00	1.25	0.67	1.23	1.03	0.70	0.70
	+	+		-	+		+	+	-	+
(b)percentage	10.9	14.6	0.00	0.00	32.0	3.86	11.6	11.4	3.73	3.93
	29.8	25.0	0.00	0.00	33.3	5.93	11.7	13.4	5.23	6.64
	+	-		-	-	-	-	-		
Live implants (a) Number	6.50	0.25	0.00	0.00	2.83	6.14	9.57	8.50	10.4	10.9
	4.79	0.63	0.00	0.00	3.20	3.68	5.72	4.54	4.72	3.91
	-	-		-	-	-	-	-	+	-
(b) percentage	55.6	3.13	0.00	0.00	51.3	84.0	78.3	84.4	94.0	91.9
	39.0	7.91	0.00	0.00	41.9	42.2	43.7	37.6	40.1	30.7
	+	+		+	+	+	+	+	-	-
Pre-implantation loss (%)	12.3	73.0	0.00	82.5	60.8	30.0	10.7	19.1	4.63	4.92
	19.5	38.8	0.00	35.1	40.3	29.5	21.1	22.4	8.77	6.92
	+	+		+	+	+	+	+	-	+
Post-implantation loss (%)	44.4	96.9	0.00	100	48.7	16.0	21.7	15.7	6.01	8.22
	39.0	41.6	0.00	42.2	41.0	14.0	24.2	13.8	6.58	10.3

*:One Sire Died at week 4 +/-:Significantly ($P \leq 0.01$) higher(+)/lower)-) than control group by Dunnett's test.

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APPENDIX 1

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE PHARMACOTOXIC SYMPTOMS AND PHYSICAL EXAMINATION

Dosage: mg/kg

Group Dose	Sl. No.	Sire No.	Changes Observed
G1 0	1 - 3	R 9831 - R 9833	NAD
	4	R 9834	Snuffling (Week 1)
	5 - 12	R 9835 - R 9842	NAD
	13	R 9843	Soft stool/diarrhoea (Week 2)
	14 - 24	R 9844 - R 9854	NAD
	25	R 9855	Snuffling (Week 1,2) Nasal discharge -watery (Week 1,2)
	26	R 9856	Snuffling (Week 1)
	27	R 9857	NAD
	28	R 9858	Dull (Week 1, 2) Epistaxis (Week 1)
	29 - 30	R 9859 - R 9860	NAD
G2 200	1 - 30	R 9861 - R 9890	NAD
G3 1000	1 - 2	R 9891 - R 9892	NAD
	3	R 9893	Nasal discharge -watery (Week 1) Dull (Week 4)
	4	R 9894	Soft stool/diarrhoea (Week 1)
	5	R 9895	NAD
	6	R 9896	Nasal discharge -watery (Week 4)
	7 - 18	R 9897 - R 9908	NAD
	19	R 9909	Urine incontinence (Week 1)
	20	R 9910	Urine incontinence (Week 1)
	21 -22	R 9911 - R 9912	NAD
	23	R 9913	Urine incontinence (Week 1)
	24 - 27	R 9914 - R 9917	NAD

NAD:No Abnormality Detected

contd....

APPENDIX 1 contd.

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE PHARMACOTOXIC SYMPTOMS AND PHYSICAL EXAMINATION

Dosage: mg/kg

Group Dose	Sl. No.	Sire No.	Changes Observed
G3 1000	28	R 9918	Urine incontinence (Week 1)
	29	R 9919	Urine incontinence (Week 1)
	30	R 9920	NAD
G4 5000	1 - 2	R 9921 - R 9922	NAD
	3	R 9923	Rough hair coat (Week 1)
	4	R 9924	NAD
	5	R 9925	Nasal discharge -watery (Week 1)
	6	R 9926	Nasal discharge -watery (Week 1) Snuffling (Week 1)
	7	R 9927	Snuffling (Week 1,3,5,8) Nasal discharge -watery (Week 5,8)
	8 - 10	R 9928 - R 9930	NAD
	11	R 9931	Rough hair coat (Week 7)
	12	R 9932	Soft stool/diarrhoea (Week 2) Occular discharge - reddish (Week 5)
	13	R 9933	NAD
	14	R 9934	Snuffling (Week 8)
	15	R 9935	Urine incontinence (Week 1) Nasal discharge -watery (Week 4)
	16 - 17	R 9936 - R 9937	NAD
	18	R 9938	Snuffling (Week 1,4,10)
	19	R 9939	Snuffling (Week 2) Rough hair coat (Week 4)
	20	R 9940	Nasal discharge -watery (Week 1,4,8) Snuffling (Week 1,4,5,8)
	21	R 9941	Snuffling (Week 1,3,4,10) Nasal discharge (Week 1,4) Rough hair coat (Week 4)
	22 - 24	R 9942 - R 9944	NAD

NAD:No Abnormality Detected

contd....

APPENDIX 1 contd.

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE PHARMACOTOXIC SYMPTOMS AND PHYSICAL EXAMINATION

Dosage: mg/kg

Group Dose	Sl. No.	Sire No.	Changes Observed
G4 5000	25	R 9945	Snuffling (Week 1,3) Nasal discharge (Week 1) Rough hair coat (Week 3)
	26	R 9946	Snuffling (Week 4,10) Nasal discharge (Week 4,10) Soft stool/diarrhoea (Week 8) Generalised alopecia (Week 10)
	27	R 9947	Soft stool/diarrhoea (Week 1) Snuffling (Week 5,7,8,10) Nasal discharge -watery (Week 8,10)
	28	R 9948	Soft stool/diarrhoea (Week 1)
	29	R 9949	Soft stool/diarrhoea (Week 1)
	30	R 9950	NAD

NAD:No Abnormality Detected

APPENDIX 2

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVDUAL SIRE WEEKLY BODY WEIGHT(g)

GROUP: G1 DOSE: 0 mg/kg

Sl. No.	Sire No.	Days					Weeks									
		0	1	2	4	6	2	3	4	5	6	7	8	9	10	@
1	R 9831	280	308	302	308	310	314	318	336	320	340	350	350	340	330	338
2	R 9832	300	310	322	330	336	336	364	374	380	390	406	384	400	380	390
3	R 9833	280	304	310	318	324	314	326	318	340	360	370	348	360	374	370
4	R 9834	312	328	308	320	330	333	354	342	340	350	350	350	350	340	330
5	R 9835	322	326	338	340	350	354	374	390	388	400	404	410	410	402	410
6	R 9836	296	314	328	330	338	338	370	390	372	410	410	400	410	400	418
7	R 9837	312	324	326	328	336	336	354	368	364	380	374	370	374	360	370
8	R 9838	304	324	330	330	344	346	364	388	390	390	396	380	390	380	376
9	R 9839	278	290	302	308	310	310	334	354	370	372	384	370	386	360	376
10	R 9840	270	270	300	308	316	310	330	350	350	350	360	370	368	340	360
11	R 9841	278	290	298	300	310	300	336	352	350	360	372	380	386	394	386
12	R 9842	270	270	290	296	296	300	318	308	300	330	336	340	350	350	340
13	R 9843	288	308	310	310	314	320	332	348	340	360	360	346	360	354	350
14	R 9844	260	280	294	294	300	304	318	320	320	330	336	348	350	350	352
15	R 9845	250	266	266	276	280	284	300	296	298	300	308	306	306	308	302
16	R 9846	250	276	280	286	296	300	320	312	320	330	330	350	328	340	340
17	R 9847	250	260	260	262	264	266	270	278	272	290	298	300	300	310	300
18	R 9848	256	270	286	288	300	304	320	328	332	350	344	340	354	320	330
19	R 9849	260	272	288	288	302	302	324	342	340	350	356	358	378	378	380
20	R 9850	254	280	288	290	294	306	322	350	354	370	382	376	390	400	400
21	R 9851	250	260	258	260	264	266	280	290	288	290	304	296	300	284	300
22	R 9852	240	248	268	272	280	280	296	310	308	320	330	340	336	300	316
23	R 9853	250	274	280	290	300	304	310	330	328	340	366	364	340	350	360
24	R 9854	238	254	260	268	274	280	290	298	286	300	272	280	286	290	300
25	R 9855	240	254	258	260	266	264	280	282	282	270	330	260	268	230	250
26	R 9856	250	272	284	286	296	296	308	280	288	320	332	340	340	240	310
27	R 9857	260	274	280	280	290	294	306	332	336	340	346	320	360	310	330
28	R 9858	310	330	330	350	350	340	340	320	324	320	330	340	340	346	350
29	R 9859	242	254	264	270	280	280	308	330	326	340	342	336	344	340	340
30	R 9860	240	258	260	260	278	276	298	308	310	320	310	320	340	316	330

@:Body weight at Sacrifice

APPENDIX 3

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVDUAL SIRE WEEKLY BODY WEIGHT(g)

GROUP: G2 DOSE: 200 mg/kg

Sl. No.	Sire No.	Days					Weeks									
		0	1	2	4	6	2	3	4	5	6	7	8	9	10	@
1	R 9861	322	322	322	326	336	334	348	362	378	380	380	422	420	430	400
2	R 9862	300	300	306	306	310	310	310	316	304	308	332	320	330	322	320
3	R 9863	314	320	320	324	330	328	332	340	342	340	360	360	360	350	354
4	R 9864	298	302	304	304	312	322	338	350	366	356	398	382	360	382	378
5	R 9865	320	320	334	334	340	340	352	370	394	386	354	420	410	440	442
6	R 9866	300	302	312	312	320	322	324	332	320	332	330	332	322	320	312
7	R 9867	310	314	322	322	322	330	334	356	338	350	360	346	346	354	366
8	R 9868	290	280	290	286	290	290	294	302	278	300	348	340	318	320	322
9	R 9869	304	304	308	310	320	318	322	322	332	338	368	326	322	312	310
10	R 9870	310	320	320	320	334	334	340	356	362	370	348	396	408	416	412
11	R 9871	298	298	300	300	302	302	314	320	320	304	360	336	336	324	338
12	R 9872	294	296	300	300	310	308	322	342	322	350	320	360	354	360	366
13	R 9873	302	302	312	312	328	324	338	364	368	368	410	370	374	368	380
14	R 9874	290	290	298	290	302	304	314	314	310	332	372	340	340	332	334
15	R 9875	308	312	318	322	334	332	344	364	354	376	370	386	380	368	362
16	R 9876	320	320	328	334	340	342	354	360	350	368	410	360	360	368	372
17	R 9877	290	276	274	284	296	292	304	308	306	320	320	328	320	308	310
18	R 9878	294	286	290	300	304	300	310	318	340	340	350	350	350	342	360
19	R 9879	310	316	322	324	338	334	364	366	384	380	380	382	380	380	384
20	R 9880	296	304	314	314	322	320	326	334	360	350	420	352	354	352	358
21	R 9881	294	298	300	310	318	316	324	330	316	320	340	334	324	328	318
22	R 9882	304	304	320	320	328	320	344	354	376	374	350	390	398	380	384
23	R 9883	290	302	312	316	318	312	332	334	340	338	320	350	336	324	338
24	R 9884	296	304	312	318	322	326	328	342	338	348	310	348	360	370	370
25	R 9885	294	290	292	304	314	312	320	330	340	330	382	362	362	340	342
26	R 9886	290	306	316	322	330	328	332	340	362	360	330	378	378	366	380
27	R 9887	294	298	294	302	308	306	296	314	318	312	330	324	322	320	320
28	R 9888	330	330	326	328	350	350	360	372	396	394	366	410	410	404	408
29	R 9889	318	328	328	334	342	338	356	364	372	362	344	370	364	368	362
30	R 9890	296	304	306	310	320	320	330	342	342	352	382	374	374	364	378

@:Body weight at Sacrifice

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APPENDIX 4

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVDUAL SIRE WEEKLY BODY WEIGHT(g)

GROUP: G3 DOSE: 1000 mg/kg

Sl. No.	Sire No.	Days					Weeks									
		0	1	2	4	6	2	3	4	5	6	7	8	9	10	@
1	R 9891	320	310	304	310	310	324	326	318	334	334	340	354	340	338	350
2	R 9892	360	356	360	350	366	366	378	386	386	378	374	374	380	368	378
3	R 9893	380	372	380	364	370	374	390	292	366	384	392	408	414	412	430
4	R 9894	372	348	356	352	360	368	380	382	374	380	376	384	392	392	380
5	R 9895	374	358	350	344	346	342	376	390	398	410	418	414	406	408	432
6	R 9896	372	350	360	364	362	370	388	402	396	394	392	410	410	410	412
7	R 9897	354	344	346	346	360	354	376	380	370	380	360	406	410	400	422
8	R 9898	386	370	372	370	384	376	370	384	392	396	394	400	408	400	416
9	R 9899	384	374	384	384	392	384	390	398	424	440	424	450	460	454	460
10	R 9900	352	348	352	352	356	354	372	364	374	368	346	360	360	358	372
11	R 9901	332	316	330	340	342	342	360	350	358	364	370	384	360	368	400
12	R 9902	340	338	336	342	346	350	376	362	370	374	384	390	392	372	378
13	R 9903	334	310	322	338	340	340	370	364	372	372	300	364	380	388	390
14	R 9904	326	324	326	330	344	340	340	372	380	386	394	404	414	416	430
15	R 9905	302	290	290	298	304	308	302	322	314	324	320	330	334	328	332
16	R 9906	304	282	294	298	302	308	334	312	330	326	336	350	354	344	360
17	R 9907	354	336	356	356	364	364	380	394	408	410	398	420	408	438	430
18	R 9908	326	316	320	320	334	320	340	350	382	372	364	384	382	378	390
19	R 9909	284	272	270	274	282	282	304	310	308	330	336	340	360	358	370
20	R 9910	262	244	256	258	266	266	290	298	302	310	320	340	360	358	342
21	R 9911	268	260	266	266	274	274	298	298	310	290	314	340	342	308	350
22	R 9912	312	304	310	310	320	326	342	344	352	354	348	360	368	368	380
23	R 9913	308	296	300	306	314	314	336	322	326	340	326	344	340	340	356
24	R 9914	298	284	296	300	304	308	330	322	346	352	350	354	350	364	380
25	R 9915	308	306	308	312	322	320	340	354	358	366	360	380	370	372	402
26	R 9916	282	272	282	282	294	294	310	310	310	320	316	330	320	320	332
27	R 9917	312	308	316	316	322	322	350	348	360	360	360	360	350	374	390
28	R 9918	330	324	322	326	334	330	360	354	358	368	368	350	372	380	400
29	R 9919	306	294	304	304	304	304	332	338	338	336	334	336	352	344	346
30	R 9920	316	310	324	324	338	334	360	378	364	386	384	402	402	414	426

@:Body weight at Sacrifice

APPENDIX 5

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVDUAL SIRE WEEKLY BODY WEIGHT(g)

GROUP: G4 DOSE: 5000 mg/kg

Sl. No.	Sire No.	Days					Weeks									
		0	1	2	4	6	2	3	4	5	6	7	8	9	10	@
1	R 9921	376	362	356	356	368	370	384	380	402	390	394	394	414	412	410
2	R 9922	360	350	338	336	360	356	374	384	400	380	394	396	412	396	408
3	R 9923	286	270	260	270	280	280	290	312	326	342	344	350	360	370	368
4	R 9924	330	312	312	298	336	332	352	352	390	384	390	402	414	416	412
5	R 9925	374	356	346	356	348	370	378	378	394	390	390	396	400	402	406
6	R 9926	294	280	280	280	294	274	290	306	328	330	330	322	322	322	320
7	R 9927	262	254	260	268	268	260	276	280	284	292	286	270	272	270	272
8	R 9928	270	260	250	270	276	286	298	322	324	334	338	352	360	370	368
9	R 9929	296	280	272	280	298	300	306	326	330	346	346	366	364	370	364
10	R 9930	292	280	274	292	298	298	326	332	340	344	350	354	352	340	350
11	R 9931	284	270	276	276	282	280	286	290	298	290	300	302	310	308	306
12	R 9932	298	280	280	296	310	306	350	356	384	384	370	412	420	420	422
13	R 9933	270	256	262	270	274	278	302	274	324	338	346	352	356	374	372
14	R 9934	282	280	282	296	296	302	316	298	314	328	330	340	342	340	336
15	R 9935	278	256	240	242	260	264	302	294	320	328	332	336	340	344	342
16	R 9936	338	328	300	330	332	346	368	356	390	404	390	386	396	398	390
17	R 9937	330	312	310	330	342	340	364	362	388	390	414	416	444	448	450
18	R 9938	360	352	330	364	370	346	386	376	402	410	400	414	414	414	412
19	R 9939	314	296	280	298	306	308	316	304	334	334	344	354	330	360	360
20	R 9940	306	292	274	302	312	314	312	314	318	320	334	332	334	338	338
21	R 9941	314	314	314	304	320	322	300	334	340	332	344	348	340	340	338
22	R 9942	326	302	300	318	330	334	314	332	362	362	360	366	372	372	372
23	R 9943	344	324	320	328	348	340	362	360	384	394	380	362	382	396	400
24	R 9944	360	354	354	374	376	378	396	412	424	432	430	432	440	444	450
25	R 9945	314	314	292	290	314	306	330	332	338	252	320	340	350	350	350
26	R 9946	322	322	310	330	316	324	346	342	362	360	364	362	354	360	356
27	R 9947	334	320	324	336	336	344	368	342	338	344	342	382	360	360	356
28	R 9948	324	320	304	328	320	332	350	320	336	350	360	368	370	370	364
29	R 9949	300	302	300	312	318	318	336	342	346	346	360	346	350	360	358
30	R 9950	294	298	300	308	306	306	322	322	348	344	362	370	384	380	384

@:Body weight at Sacrifice

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APPENDIX 6

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 1

GROUP: G1 DOSE: 0 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9831	R 9951	P	10	4	0	0	0	4
2	R 9832	R 9952	P	10	10	0	0	0	10
3	R 9833	R 9953	P	14	14	0	0	0	14
4	R 9834	R 9954	P	13	13	0	1	0	12
5	R 9835	R 9955	P	14	12	0	1	0	11
6	R 9836	R 9956	P	11	11	0	0	0	11
7	R 9837	R 9957	P	14	14	0	0	0	14
8	R 9838	R 9958	P	11	11	0	0	2	9
9	R 9839	R 9959	P	14	13	0	3	0	10
10	R 9840	R 9960	P	14	14	0	0	1	13
11	R 9841	R 9961	P	14	13	0	0	0	13
12	R 9842	R 9962	P	12	11	0	0	0	11
13	R 9843	R 9963	P	11	10	0	0	0	10
14	R 9844	R 9964	P	15	15	0	1	0	14
15	R 9845	R 9965	P	13	11	0	0	0	11
16	R 9846	R 9966	P	11	10	0	0	0	10
17	R 9847	R 9967	P	14	14	0	0	1	13
18	R 9848	R 9968	P	12	12	0	1	0	11
19	R 9849	R 9969	P	11	11	0	1	1	9
20	R 9850	R 9970	P	13	13	0	0	0	13
21	R 9851	R 9971	NP	–	–	–	–	–	–
22	R 9852	R 9972	P	14	14	0	0	1	13
23	R 9853	R 9973	P	10	10	0	0	0	10
24	R 9854	R 9974	P	11	11	0	1	0	10
25	R 9855	R 9975	P	12	11	0	0	0	11
26	R 9856	R 9976	P	15	15	0	0	0	15
27	R 9857	R 9977	P	13	13	0	1	1	11
28	R 9858	R 9978	P	9	9	0	0	2	7
29	R 9859	R 9979	P	12	12	0	1	0	11
30	R 9860	R 9980	P	12	7	0	0	0	7

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 7

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 1

GROUP: G2 DOSE: 200 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9861	R 10251	P	14	14	0	0	0	14
2	R 9862	R 10252	P	11	6	0	0	0	6
3	R 9863	R 10253	P	13	13	0	1	0	12
4	R 9864	R 10254	P	14	14	0	0	0	14
5	R 9865	R 10255	P	11	11	0	0	1	10
6	R 9866	R 10256	P	11	11	0	0	0	11
7	R 9867	R 10257	P	11	11	0	0	0	11
8	R 9868	R 10258	P	13	13	0	1	1	11
9	R 9869	R 10259	P	12	12	0	0	0	12
10	R 9870	R 10260	P	12	12	0	0	0	12
11	R 9871	R 10261	NP	-	-	-	-	-	-
12	R 9872	R 10262	P	12	12	0	1	0	11
13	R 9873	R 10263	P	11	10	0	0	0	10
14	R 9874	R 10264	P	14	12	0	0	0	12
15	R 9875	R 10265	P	12	12	0	0	0	12
16	R 9876	R 10266	P	12	12	0	0	1	11
17	R 9877	R 10267	P	13	13	0	1	1	11
18	R 9878	R 10268	P	11	11	0	0	1	10
19	R 9879	R 10269	P	13	13	0	0	1	12
20	R 9880	R 10270	P	9	9	0	0	0	9
21	R 9881	R 10271	P	14	13	0	1	0	12
22	R 9882	R 10272	P	11	11	0	0	0	11
23	R 9883	R 10273	P	13	12	0	1	0	11
24	R 9884	R 10274	P	13	8	0	0	1	7
25	R 9885	R 10275	P	12	12	0	0	0	12
26	R 9886	R 10276	P	13	13	0	0	0	13
27	R 9887	R 10277	NP	-	-	-	-	-	-
28	R 9888	R 10278	P	10	10	0	0	1	9
29	R 9889	R 10279	P	12	9	0	2	0	7
30	R 9890	R 10280	P	11	10	0	0	2	8

P/NP:Pregnant/Non Pregnant D:Dead

APPENDIX 8

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 1

GROUP: G3 DOSE: 1000 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9891	R 10551	P	11	11	0	2	0	9
2	R 9892	R 10552	P	12	11	0	3	0	8
3	R 9893	R 10553	P	8	8	0	0	0	8
4	R 9894	R 10554	NP	-	-	-	-	-	-
5	R 9895	R 10555	P	11	11	0	0	0	11
6	R 9896	R 10556	P	10	10	0	0	0	10
7	R 9897	R 10557	P	11	11	0	0	0	11
8	R 9898	R 10558	P	8	8	0	0	0	8
9	R 9899	R 10559	P	12	12	0	2	0	10
10	R 9900	R 10560	P	9	9	0	0	0	9
11	R 9901	R 10561	P	10	8	0	0	0	8
12	R 9902	R 10562	P	15	15	0	2	0	13
13	R 9903	R 10563	P	9	9	0	1	0	8
14	R 9904	R 10564	P	11	11	0	2	0	9
15	R 9905	R 10565	P	10	10	0	0	0	10
16	R 9906	R 10566	P	10	10	0	1	0	9
17	R 9907	R 10567	P	8	8	0	0	0	8
18	R 9908	R 10568	P	13	12	0	1	0	11
19	R 9909	R 10569	P	13	13	0	0	0	13
20	R 9910	R 10570	P	8	8	0	0	0	8
21	R 9911	R 10571	P	11	11	0	1	0	10
22	R 9912	R 10572	P	13	13	0	0	0	13
23	R 9913	R 10573	P	12	12	0	0	0	12
24	R 9914	R 10574	P	11	11	0	0	0	11
25	R 9915	R 10575	P	13	13	0	1	0	12
26	R 9916	R 10576	P	11	9	0	1	0	8
27	R 9917	R 10577	P	13	12	0	1	0	11
28	R 9918	R 10578	P	14	13	0	0	0	13
29	R 9919	R 10579	P	15	15	0	0	0	15
30	R 9920	R 10580	P	9	9	0	0	0	9

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 9

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 1

GROUP: G4 DOSE: .5000 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9921	R 10851	P	12	6	0	4	1	1
2	R 9922	R 10852	P	11	4	0	2	2	0
3	R 9923	R 10853	P	21	1	1	0	0	0
4	R 9924	R 10854	P	13	11	9	2	0	0
5	R 9925	R 10855	NP	-	-	-	-	-	-
6	R 9926	R 10856	P	24	10	0	3	0	7
7	R 9927	R 10857	NP	-	-	-	-	-	-
8	R 9928	R 10858	NP	-	-	-	-	-	-
9	R 9929	R 10859	P	10	9	0	0	0	9
10	R 9930	R 10860	P	7	6	0	0	0	0
11	R 9931	R 10861	NP	-	-	-	-	-	-
12	R 9932	R 10862	NP	-	-	-	-	-	-
13	R 9933	R 10863	P	10	6	6	0	0	0
14	R 9934	R 10864	P	9	9	0	0	0	9
15	R 9935	R 10865	P	13	12	0	2	0	10
16	R 9936	R 10866	P	11	10	0	1	0	9
17	R 9937	R 10867	P	12	12	0	2	0	10
18	R 9938	R 10868	P	10	10	0	0	0	10
19	R 9939	R 10869	P	12	12	0	1	0	11
20	R 9940	R 10870	NP	-	-	-	-	-	-
21	R 9941	R 10871	P	13	3	3	0	0	0
22	R 9942	R 10872	NP	-	-	-	-	-	-
23	R 9943	R 10873	P	12	3	0	1	0	2
24	R 9944	R 10874	P	13	10	0	0	1	9
25	R 9945	R 10875	P	10	9	0	0	0	9
26	R 9946	R 10876	P	14	14	0	0	0	14
27	R 9947	R 10877	P	13	13	0	0	0	13
28	R 9948	R 10878	P	12	12	0	0	0	12
29	R 9949	R 10879	P	12	11	0	0	0	11
30	R 9950	R 10880	P	12	12	0	0	0	12

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 10

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 2

GROUP: G1 DOSE: 0 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9831	R 9981	P	15	15	0	0	0	15
2	R 9832	R 9982	P	11	11	0	0	1	10
3	R 9833	R 9983	P	10	7	0	0	1	6
4	R 9834	R 9984	P	14	13	0	0	0	13
5	R 9835	R 9985	P	10	9	0	0	0	9
6	R 9836	R 9986	P	13	13	0	0	0	13
7	R 9837	R 9987	NP	-	-	-	-	-	-
8	R 9838	R 9988	P	14	14	0	6	0	8
9	R 9839	R 9989	NP	-	-	-	-	-	-
10	R 9840	R 9990	P	16	12	0	12	0	0
11	R 9841	R 9991	P	10	8	0	0	3	5
12	R 9842	R 9992	P	10	10	0	0	0	10
13	R 9843	R 9993	P	14	14	0	0	1	13
14	R 9844	R 9994	P	12	12	0	0	0	12
15	R 9845	R 9995	P	12	8	0	4	0	4
16	R 9846	R 9996	P	10	10	0	0	0	10
17	R 9847	R 9997	P	10	9	0	0	2	7
18	R 9848	R 9998	NP	-	-	-	-	-	-
19	R 9849	R 9999	P	10	10	0	0	1	9
20	R 9850	R 10000	P	11	11	0	0	1	10
21	R 9851	R 10001	P	13	1	0	1	0	0
22	R 9852	R 10002	NP	-	-	-	-	-	-
23	R 9853	R 10003	P	9	9	0	0	0	9
24	R 9854	R 10004	P	12	10	0	0	2	8
25	R 9855	R 10005	P	9	9	0	0	0	9
26	R 9856	R 10006	P	11	11	0	0	0	11
27	R 9857	R 10007	NP	-	-	-	-	-	-
28	R 9858	R 10008	P	12	12	0	0	1	11
29	R 9859	R 10009	P	13	13	0	0	0	13
30	R 9860	R 10010	P	9	7	0	0	0	7

P/NP:Pregnant/Non Pregnant D:Dead

APPENDIX 11

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 2

GROUP: G2 DOSE: 200 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9861	R 10281	P	15	15	0	0	2	13
2	R 9862	R 10282	P	13	13	0	0	0	13
3	R 9863	R 10283	P	13	13	0	0	1	12
4	R 9864	R 10284	P	14	14	0	0	1	13
5	R 9865	R 10285	P	13	13	0	0	1	12
6	R 9866	R 10286	P	11	11	0	1	1	9
7	R 9867	R 10287	P	11	11	0	0	0	11
8	R 9868	R 10288	P	12	12	0	1	1	10
9	R 9869	R 10289	P	10	9	0	0	0	9
10	R 9870	R 10290	P	13	13	0	0	0	13
11	R 9871	R 10291	P	10	10	0	0	0	10
12	R 9872	R 10292	NP	-	-	-	-	-	-
13	R 9873	R 10293	P	13	13	0	1	0	12
14	R 9874	R 10294	P	12	12	0	3	0	9
15	R 9875	R 10295	P	13	13	0	0	0	13
16	R 9876	R 10296	P	10	10	0	1	0	9
17	R 9877	R 10297	P	12	12	0	1	0	11
18	R 9878	R 10298	P	11	11	0	0	2	9
19	R 9879	R 10299	P	9	9	0	0	0	9
20	R 9880	R 10300	P	13	11	0	0	0	11
21	R 9881	R 10301	P	9	9	0	1	0	8
22	R 9882	R 10302	P	8	8	0	0	0	8
23	R 9883	R 10303	P	14	14	0	0	1	13
24	R 9884	R 10304	P	8	8	0	0	0	8
25	R 9885	R 10305	P	8	2	0	0	2	0
26	R 9886	R 10306	P	11	11	0	1	0	10
27	R 9887	R 10307	P	12	12	0	0	0	12
28	R 9888	R 10308	P	14	13	0	0	1	12
29	R 9889	R 10309	P	10	10	0	0	2	8
30	R 9890	R 10310	P	12	12	0	0	0	12

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 12

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 2

GROUP: G3 DOSE: 1000 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9891	R 10581	P	9	8	0	0	0	8
2	R 9892	R 10582	NP	–	–	–	–	–	–
3	R 9893	R 10583	P	11	11	0	1	0	10
4	R 9894	R 10584	NP	–	–	–	–	–	–
5	R 9895	R 10585	NP	–	–	–	–	–	–
6	R 9896	R 10586	P	12	12	0	0	0	12
7	R 9897	R 10587	P	9	7	0	0	0	7
8	R 9898	R 10588	P	8	5	0	0	0	5
9	R 9899	R 10589	P	12	12	0	1	0	11
10	R 9900	R 10590	P	10	10	0	0	0	10
11	R 9901	R 10591	P	13	13	0	1	2	10
12	R 9902	R 10592	P	8	8	0	0	0	8
13	R 9903	R 10593	P	11	9	0	1	0	8
14	R 9904	R 10594	P	10	10	0	1	0	9
15	R 9905	R 10595	P	11	7	0	0	0	7
16	R 9906	R 10596	NP	–	–	–	–	–	–
17	R 9907	R 10597	P	10	9	0	0	0	9
18	R 9908	R 10598	P	8	6	0	0	0	6
19	R 9909	R 10599	NP	–	–	–	–	–	–
20	R 9910	R 10600	P	12	12	0	0	0	12
21	R 9911	R 10601	P	9	9	0	0	0	9
22	R 9912	R 10602	P	11	11	0	0	0	11
23	R 9913	R 10603	P	11	11	0	0	0	11
24	R 9914	R 10604	P	12	12	0	0	0	12
25	R 9915	R 10605	P	11	11	0	2	0	9
26	R 9916	R 10606	P	11	10	0	0	0	10
27	R 9917	R 10607	NP	–	–	–	–	–	–
28	R 9918	R 10608	NP	–	–	–	–	–	–
29	R 9919	R 10609	P	11	10	0	0	0	10
30	R 9920	R 10610	P	10	10	0	1	0	9

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 13

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 2

GROUP: G4 DOSE: 5000 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9921	R 10881	P	15	15	0	1	0	14
2	R 9922	R 10882	P	12	12	0	0	0	12
3	R 9923	R 10883	P	13	13	0	2	0	11
4	R 9924	R 10884	NP	-	-	-	-	-	-
5	R 9925	R 10885	P	9	9	0	0	0	9
6	R 9926	R 10886	P	13	12	0	1	0	11
7	R 9927	R 10887	P	12	10	0	2	0	8
8	R 9928	R 10888	P	16	16	0	0	1	15
9	R 9929	R 10889	P	15	14	0	0	0	14
10	R 9930	R 10890	P	12	12	0	1	0	11
11	R 9931	R 10891	P	10	10	0	0	0	10
12	R 9932	R 10892	P	14	14	0	0	0	14
13	R 9933	R 10893	P	12	12	0	1	0	11
14	R 9934	R 10894	NP	-	-	-	-	-	-
15	R 9935	R 10895	P	10	10	0	2	0	8
16	R 9936	R 10896	P	11	10	0	0	0	10
17	R 9937	R 10897	P	8	7	0	0	0	7
18	R 9938	R 10898	P	10	10	0	8	0	2
19	R 9939	R 10899	P	10	7	0	0	1	6
20	R 9940	R 10900	P	11	10	0	0	0	10
21	R 9941	R 10901	P	14	14	0	0	0	14
22	R 9942	R 10902	P	11	11	0	1	0	10
23	R 9943	R 10903	P	13	13	0	0	0	13
24	R 9944	R 10904	P	12	12	0	1	0	11
25	R 9945	R 10905	P	14	14	0	0	0	14
26	R 9946	R 10906	NP	-	-	-	-	-	-
27	R 9947	R 10907	P	13	13	0	1	1	11
28	R 9948	R 10908	P	13	13	0	0	0	13
29	R 9949	R 10909	P	18	16	0	2	0	14
30	R 9950	R 10910	NP	-	-	-	-	-	-

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 14

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 3

GROUP: G1 DOSE: 0 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9831	R 10011	P	14	14	0	1	0	13
2	R 9832	R 10012	P	12	12	0	0	0	12
3	R 9833	R 10013	P	11	9	0	4	0	5
4	R 9834	R 10014	P	13	13	0	0	0	13
5	R 9835	R 10015	P	14	13	0	0	1	12
6	R 9836	R 10016	P	10	10	0	0	0	10
7	R 9837	R 10017	P	9	9	0	0	0	9
8	R 9838	R 10018	P	12	11	0	0	0	11
9	R 9839	R 10019	P	9	6	0	0	0	6
10	R 9840	R 10020	P	10	9	0	0	0	9
11	R 9841	R 10021	P	10	10	0	0	0	10
12	R 9842	R 10022	NP	–	–	–	–	–	–
13	R 9843	R 10023	P	14	12	0	12	0	0
14	R 9844	R 10024	P	10	10	0	1	0	9
15	R 9845	R 10025	NP	–	–	–	–	–	–
16	R 9846	R 10026	P	7	7	0	0	1	6
17	R 9847	R 10027	P	12	9	0	0	1	8
18	R 9848	R 10028	P	11	11	0	0	2	9
19	R 9849	R 10029	P	9	9	0	0	1	8
20	R 9850	R 10030	P	8	7	0	1	1	5
21	R 9851	R 10031	NP	–	–	–	–	–	–
22	R 9852	R 10032	P	13	12	0	0	0	12
23	R 9853	R 10033	P	9	9	0	1	0	8
24	R 9854	R 10034	P	8	6	0	6	0	0
25	R 9855	R 10035	P	10	10	0	0	1	9
26	R 9856	R 10036	P	11	11	0	0	0	11
27	R 9857	R 10037	P	10	10	0	0	0	10
28	R 9858	R 10038	P	11	11	0	0	0	11
29	R 9859	R 10039	P	12	10	0	0	2	8
30	R 9860	R 10040	P	14	14	0	0	0	14

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 15

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 3

GROUP: G2 DOSE: 200 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9861	R 10311	P	10	10	0	2	0	8
2	R 9862	R 10312	P	13	12	0	0	0	12
3	R 9863	R 10313	P	9	8	0	0	0	8
4	R 9864	R 10314	NP	–	–	–	–	–	–
5	R 9865	R 10315	P	7	3	0	0	0	3
6	R 9866	R 10316	P	14	14	0	0	0	14
7	R 9867	R 10317	P	12	12	0	0	1	11
8	R 9868	R 10318	NP	–	–	–	–	–	–
9	R 9869	R 10319	P	17	15	0	0	0	15
10	R 9870	R 10320	P	16	15	0	1	0	14
11	R 9871	R 10321	P	9	9	0	0	1	8
12	R 9872	R 10322	P	14	14	0	5	1	8
13	R 9873	R 10323	NP	–	–	–	–	–	–
14	R 9874	R 10324	P	10	10	0	1	0	9
15	R 9875	R 10325	NP	–	–	–	–	–	–
16	R 9876	R 10326	P	9	8	0	0	0	8
17	R 9877	R 10327	P	11	11	0	0	0	11
18	R 9878	R 10328	P	14	13	0	0	1	12
19	R 9879	R 10329	P	12	12	0	2	3	7
20	R 9880	R 10330	P	10	10	0	0	2	8
21	R 9881	R 10331	P	6	4	0	2	0	2
22	R 9882	R 10332	P	11	11	0	0	0	11
23	R 9883	R 10333	P	10	10	0	0	0	10
24	R 9884	R 10334	P	9	7	0	0	0	7
25	R 9885	R 10335	P	10	10	0	0	3	7
26	R 9886	R 10336	P	13	13	0	0	0	13
27	R 9887	R 10337	P	10	9	0	2	0	7
28	R 9888	R 10338	P	11	11	0	0	2	9
29	R 9889	R 10339	P	11	11	0	0	0	11
30	R 9890	R 10340	P	12	12	0	0	2	10

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 16

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 3

GROUP: G3 DOSE: 1000 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9891	R 10611	NP	-	-	-	-	-	-
2	R 9892	R 10612	P	9	9	0	1	0	8
3	R 9893	R 10613	NP	-	-	-	-	-	-
4	R 9894	R 10614	P	12	12	0	2	0	10
5	R 9895	R 10615	P	10	10	0	0	0	10
6	R 9896	R 10616	P	9	6	0	0	0	6
7	R 9897	R 10617	NP	-	-	-	-	-	-
8	R 9898	R 10618	P	10	10	0	0	0	0
9	R 9899	R 10619	P	12	12	0	6	0	6
10	R 9900	R 10620	P	10	8	0	0	0	8
11	R 9901	R 10621	P	11	10	0	0	0	10
12	R 9902	R 10622	P	9	9	0	0	0	9
13	R 9903	R 10623	P	8	8	0	0	0	8
14	R 9904	R 10624	P	13	12	0	0	0	12
15	R 9905	R 10625	P	9	9	0	0	0	9
16	R 9906	R 10626	P	7	5	0	2	0	3
17	R 9907	R 10627	P	9	9	0	0	0	9
18	R 9908	R 10628	P	11	9	0	2	0	7
19	R 9909	R 10629	P	8	8	0	1	0	7
20	R 9910	R 10630	NP	-	-	-	-	-	-
21	R 9911	R 10631	P	8	7	0	2	0	5
22	R 9912	R 10632	P	11	11	0	0	0	11
23	R 9913	R 10633	P	10	10	0	2	0	8
24	R 9914	R 10634	P	10	9	0	0	0	9
25	R 9915	R 10635	P	11	11	0	1	0	10
26	R 9916	R 10636	P	9	9	0	0	0	9
27	R 9917	R 10637	P	9	3	0	1	0	2
28	R 9918	R 10638	P	11	5	0	1	0	4
29	R 9919	R 10639	P	8	8	0	0	0	8
30	R 9920	R 10640	P	13	13	0	1	0	12

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 17

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 3

GROUP: G4 DOSE: 5000 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9921	R 10911	P	14	13	0	2	0	11
2	R 9922	R 10912	P	9	8	8	0	0	0
3	R 9923	R 10913	NP	-	-	-	-	-	-
4	R 9924	R 10914	P	12	12	0	1	0	11
5	R 9925	R 10915	P	16	10	0	0	0	10
6	R 9926	R 10916	NP	-	-	-	-	-	-
7	R 9927	R 10917	P	13	12	0	0	0	12
8	R 9928	R 10918	P	13	11	0	2	0	9
9	R 9929	R 10919	P	14	14	0	0	0	14
10	R 9930	R 10920	P	12	10	0	1	0	9
11	R 9931	R 10921	NP	-	-	-	-	-	-
12	R 9932	R 10922	NP	-	-	-	-	-	-
13	R 9933	R 10923	P	11	11	0	0	0	11
14	R 9934	R 10924	P	13	3	0	2	0	1
15	R 9935	R 10925	P	12	12	0	1	0	11
16	R 9936	R 10926	P	13	12	0	1	0	11
17	R 9937	R 10927	P	13	13	0	0	0	13
18	R 9938	R 10928	P	12	11	0	0	0	11
19	R 9939	R 10929	P	13	11	0	0	0	11
20	R 9940	R 10930	P	12	11	0	0	0	11
21	R 9941	R 10931	P	11	10	0	0	0	10
22	R 9942	R 10932	P	14	14	0	2	0	12
23	R 9943	R 10933	P	11	11	0	1	0	10
24	R 9944	R 10934	P	10	10	0	0	0	10
25	R 9945	R 10935	P	11	10	0	3	0	7
26	R 9946	R 10936	P	12	11	0	1	0	10
27	R 9947	R 10937	P	13	13	0	0	0	13
28	R 9948	R 10938	P	12	9	0	1	0	8
29	R 9949	R 10939	P	13	12	0	0	0	12
30	R 9950	R 10940	D	0	0	0	0	0	0

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 18

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 4

GROUP: G1 DOSE: 0 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9831	R 10041	P	11	11	0	1	0	10
2	R 9832	R 10042	P	13	12	0	1	0	11
3	R 9833	R 10043	P	10	7	0	0	0	7
4	R 9834	R 10044	P	12	11	0	1	0	10
5	R 9835	R 10045	P	10	10	0	1	0	9
6	R 9836	R 10046	P	10	10	0	0	1	9
7	R 9837	R 10047	P	7	7	0	0	0	7
8	R 9838	R 10048	P	10	10	0	1	0	9
9	R 9839	R 10049	P	8	8	0	0	0	8
10	R 9840	R 10050	P	14	14	0	0	1	13
11	R 9841	R 10051	P	10	9	0	0	0	9
12	R 9842	R 10052	P	12	5	0	1	0	4
13	R 9843	R 10053	P	10	9	0	1	0	8
14	R 9844	R 10054	P	8	5	0	0	0	5
15	R 9845	R 10055	P	9	9	0	4	0	5
16	R 9846	R 10056	P	10	9	0	0	0	9
17	R 9847	R 10057	P	11	10	0	0	0	10
18	R 9848	R 10058	P	10	10	0	1	0	9
19	R 9849	R 10059	P	12	12	0	1	0	11
20	R 9850	R 10060	NP	–	–	–	–	–	–
21	R 9851	R 10061	NP	–	–	–	–	–	–
22	R 9852	R 10062	P	12	8	0	3	0	5
23	R 9853	R 10063	P	10	10	0	2	0	8
24	R 9854	R 10064	P	11	11	0	0	0	11
25	R 9855	R 10065	P	7	7	0	0	0	7
26	R 9856	R 10066	P	10	8	0	1	0	7
27	R 9857	R 10067	P	11	11	0	1	0	10
28	R 9858	R 10068	P	12	12	0	0	1	11
29	R 9859	R 10069	P	8	8	0	0	0	8
30	R 9860	R 10070	P	10	10	0	0	0	10

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 19

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 4

GROUP: G2 DOSE: 200 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9861	R 10341	P	11	11	0	0	0	11
2	R 9862	R 10342	P	11	9	0	0	0	9
3	R 9863	R 10343	P	13	12	0	2	0	10
4	R 9864	R 10344	P	12	11	0	0	1	10
5	R 9865	R 10345	P	12	11	0	3	0	8
6	R 9866	R 10346	P	15	13	0	1	0	12
7	R 9867	R 10347	P	11	9	0	0	0	9
8	R 9868	R 10348	P	15	14	0	0	2	12
9	R 9869	R 10349	P	9	6	0	0	1	5
10	R 9870	R 10350	P	12	10	0	3	0	7
11	R 9871	R 10351	P	15	15	0	0	0	15
12	R 9872	R 10352	P	14	4	0	0	0	4
13	R 9873	R 10353	P	14	14	0	0	0	14
14	R 9874	R 10354	P	13	10	0	1	0	9
15	R 9875	R 10355	NP	–	–	–	–	–	–
16	R 9876	R 10356	P	13	12	0	1	1	10
17	R 9877	R 10357	P	13	11	0	1	0	10
18	R 9878	R 10358	P	10	10	0	2	0	8
19	R 9879	R 10359	P	9	9	0	0	1	8
20	R 9880	R 10360	P	9	9	0	1	0	8
21	R 9881	R 10361	P	9	9	0	0	0	9
22	R 9882	R 10362	P	11	11	0	0	0	11
23	R 9883	R 10363	P	10	8	0	0	0	8
24	R 9884	R 10364	P	12	11	0	1	2	8
25	R 9885	R 10365	P	10	10	0	0	0	10
26	R 9886	R 10366	P	11	11	0	0	0	11
27	R 9887	R 10367	P	10	10	0	0	1	9
28	R 9888	R 10368	P	13	12	0	0	0	12
29	R 9889	R 10369	P	16	15	0	0	0	15
30	R 9890	R 10370	P	11	11	0	0	2	9

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 20

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 4

GROUP: G3 DOSE: 1000 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9891	R 10641	P	10	5	5	0	0	0
2	R 9892	R 10642	P	10	2	0	2	0	0
3	R 9893	R 10643	NP	–	–	–	–	–	–
4	R 9894	R 10644	P	12	11	11	0	0	0
5	R 9895	R 10645	P	11	10	0	1	0	9
6	R 9896	R 10646	P	10	10	0	2	0	8
7	R 9897	R 10647	P	10	8	4	0	0	4
8	R 9898	R 10648	P	12	8	0	3	0	5
9	R 9899	R 10649	P	9	8	0	0	0	8
10	R 9900	R 10650	P	16	15	0	0	0	15
11	R 9901	R 10651	P	14	14	0	0	0	14
12	R 9902	R 10652	P	13	13	0	0	0	13
13	R 9903	R 10653	P	11	9	0	0	0	9
14	R 9904	R 10654	P	10	1	1	0	0	0
15	R 9905	R 10655	P	10	9	0	2	1	6
16	R 9906	R 10656	NP	–	–	–	–	–	–
17	R 9907	R 10657	P	8	8	0	0	0	8
18	R 9908	R 10658	P	9	4	0	1	0	3
19	R 9909	R 10659	NP	–	–	–	–	–	–
20	R 9910	R 10660	P	13	10	0	0	0	10
21	R 9911	R 10661	P	13	13	0	0	1	12
22	R 9912	R 10662	P	13	12	0	0	0	12
23	R 9913	R 10663	P	13	12	0	0	0	12
24	R 9914	R 10664	P	16	8	3	1	4	0
25	R 9915	R 10665	P	17	16	0	1	0	15
26	R 9916	R 10666	P	14	13	0	0	1	12
27	R 9917	R 10667	NP	–	–	–	–	–	–
28	R 9918	R 10668	P	17	13	0	0	0	13
29	R 9919	R 10669	P	12	11	0	1	3	7
30	R 9920	R 10670	P	14	10	0	2	0	8

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 21

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 4

GROUP: G4 DOSE: 5000 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9921	R 10941	P	10	10	0	0	0	10
2	R 9922	R 10942	NP	–	–	–	–	–	–
3	R 9923	R 10943	P	10	10	0	1	0	9
4	R 9924	R 10944	P	13	13	0	2	0	11
5	R 9925	R 10945	P	9	9	0	1	0	8
6	R 9926	R 10946	P	11	10	0	1	0	9
7	R 9927	R 10947	P	11	10	0	0	0	10
8	R 9928	R 10948	P	9	1	0	0	0	1
9	R 9929	R 10949	P	9	9	0	0	0	9
10	R 9930	R 10950	P	10	10	0	0	0	10
11	R 9931	R 10951	P	9	9	0	0	0	9
12	R 9932	R 10952	P	14	14	0	0	2	12
13	R 9933	R 10953	P	15	9	0	0	0	9
14	R 9934	R 10954	NP	–	–	–	–	–	–
15	R 9935	R 10955	P	9	9	0	0	0	9
16	R 9936	R 10956	NP	–	–	–	–	–	–
17	R 9937	R 10957	P	14	14	0	3	0	11
18	R 9938	R 10958	P	9	8	0	0	0	8
19	R 9939	R 10959	P	11	9	0	0	0	9
20	R 9940	R 10960	P	15	14	0	3	0	11
21	R 9941	R 10961	P	12	12	0	1	0	11
22	R 9942	R 10962	P	11	9	0	0	2	7
23	R 9943	R 10963	P	12	11	0	0	0	11
24	R 9944	R 10964	NP	–	–	–	–	–	–
25	R 9945	R 10965	P	16	15	0	2	0	13
26	R 9946	R 10966	P	9	5	0	1	0	4
27	R 9947	R 10967	P	11	10	0	0	0	10
28	R 9948	R 10968	P	19	16	0	5	0	11
29	R 9949	R 10969	P	13	9	0	0	0	9
30	R 9950	R 10970	P	12	10	0	1	0	9

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 22

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 5

GROUP: G1 DOSE: 0 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9831	R 10071	P	9	9	0	1	1	7
2	R 9832	R 10072	P	11	11	0	1	0	10
3	R 9833	R 10073	NP	-	-	-	-	-	-
4	R 9834	R 10074	P	11	10	0	0	0	10
5	R 9835	R 10075	P	13	12	0	0	1	11
6	R 9836	R 10076	P	13	10	0	0	0	10
7	R 9837	R 10077	P	11	10	0	0	1	9
8	R 9838	R 10078	P	14	13	0	0	3	10
9	R 9839	R 10079	P	11	11	0	1	0	10
10	R 9840	R 10080	P	15	13	0	0	0	13
11	R 9841	R 10081	P	10	9	0	0	0	9
12	R 9842	R 10082	P	11	11	0	0	0	11
13	R 9843	R 10083	P	10	10	0	1	0	9
14	R 9844	R 10084	P	9	9	0	0	0	9
15	R 9845	R 10085	P	10	10	0	0	0	10
16	R 9846	R 10086	P	12	6	0	0	0	6
17	R 9847	R 10087	P	13	13	0	0	0	13
18	R 9848	R 10088	P	13	12	0	1	0	11
19	R 9849	R 10089	NP	-	-	-	-	-	-
20	R 9850	R 10090	P	12	11	0	4	0	7
21	R 9851	R 10091	NP	-	-	-	-	-	-
22	R 9852	R 10092	P	14	13	0	0	0	13
23	R 9853	R 10093	P	11	9	0	0	0	9
24	R 9854	R 10094	P	12	12	0	2	0	10
25	R 9855	R 10095	P	11	11	0	0	0	11
26	R 9856	R 10096	P	14	13	0	2	0	11
27	R 9857	R 10097	P	12	12	0	2	4	6
28	R 9858	R 10098	P	11	9	0	0	0	9
29	R 9859	R 10099	P	11	10	0	0	1	9
30	R 9860	R 10100	P	12	12	0	1	1	10

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 23

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 5

GROUP: G2 DOSE: 200 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9861	R 10371	P	8	7	0	0	0	7
2	R 9862	R 10372	P	9	8	0	1	1	6
3	R 9863	R 10373	P	13	13	0	1	1	11
4	R 9864	R 10374	P	9	9	0	1	0	8
5	R 9865	R 10375	P	8	8	0	1	0	7
6	R 9866	R 10376	P	13	13	0	1	0	12
7	R 9867	R 10377	P	10	10	0	0	0	10
8	R 9868	R 10378	P	9	9	0	2	0	7
9	R 9869	R 10379	P	10	10	0	0	1	9
10	R 9870	R 10380	P	13	13	0	1	0	12
11	R 9871	R 10381	P	11	10	0	0	0	10
12	R 9872	R 10382	P	10	10	0	0	0	10
13	R 9873	R 10383	P	9	9	0	0	0	9
14	R 9874	R 10384	P	12	12	0	2	0	10
15	R 9875	R 10385	NP	–	–	–	–	–	–
16	R 9876	R 10386	P	10	9	0	0	0	9
17	R 9877	R 10387	P	10	10	0	1	0	9
18	R 9878	R 10388	P	10	10	0	1	0	9
19	R 9879	R 10389	P	15	15	0	1	2	12
20	R 9880	R 10390	P	12	12	0	0	0	12
21	R 9881	R 10391	P	10	10	0	0	0	10
22	R 9882	R 10392	P	13	13	0	3	0	10
23	R 9883	R 10393	P	10	10	0	0	0	10
24	R 9884	R 10394	P	11	11	0	1	0	10
25	R 9885	R 10395	P	12	12	0	2	0	10
26	R 9886	R 10396	P	9	9	0	0	1	8
27	R 9887	R 10397	P	10	10	0	0	0	10
28	R 9888	R 10398	P	11	11	0	1	0	10
29	R 9889	R 10399	P	11	11	0	0	0	11
30	R 9890	R 10400	P	10	10	0	0	2	8

P/NP:Pregnant/Non Pregnant D:Dead

APPENDIX 24

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 5

GROUP: G3 DOSE: 1000 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9891	R 10671	P	14	14	0	2	0	12
2	R 9892	R 10672	P	14	13	0	0	0	13
3	R 9893	R 10673	P	10	7	0	1	0	6
4	R 9894	R 10674	P	12	11	0	0	0	11
5	R 9895	R 10675	P	13	7	0	1	0	6
6	R 9896	R 10676	P	15	6	0	1	0	5
7	R 9897	R 10677	P	13	13	0	1	0	12
8	R 9898	R 10678	P	11	9	0	0	0	9
9	R 9899	R 10679	P	13	13	0	0	0	13
10	R 9900	R 10680	P	14	14	0	2	0	12
11	R 9901	R 10681	P	14	14	0	0	1	13
12	R 9902	R 10682	P	11	10	0	0	0	10
13	R 9903	R 10683	P	11	11	0	0	1	10
14	R 9904	R 10684	P	14	14	0	0	1	13
15	R 9905	R 10685	P	15	14	0	0	0	14
16	R 9906	R 10686	P	14	14	0	2	0	12
17	R 9907	R 10687	P	10	10	0	0	0	10
18	R 9908	R 10688	P	12	10	0	5	0	5
19	R 9909	R 10689	P	11	11	0	0	1	10
20	R 9910	R 10690	P	12	12	0	0	1	11
21	R 9911	R 10691	NP	–	–	–	–	–	–
22	R 9912	R 10692	P	15	15	0	0	0	15
23	R 9913	R 10693	P	12	12	0	1	0	11
24	R 9914	R 10694	P	5	2	0	0	0	2
25	R 9915	R 10695	P	11	9	0	0	0	9
26	R 9916	R 10696	NP	–	–	–	–	–	–
27	R 9917	R 10697	P	10	7	0	6	0	1
28	R 9918	R 10698	P	13	13	0	0	0	13
29	R 9919	R 10699	P	13	11	0	1	2	8
30	R 9920	R 10700	P	14	14	0	1	0	13

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 25

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 5

GROUP: G4 DOSE: 5000 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9921	R 10971	P	13	13	0	0	0	13
2	R 9922	R 10972	P	11	11	0	0	0	11
3	R 9923	R 10973	NP	–	–	–	–	–	–
4	R 9924	R 10974	P	10	4	0	1	0	3
5	R 9925	R 10975	P	14	14	0	1	0	13
6	R 9926	R 10976	P	14	14	0	0	0	14
7	R 9927	R 10977	P	11	11	0	1	0	10
8	R 9928	R 10978	P	13	10	0	0	1	9
9	R 9929	R 10979	P	12	11	0	0	0	11
10	R 9930	R 10980	P	13	13	0	0	0	13
11	R 9931	R 10981	P	12	12	0	1	0	11
12	R 9932	R 10982	P	11	11	0	0	0	11
13	R 9933	R 10983	P	11	11	0	0	0	11
14	R 9934	R 10984	P	10	6	0	5	0	1
15	R 9935	R 10985	P	11	5	0	1	0	4
16	R 9936	R 10986	P	11	11	0	0	0	11
17	R 9937	R 10987	P	15	13	0	0	0	13
18	R 9938	R 10988	P	12	12	0	1	0	11
19	R 9939	R 10989	P	14	14	0	2	0	12
20	R 9940	R 10990	P	13	13	0	1	0	12
21	R 9941	R 10991	P	13	6	1	0	0	5
22	R 9942	R 10992	P	12	4	0	0	0	4
23	R 9943	R 10993	P	13	13	0	0	0	13
24	R 9944	R 10994	P	10	10	0	0	0	10
25	R 9945	R 10995	P	13	12	0	1	0	11
26	R 9946	R 10996	NP	–	–	–	–	–	–
27	R 9947	R 10997	NP	–	–	–	–	–	–
28	R 9948	R 10998	P	13	13	0	0	0	13
29	R 9949	R 10999	P	12	12	0	0	7	5
30	R 9950	R 11000	P	10	10	0	1	0	9

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 26

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 6

GROUP: G1 DOSE: 0 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9831	R 10101	P	9	7	0	0	0	7
2	R 9832	R 10102	P	10	8	0	0	0	8
3	R 9833	R 10103	NP	-	-	-	-	-	-
4	R 9834	R 10104	P	10	10	0	1	0	9
5	R 9835	R 10105	P	12	12	0	0	1	11
6	R 9836	R 10106	P	13	10	0	0	0	10
7	R 9837	R 10107	P	10	10	0	0	4	6
8	R 9838	R 10108	P	8	8	0	0	1	7
9	R 9839	R 10109	P	9	9	0	1	1	7
10	R 9840	R 10110	P	11	10	0	0	0	10
11	R 9841	R 10111	P	12	11	0	0	0	11
12	R 9842	R 10112	P	8	8	0	0	0	8
13	R 9843	R 10113	NP	-	-	-	-	-	-
14	R 9844	R 10114	P	14	13	0	2	0	11
15	R 9845	R 10115	P	10	9	0	0	0	9
16	R 9846	R 10116	P	9	9	0	0	0	9
17	R 9847	R 10117	P	14	14	0	1	0	13
18	R 9848	R 10118	P	14	13	0	1	0	12
19	R 9849	R 10119	P	13	11	0	1	3	7
20	R 9850	R 10120	P	11	6	0	0	0	6
21	R 9851	R 10121	NP	-	-	-	-	-	-
22	R 9852	R 10122	P	10	9	0	1	0	8
23	R 9853	R 10123	P	12	12	0	0	0	12
24	R 9854	R 10124	P	14	11	0	0	1	10
25	R 9855	R 10125	P	13	12	0	0	0	12
26	R 9856	R 10126	P	12	12	0	1	0	11
27	R 9857	R 10127	P	12	11	0	0	0	11
28	R 9858	R 10128	P	16	16	0	1	1	14
29	R 9859	R 10129	P	11	10	0	0	0	10
30	R 9860	R 10130	P	12	11	0	0	0	11

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 27

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 6

GROUP: G2 DOSE: 200 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9861	R 10401	P	12	12	0	0	0	12
2	R 9862	R 10402	P	10	9	0	1	0	8
3	R 9863	R 10403	NP	-	-	-	-	-	-
4	R 9864	R 10404	P	10	10	0	2	0	8
5	R 9865	R 10405	P	7	7	0	0	0	7
6	R 9866	R 10406	P	12	11	0	0	0	11
7	R 9867	R 10407	P	8	8	0	0	0	8
8	R 9868	R 10408	P	11	11	0	1	0	10
9	R 9869	R 10409	P	12	12	0	0	1	11
10	R 9870	R 10410	P	8	8	0	0	1	7
11	R 9871	R 10411	P	9	9	0	1	0	8
12	R 9872	R 10412	P	11	11	0	0	0	11
13	R 9873	R 10413	P	13	12	0	0	0	12
14	R 9874	R 10414	P	16	16	0	1	1	14
15	R 9875	R 10415	P	8	8	0	0	0	8
16	R 9876	R 10416	NP	-	-	-	-	-	-
17	R 9877	R 10417	P	12	12	0	1	0	11
18	R 9878	R 10418	P	12	12	0	0	0	12
19	R 9879	R 10419	P	10	10	0	0	1	9
20	R 9880	R 10420	P	10	10	0	2	0	8
21	R 9881	R 10421	P	13	11	0	0	0	11
22	R 9882	R 10422	NP	-	-	-	-	-	-
23	R 9883	R 10423	P	14	12	0	0	0	12
24	R 9884	R 10424	P	12	12	0	0	0	12
25	R 9885	R 10425	P	10	5	0	0	0	5
26	R 9886	R 10426	P	13	11	0	0	0	11
27	R 9887	R 10427	P	16	16	0	3	0	13
28	R 9888	R 10428	P	12	5	0	0	1	4
29	R 9889	R 10429	P	9	9	0	0	0	9
30	R 9890	R 10430	P	12	12	0	0	0	12

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 28

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 6

GROUP: G3 DOSE: 1000 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9891	R 10701	P	9	4	0	0	3	1
2	R 9892	R 10702	P	14	14	0	0	0	14
3	R 9893	R 10703	P	7	2	0	1	0	1
4	R 9894	R 10704	P	11	9	0	1	0	8
5	R 9895	R 10705	NP	–	–	–	–	–	–
6	R 9896	R 10706	P	10	10	0	0	0	10
7	R 9897	R 10707	P	9	9	0	0	0	9
8	R 9898	R 10708	NP	–	–	–	–	–	–
9	R 9899	R 10709	P	12	11	0	1	0	10
10	R 9900	R 10710	P	12	9	0	0	0	9
11	R 9901	R 10711	P	12	12	0	0	2	10
12	R 9902	R 10712	P	11	11	0	0	1	10
13	R 9903	R 10713	P	10	9	0	0	0	9
14	R 9904	R 10714	P	13	13	0	1	1	11
15	R 9905	R 10715	P	10	10	0	0	0	10
16	R 9906	R 10716	NP	–	–	–	–	–	–
17	R 9907	R 10717	P	9	9	0	0	0	9
18	R 9908	R 10718	P	13	13	0	1	0	12
19	R 9909	R 10719	NP	–	–	–	–	–	–
20	R 9910	R 10720	P	14	14	0	1	0	13
21	R 9911	R 10721	P	14	14	0	1	0	13
22	R 9912	R 10722	P	11	11	0	0	0	11
23	R 9913	R 10723	P	12	12	0	1	0	11
24	R 9914	R 10724	P	12	12	0	2	0	10
25	R 9915	R 10725	P	11	11	0	0	0	11
26	R 9916	R 10726	P	13	13	0	1	0	12
27	R 9917	R 10727	P	12	12	0	0	0	12
28	R 9918	R 10728	P	12	12	0	0	0	12
29	R 9919	R 10729	P	12	12	0	0	2	10
30	R 9920	R 10730	P	12	11	0	1	0	10

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 29

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 6

GROUP: G4 DOSE: 5000 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9921	R 11001	P	13	13	0	1	0	12
2	R 9922	R 11002	P	10	10	0	0	0	10
3	R 9923	R 11003	P	14	12	0	3	0	9
4	R 9924	R 11004	P	14	13	0	1	0	12
5	R 9925	R 11005	P	10	10	0	1	0	9
6	R 9926	R 11006	P	20	10	0	0	0	10
7	R 9927	R 11007	P	11	6	0	1	0	5
8	R 9928	R 11008	P	15	13	0	1	0	12
9	R 9929	R 11009	P	12	12	0	1	0	11
10	R 9930	R 11010	P	13	12	0	2	0	10
11	R 9931	R 11011	P	11	11	0	1	0	10
12	R 9932	R 11012	P	12	12	0	0	0	12
13	R 9933	R 11013	P	9	4	0	0	0	4
14	R 9934	R 11014	P	10	10	0	0	0	10
15	R 9935	R 11015	P	13	11	0	0	0	11
16	R 9936	R 11016	P	15	15	0	2	0	13
17	R 9937	R 11017	P	10	10	0	0	0	10
18	R 9938	R 11018	P	7	7	0	0	0	7
19	R 9939	R 11019	P	12	9	0	4	0	5
20	R 9940	R 11020	NP	-	-	-	-	-	-
21	R 9941	R 11021	P	9	7	0	5	0	2
22	R 9942	R 11022	P	12	12	0	1	0	11
23	R 9943	R 11023	P	10	4	0	0	0	4
24	R 9944	R 11024	P	10	7	0	0	0	7
25	R 9945	R 11025	P	11	11	0	2	0	9
26	R 9946	R 11026	P	11	11	0	5	0	6
27	R 9947	R 11027	P	11	10	0	1	0	9
28	R 9948	R 11028	P	12	12	0	0	0	12
29	R 9949	R 11029	P	10	10	0	0	0	10
30	R 9950	R 11030	P	11	10	0	0	0	10

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 30

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 7

GROUP: G1 DOSE: 0 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9831	R 10131	P	15	15	0	0	1	14
2	R 9832	R 10132	P	14	14	0	0	1	13
3	R 9833	R 10133	P	13	12	0	2	1	9
4	R 9834	R 10134	P	14	14	0	3	2	9
5	R 9835	R 10135	P	15	15	0	0	1	14
6	R 9836	R 10136	P	14	11	0	1	1	9
7	R 9837	R 10137	P	14	13	0	2	2	9
8	R 9838	R 10138	P	16	13	0	0	1	12
9	R 9839	R 10139	P	15	15	0	0	1	14
10	R 9840	R 10140	P	10	10	0	0	2	8
11	R 9841	R 10141	P	16	15	0	0	0	15
12	R 9842	R 10142	P	17	17	0	0	1	16
13	R 9843	R 10143	P	14	13	0	0	0	13
14	R 9844	R 10144	P	11	8	0	0	0	8
15	R 9845	R 10145	P	17	14	0	2	1	11
16	R 9846	R 10146	P	13	11	0	0	0	11
17	R 9847	R 10147	NP	-	-	-	-	-	-
18	R 9848	R 10148	P	16	16	0	0	0	16
19	R 9849	R 10149	P	17	17	0	0	1	16
20	R 9850	R 10150	P	12	12	0	0	2	10
21	R 9851	R 10151	NP	-	-	-	-	-	-
22	R 9852	R 10152	P	19	17	0	1	0	16
23	R 9853	R 10153	P	15	8	0	0	1	7
24	R 9854	R 10154	P	14	14	0	0	0	14
25	R 9855	R 10155	P	14	14	0	0	0	14
26	R 9856	R 10156	P	14	14	0	0	0	14
27	R 9857	R 10157	P	13	13	0	0	0	13
28	R 9858	R 10158	P	16	13	0	0	0	13
29	R 9859	R 10159	P	17	16	0	1	0	15
30	R 9860	R 10160	P	14	13	0	0	2	11

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 31

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 7

GROUP: G2 DOSE: 200 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9861	R 10431	P	13	7	0	0	0	7
2	R 9862	R 10432	P	12	2	0	1	0	1
3	R 9863	R 10433	P	15	13	0	0	4	9
4	R 9864	R 10434	P	13	2	0	2	0	0
5	R 9865	R 10435	P	10	9	0	1	1	7
6	R 9866	R 10436	NP	-	-	-	-	-	-
7	R 9867	R 10437	P	13	13	0	0	1	12
8	R 9868	R 10438	P	12	4	0	1	0	3
9	R 9869	R 10439	NP	-	-	-	-	-	-
10	R 9870	R 10440	P	15	14	0	1	0	13
11	R 9871	R 10441	P	12	10	0	0	0	10
12	R 9872	R 10442	P	14	10	0	1	0	9
13	R 9873	R 10443	P	14	12	0	1	0	11
14	R 9874	R 10444	P	13	12	0	0	1	11
15	R 9875	R 10445	NP	-	-	-	-	-	-
16	R 9876	R 10446	P	15	15	0	0	4	11
17	R 9877	R 10447	P	13	11	0	0	1	10
18	R 9878	R 10448	P	12	12	0	1	1	10
19	R 9879	R 10449	P	14	14	0	0	0	14
20	R 9880	R 10450	NP	-	-	-	-	-	-
21	R 9881	R 10451	P	8	8	0	0	2	6
22	R 9882	R 10452	NP	-	-	-	-	-	-
23	R 9883	R 10453	P	11	11	0	0	0	11
24	R 9884	R 10454	NP	-	-	-	-	-	-
25	R 9885	R 10455	NP	-	-	-	-	-	-
26	R 9886	R 10456	P	13	11	0	1	1	9
27	R 9887	R 10457	P	11	11	0	0	1	10
28	R 9888	R 10458	P	11	11	0	0	0	11
29	R 9889	R 10459	P	10	10	1	1	0	8
30	R 9890	R 10460	P	11	10	0	0	0	10

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 32

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 7

GROUP: G3 DOSE: 1000 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9891	R 10731	P	10	10	0	0	0	10
2	R 9892	R 10732	P	10	5	0	0	1	4
3	R 9893	R 10733	P	11	6	0	0	1	5
4	R 9894	R 10734	P	9	9	0	0	1	8
5	R 9895	R 10735	NP	-	-	-	-	-	-
6	R 9896	R 10736	P	17	16	0	0	1	15
7	R 9897	R 10737	P	12	10	0	4	0	6
8	R 9898	R 10738	P	11	11	0	1	0	10
9	R 9899	R 10739	P	14	14	0	1	1	12
10	R 9900	R 10740	P	10	9	0	0	0	9
11	R 9901	R 10741	P	11	10	0	1	0	9
12	R 9902	R 10742	P	13	13	0	0	0	13
13	R 9903	R 10743	P	13	13	0	0	2	11
14	R 9904	R 10744	P	14	11	0	1	0	10
15	R 9905	R 10745	P	12	12	0	0	1	11
16	R 9906	R 10746	P	11	11	0	2	0	9
17	R 9907	R 10747	P	12	12	0	0	1	11
18	R 9908	R 10748	P	17	2	0	2	0	0
19	R 9909	R 10749	P	16	16	0	0	3	13
20	R 9910	R 10750	P	14	14	0	0	0	14
21	R 9911	R 10751	P	18	18	0	2	0	16
22	R 9912	R 10752	P	13	13	0	0	2	11
23	R 9913	R 10753	P	14	13	0	0	0	13
24	R 9914	R 10754	P	15	15	0	1	1	13
25	R 9915	R 10755	P	11	2	0	0	0	2
26	R 9916	R 10756	P	16	15	0	0	0	15
27	R 9917	R 10757	P	14	13	0	1	0	12
28	R 9918	R 10758	P	13	9	0	2	0	7
29	R 9919	R 10759	P	13	13	0	0	0	13
30	R 9920	R 10760	P	9	4	0	0	0	4

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 33

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 7

GROUP: G4 DOSE: 5000 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9921	R 11031	P	10	9	0	1	0	8
2	R 9922	R 11032	P	11	4	0	2	0	2
3	R 9923	R 11033	P	12	12	0	0	0	12
4	R 9924	R 11034	P	12	12	0	0	0	12
5	R 9925	R 11035	P	10	9	0	1	0	8
6	R 9926	R 11036	P	11	10	0	3	0	7
7	R 9927	R 11037	P	10	10	0	1	0	9
8	R 9928	R 11038	P	12	12	0	4	0	8
9	R 9929	R 11039	P	14	12	0	2	0	10
10	R 9930	R 11040	P	10	10	0	0	0	10
11	R 9931	R 11041	P	12	12	0	1	0	11
12	R 9932	R 11042	P	13	13	0	1	0	12
13	R 9933	R 11043	P	13	8	0	3	0	5
14	R 9934	R 11044	P	13	12	0	1	0	11
15	R 9935	R 11045	P	12	12	0	2	0	10
16	R 9936	R 11046	P	12	11	0	0	0	11
17	R 9937	R 11047	P	10	8	0	0	0	8
18	R 9938	R 11048	P	13	13	0	2	0	11
19	R 9939	R 11049	NP	-	-	-	-	-	-
20	R 9940	R 11050	NP	-	-	-	-	-	-
21	R 9941	R 11051	NP	-	-	-	-	-	-
22	R 9942	R 11052	NP	-	-	-	-	-	-
23	R 9943	R 11053	NP	-	-	-	-	-	-
24	R 9944	R 11054	P	12	10	0	0	0	10
25	R 9945	R 11055	P	10	10	0	0	0	10
26	R 9946	R 11056	P	8	3	0	0	0	3
27	R 9947	R 11057	P	14	10	0	1	0	9
28	R 9948	R 11058	P	9	9	0	1	0	8
29	R 9949	R 11059	P	11	11	0	0	0	11
30	R 9950	R 11060	P	8	5	0	0	0	5

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 34

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 8

GROUP: G1 DOSE: 0 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9831	R 10161	P	8	6	0	0	0	6
2	R 9832	R 10162	P	15	15	0	1	2	12
3	R 9833	R 10163	P	12	11	0	1	1	9
4	R 9834	R 10164	P	13	9	0	0	2	7
5	R 9835	R 10165	P	14	4	0	0	0	4
6	R 9836	R 10166	P	11	7	0	0	3	4
7	R 9837	R 10167	P	14	10	0	0	0	10
8	R 9838	R 10168	P	12	11	0	0	1	10
9	R 9839	R 10169	P	14	14	0	0	1	13
10	R 9840	R 10170	P	13	13	0	0	0	13
11	R 9841	R 10171	P	15	15	0	0	0	15
12	R 9842	R 10172	P	16	15	0	1	1	13
13	R 9843	R 10173	P	10	9	0	0	2	7
14	R 9844	R 10174	P	11	11	0	6	1	4
15	R 9845	R 10175	P	14	14	0	0	1	13
16	R 9846	R 10176	P	16	15	0	0	0	15
17	R 9847	R 10177	P	16	15	0	0	0	15
18	R 9848	R 10178	P	17	17	0	0	0	17
19	R 9849	R 10179	P	11	4	0	2	0	2
20	R 9850	R 10180	P	12	12	0	0	1	11
21	R 9851	R 10181	NP	–	–	–	–	–	–
22	R 9852	R 10182	P	13	13	0	2	0	11
23	R 9853	R 10183	P	16	16	0	0	2	14
24	R 9854	R 10184	P	12	10	0	1	0	9
25	R 9855	R 10185	P	15	13	0	0	2	13
26	R 9856	R 10186	NP	–	–	–	–	–	–
27	R 9857	R 10187	P	12	12	0	0	1	11
28	R 9858	R 10188	P	13	12	0	0	0	13
29	R 9859	R 10189	P	12	12	0	0	1	11
30	R 9860	R 10190	P	12	12	0	2	0	10

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 35

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 8

GROUP: G2 DOSE: 200 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9861	R 10461	P	9	8	0	0	3	5
2	R 9862	R 10462	NP	–	–	–	–	–	–
3	R 9863	R 10463	P	11	10	0	0	1	9
4	R 9864	R 10464	P	12	12	0	0	1	11
5	R 9865	R 10465	P	14	13	0	0	0	13
6	R 9866	R 10466	P	16	16	0	0	0	16
7	R 9867	R 10467	P	15	10	0	0	0	10
8	R 9868	R 10468	P	17	16	0	0	1	15
9	R 9869	R 10469	P	15	14	0	0	0	14
10	R 9870	R 10470	P	12	12	0	0	1	11
11	R 9871	R 10471	P	18	14	0	0	0	14
12	R 9872	R 10472	NP	–	–	–	–	–	–
13	R 9873	R 10473	P	15	14	0	0	0	14
14	R 9874	R 10474	P	11	11	0	0	2	9
15	R 9875	R 10475	P	12	12	0	1	0	11
16	R 9876	R 10476	P	15	15	0	0	1	14
17	R 9877	R 10477	P	14	14	0	0	0	14
18	R 9878	R 10478	P	16	14	0	0	1	13
19	R 9879	R 10479	P	14	14	0	0	1	13
20	R 9880	R 10480	NP	–	–	–	–	–	–
21	R 9881	R 10481	P	12	7	0	0	2	5
22	R 9882	R 10482	P	15	14	0	1	0	13
23	R 9883	R 10483	P	17	13	0	0	1	12
24	R 9884	R 10484	P	15	10	0	0	0	10
25	R 9885	R 10485	P	14	12	0	0	0	12
26	R 9886	R 10486	P	14	10	0	0	0	10
27	R 9887	R 10487	P	10	1	0	0	1	0
28	R 9888	R 10488	P	12	12	0	0	0	12
29	R 9889	R 10489	P	15	14	0	1	0	13
30	R 9890	R 10490	NP	–	–	–	–	–	–

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 36

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 8

GROUP: G3 DOSE: 1000 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9891	R 10761	P	11	10	0	0	0	10
2	R 9892	R 10762	P	11	10	0	1	0	9
3	R 9893	R 10763	P	12	11	0	2	0	9
4	R 9894	R 10764	P	10	10	0	1	0	9
5	R 9895	R 10765	P	10	8	0	0	0	8
6	R 9896	R 10766	P	12	11	0	2	1	8
7	R 9897	R 10767	P	10	10	0	0	0	10
8	R 9898	R 10768	P	10	9	0	0	0	9
9	R 9899	R 10769	P	11	10	0	0	1	9
10	R 9900	R 10770	P	8	8	0	0	0	8
11	R 9901	R 10771	P	10	10	0	2	1	7
12	R 9902	R 10772	P	11	10	0	1	0	9
13	R 9903	R 10773	P	10	10	0	0	0	10
14	R 9904	R 10774	P	13	12	0	1	0	11
15	R 9905	R 10775	NP	-	-	-	-	-	-
16	R 9906	R 10776	P	9	9	0	1	2	6
17	R 9907	R 10777	P	10	10	0	0	1	9
18	R 9908	R 10778	P	12	9	0	0	0	9
19	R 9909	R 10779	P	13	12	0	0	1	11
20	R 9910	R 10780	P	13	13	0	1	0	12
21	R 9911	R 10781	P	13	13	0	0	0	13
22	R 9912	R 10782	P	12	11	0	0	0	11
23	R 9913	R 10783	P	11	11	0	0	0	11
24	R 9914	R 10784	NP	-	-	-	-	-	-
25	R 9915	R 10785	NP	-	-	-	-	-	-
26	R 9916	R 10786	P	11	11	0	3	0	8
27	R 9917	R 10787	P	10	9	0	1	0	8
28	R 9918	R 10788	P	12	12	0	0	0	12
29	R 9919	R 10789	P	13	13	0	2	0	11
30	R 9920	R 10790	P	10	9	0	0	0	9

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 37

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 8

GROUP: G4 DOSE: 5000 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9921	R 11061	P	11	11	0	1	0	10
2	R 9922	R 11062	NP	–	–	–	–	–	–
3	R 9923	R 11063	P	10	10	0	1	0	9
4	R 9924	R 11064	P	10	10	0	0	0	10
5	R 9925	R 11065	P	11	10	0	1	0	9
6	R 9926	R 11066	P	11	10	0	0	0	10
7	R 9927	R 11067	P	11	11	0	3	0	8
8	R 9928	R 11068	P	12	11	0	0	0	11
9	R 9929	R 11069	P	9	9	0	2	0	7
10	R 9930	R 11070	P	16	3	0	3	0	0
11	R 9931	R 11071	P	11	11	0	1	0	10
12	R 9932	R 11072	P	12	12	0	0	0	12
13	R 9933	R 11073	P	12	11	0	1	0	10
14	R 9934	R 11074	P	7	7	0	0	0	7
15	R 9935	R 11075	P	8	6	0	1	0	5
16	R 9936	R 11076	P	9	9	0	1	0	8
17	R 9937	R 11077	P	10	10	0	0	0	10
18	R 9938	R 11078	P	12	12	0	1	0	11
19	R 9939	R 11079	P	10	10	0	5	0	5
20	R 9940	R 11080	P	11	10	0	3	0	7
21	R 9941	R 11081	P	12	12	0	0	0	12
22	R 9942	R 11082	P	9	9	0	0	0	9
23	R 9943	R 11083	P	9	8	0	0	1	7
24	R 9944	R 11084	P	11	9	0	2	0	7
25	R 9945	R 11085	P	10	9	0	0	0	9
26	R 9946	R 11086	P	11	4	0	0	0	4
27	R 9947	R 11087	P	11	11	0	1	0	10
28	R 9948	R 11088	P	11	10	0	0	0	10
29	R 9949	R 11089	P	15	12	0	0	0	12
30	R 9950	R 11090	P	6	6	0	2	0	4

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 38

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 9

GROUP: G1 DOSE: 0 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9831	R 10191	P	19	17	0	0	2	15
2	R 9832	R 10192	P	13	7	0	0	0	7
3	R 9833	R 10193	P	17	12	0	1	0	11
4	R 9834	R 10194	P	18	17	0	0	1	16
5	R 9835	R 10195	P	17	14	0	0	1	13
6	R 9836	R 10196	P	15	14	0	0	7	7
7	R 9837	R 10197	P	11	11	0	0	1	10
8	R 9838	R 10198	P	15	12	0	0	2	10
9	R 9839	R 10199	P	10	9	0	0	0	9
10	R 9840	R 10200	P	13	10	0	0	1	9
11	R 9841	R 10201	D	0	0	0	0	0	0
12	R 9842	R 10202	P	15	13	0	0	2	11
13	R 9843	R 10203	P	12	10	0	0	3	7
14	R 9844	R 10204	P	18	16	0	0	1	15
15	R 9845	R 10205	P	11	3	0	0	1	2
16	R 9846	R 10206	NP	–	–	–	–	–	–
17	R 9847	R 10207	NP	–	–	–	–	–	–
18	R 9848	R 10208	P	14	14	0	0	4	10
19	R 9849	R 10209	P	13	13	0	1	2	10
20	R 9850	R 10210	NP	–	–	–	–	–	–
21	R 9851	R 10211	NP	–	–	–	–	–	–
22	R 9852	R 10212	NP	–	–	–	–	–	–
23	R 9853	R 10213	P	15	15	0	0	2	13
24	R 9854	R 10214	P	10	2	0	0	0	2
25	R 9855	R 10215	P	13	13	0	0	0	13
26	R 9856	R 10216	P	15	14	0	0	0	14
27	R 9857	R 10217	P	15	14	0	0	1	13
28	R 9858	R 10218	P	12	12	0	0	1	11
29	R 9859	R 10219	P	16	13	0	1	2	10
30	R 9860	R 10220	P	13	12	0	0	1	11

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 39

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 9

GROUP: G2 DOSE: 200 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9861	R 10491	P	11	11	0	0	1	10
2	R 9862	R 10492	NP	–	–	–	–	–	–
3	R 9863	R 10493	P	12	12	0	0	0	12
4	R 9864	R 10494	P	12	12	0	0	0	12
5	R 9865	R 10495	P	14	13	0	3	0	10
6	R 9866	R 10496	P	15	14	0	0	0	14
7	R 9867	R 10497	P	12	8	0	0	1	7
8	R 9868	R 10498	P	11	6	0	5	1	0
9	R 9869	R 10499	P	6	6	0	0	0	6
10	R 9870	R 10500	P	10	9	0	0	0	9
11	R 9871	R 10501	P	16	15	0	1	0	14
12	R 9872	R 10502	P	14	14	0	2	1	11
13	R 9873	R 10503	P	11	6	0	2	1	3
14	R 9874	R 10504	P	8	8	0	1	2	5
15	R 9875	R 10505	P	15	13	0	0	0	13
16	R 9876	R 10506	P	12	12	0	0	2	10
17	R 9877	R 10507	P	12	12	0	4	3	5
18	R 9878	R 10508	P	13	13	0	0	0	13
19	R 9879	R 10509	P	12	12	0	0	2	10
20	R 9880	R 10510	P	13	12	0	0	0	12
21	R 9881	R 10511	P	12	11	0	0	3	8
22	R 9882	R 10512	NP	–	–	–	–	–	–
23	R 9883	R 10513	P	14	10	0	1	0	9
24	R 9884	R 10514	NP	–	–	–	–	–	–
25	R 9885	R 10515	P	11	11	0	0	0	11
26	R 9886	R 10516	NP	–	–	–	–	–	–
27	R 9887	R 10517	P	10	10	0	0	0	10
28	R 9888	R 10518	P	13	13	0	2	0	11
29	R 9889	R 10519	P	12	12	0	0	0	12
30	R 9890	R 10520	P	10	10	0	0	1	9

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 40

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 9

GROUP: G3 DOSE: 1000 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9891	R 10791	P	9	9	0	0	0	9
2	R 9892	R 10792	P	9	9	0	0	0	9
3	R 9893	R 10793	P	12	12	0	0	0	12
4	R 9894	R 10794	P	11	10	0	0	0	10
5	R 9895	R 10795	P	12	12	0	0	0	12
6	R 9896	R 10796	P	11	10	0	2	0	8
7	R 9897	R 10797	P	10	10	0	0	0	10
8	R 9898	R 10798	P	9	5	0	0	0	5
9	R 9899	R 10799	P	12	11	0	1	0	10
10	R 9900	R 10800	P	11	11	0	0	0	11
11	R 9901	R 10801	P	10	8	0	0	1	7
12	R 9902	R 10802	P	11	10	0	0	1	9
13	R 9903	R 10803	P	11	11	0	0	2	9
14	R 9904	R 10804	P	15	7	0	2	0	5
15	R 9905	R 10805	P	7	4	0	0	0	4
16	R 9906	R 10806	P	12	11	0	0	0	11
17	R 9907	R 10807	P	10	9	0	0	0	9
18	R 9908	R 10808	P	10	10	0	1	1	8
19	R 9909	R 10809	P	12	12	0	0	1	11
20	R 9910	R 10810	P	10	10	0	0	0	10
21	R 9911	R 10811	NP	-	-	-	-	-	-
22	R 9912	R 10812	NP	-	-	-	-	-	-
23	R 9913	R 10813	P	11	10	0	0	0	10
24	R 9914	R 10814	P	9	9	0	0	0	9
25	R 9915	R 10815	P	9	9	0	0	1	8
26	R 9916	R 10816	P	14	14	0	1	0	13
27	R 9917	R 10817	P	9	8	0	2	0	6
28	R 9918	R 10818	P	9	7	0	0	1	6
29	R 9919	R 10819	P	11	10	0	0	0	10
30	R 9920	R 10820	P	10	10	0	0	0	10

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 41

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 9

GROUP: G4 DOSE: 5000 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9921	R 11091	P	10	10	0	0	0	10
2	R 9922	R 11092	P	10	4	0	0	0	4
3	R 9923	R 11093	P	12	12	0	0	0	12
4	R 9924	R 11094	P	13	12	0	0	0	12
5	R 9925	R 11095	P	11	11	0	1	0	10
6	R 9926	R 11096	P	13	12	0	1	0	11
7	R 9927	R 11097	P	13	13	0	3	0	10
8	R 9928	R 11098	P	11	11	0	1	0	10
9	R 9929	R 11099	P	11	10	0	2	0	8
10	R 9930	R 11100	P	12	10	0	1	0	9
11	R 9931	R 11101	P	14	14	0	3	0	11
12	R 9932	R 11102	P	10	9	0	1	0	8
13	R 9933	R 11103	P	14	13	0	1	0	12
14	R 9934	R 11104	P	11	7	0	2	0	5
15	R 9935	R 11105	P	13	12	0	1	0	11
16	R 9936	R 11106	P	11	2	0	0	0	2
17	R 9937	R 11107	P	15	15	0	0	0	15
18	R 9938	R 11108	P	14	14	0	1	0	13
19	R 9939	R 11109	P	13	13	0	0	0	13
20	R 9940	R 11110	P	11	11	0	1	0	10
21	R 9941	R 11111	P	12	12	0	0	0	12
22	R 9942	R 11112	P	15	15	0	0	0	15
23	R 9943	R 11113	P	10	10	0	0	0	10
24	R 9944	R 11114	P	12	12	0	0	0	12
25	R 9945	R 11115	P	12	12	0	0	0	12
26	R 9946	R 11116	P	13	13	0	1	0	12
27	R 9947	R 11117	P	13	12	0	3	0	9
28	R 9948	R 11118	P	10	9	0	0	0	9
29	R 9949	R 11119	P	11	11	0	2	0	9
30	R 9950	R 11120	P	14	12	0	1	0	11

P/NP:Pregnant/Non Pregnant D:Dead

APPENDIX 42

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 10

GROUP: G1 DOSE: 0 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9831	R 10221	P	15	15	0	0	0	15
2	R 9832	R 10222	P	10	10	0	0	1	9
3	R 9833	R 10223	NP	–	–	–	–	–	–
4	R 9834	R 10224	P	13	12	0	0	0	12
5	R 9835	R 10225	P	14	14	0	3	0	11
6	R 9836	R 10226	P	12	11	0	1	0	10
7	R 9837	R 10227	P	14	12	0	0	0	12
8	R 9838	R 10228	P	14	13	0	0	0	13
9	R 9839	R 10229	P	11	4	0	0	0	4
10	R 9840	R 10230	P	13	12	0	1	0	11
11	R 9841	R 10231	P	12	12	0	0	0	12
12	R 9842	R 10232	P	13	11	0	1	1	9
13	R 9843	R 10233	P	16	13	0	1	0	12
14	R 9844	R 10234	P	8	5	0	0	0	5
15	R 9845	R 10235	P	11	9	0	1	0	8
16	R 9846	R 10236	NP	–	–	–	–	–	–
17	R 9847	R 10237	P	13	13	0	0	2	11
18	R 9848	R 10238	P	13	10	0	1	0	9
19	R 9849	R 10239	NP	–	–	–	–	–	–
20	R 9850	R 10240	P	8	8	0	0	0	8
21	R 9851	R 10241	P	15	14	0	1	0	13
22	R 9852	R 10242	P	12	12	0	2	0	10
23	R 9853	R 10243	NP	–	–	–	–	–	–
24	R 9854	R 10244	P	9	8	0	0	0	8
25	R 9855	R 10245	P	12	10	0	1	0	9
26	R 9856	R 10246	NP	–	–	–	–	–	–
27	R 9857	R 10247	P	10	9	0	0	0	9
28	R 9858	R 10248	P	11	10	0	0	0	10
29	R 9859	R 10249	P	10	10	0	0	0	10
30	R 9860	R 10250	P	14	13	0	0	0	13

P/NP:Pregnant/Non Pregnant D:Dead

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APPENDIX 43

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 10

GROUP: G2 DOSE: 200 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9861	R 10521	P	14	14	0	0	0	14
2	R 9862	R 10522	P	12	11	0	1	0	10
3	R 9863	R 10523	P	13	13	0	0	0	13
4	R 9864	R 10524	P	17	17	0	0	3	14
5	R 9865	R 10525	P	12	12	0	1	0	11
6	R 9866	R 10526	P	13	13	0	0	0	13
7	R 9867	R 10527	P	11	11	0	1	0	10
8	R 9868	R 10528	P	12	10	0	1	1	8
9	R 9869	R 10529	P	12	11	0	0	0	11
10	R 9870	R 10530	P	13	11	0	0	1	10
11	R 9871	R 10531	P	10	9	0	0	0	9
12	R 9872	R 10532	P	10	10	0	0	0	10
13	R 9873	R 10533	P	12	12	0	0	0	12
14	R 9874	R 10534	P	15	15	0	0	0	15
15	R 9875	R 10535	P	11	11	0	0	0	11
16	R 9876	R 10536	P	14	13	0	0	0	13
17	R 9877	R 10537	P	10	10	0	0	0	10
18	R 9878	R 10538	P	14	14	0	0	0	14
19	R 9879	R 10539	P	11	11	0	0	0	11
20	R 9880	R 10540	P	7	7	0	0	0	7
21	R 9881	R 10541	P	14	14	0	0	1	13
22	R 9882	R 10542	P	12	12	0	0	1	11
23	R 9883	R 10543	P	10	4	0	1	0	3
24	R 9884	R 10544	P	12	11	0	0	1	10
25	R 9885	R 10545	NP	-	-	-	-	-	-
26	R 9886	R 10546	P	9	3	0	0	1	2
27	R 9887	R 10547	P	11	11	0	0	0	11
28	R 9888	R 10548	P	13	13	0	0	2	11
29	R 9889	R 10549	P	13	12	0	0	0	12
30	R 9890	R 10550	P	13	13	0	1	0	12

P/NP:Pregnant/Non Pregnant D:Dead

RALLIS AGROCHEMICAL RESEARCH STATION
Peenya, Bangalore-560 058.

APPENDIX 44

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 10

GROUP: G3 DOSE: 1000 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9891	R 10821	P	22	15	0	0	2	13
2	R 9892	R 10822	NP	-	-	-	-	-	-
3	R 9893	R 10823	P	10	1	0	0	0	1
4	R 9894	R 10824	P	12	12	0	0	0	12
5	R 9895	R 10825	P	14	11	0	0	0	11
6	R 9896	R 10826	P	10	10	0	0	0	10
7	R 9897	R 10827	P	12	12	0	0	0	12
8	R 9898	R 10828	P	10	8	0	0	0	8
9	R 9899	R 10829	P	13	13	0	1	1	11
10	R 9900	R 10830	P	15	15	0	0	0	15
11	R 9901	R 10831	P	13	13	0	0	0	13
12	R 9902	R 10832	P	13	12	0	0	0	12
13	R 9903	R 10833	P	13	13	0	0	1	12
14	R 9904	R 10834	P	10	10	0	0	0	10
15	R 9905	R 10835	P	12	11	0	0	0	11
16	R 9906	R 10836	P	11	11	0	0	0	11
17	R 9907	R 10837	P	12	10	0	0	1	9
18	R 9908	R 10838	P	11	11	0	0	0	11
19	R 9909	R 10839	P	12	5	0	0	0	5
20	R 9910	R 10840	P	14	11	0	1	2	8
21	R 9911	R 10841	P	13	13	0	0	0	13
22	R 9912	R 10842	P	14	14	0	0	0	14
23	R 9913	R 10843	P	11	2	0	0	0	2
24	R 9914	R 10844	P	13	9	0	0	1	8
25	R 9915	R 10845	P	16	13	0	0	1	12
26	R 9916	R 10846	P	13	13	0	0	0	13
27	R 9917	R 10847	P	13	13	0	0	0	13
28	R 9918	R 10848	NP	-	-	-	-	-	-
29	R 9919	R 10849	P	11	11	0	0	1	10
30	R 9920	R 10850	P	14	13	0	0	0	13

P/NP:Pregnant/Non Pregnant D:Dead

RALLIS AGROCHEMICAL RESEARCH STATION
Peenya, Bangalore-560 058.

APPENDIX 45

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE FERTILITY INDICES : Week 10

GROUP: G4 DOSE: 5000 mg/kg

Sl No.	Sire No.	Dam No.	P / NP	Corp-ora Lutea	Impl-ants	Early Resorp.	Small Moles	Large Moles	Live Fetuses
1	R 9921	R 11121	P	13	13	0	0	1	12
2	R 9922	R 11122	P	13	6	0	1	0	5
3	R 9923	R 11123	P	13	13	0	0	0	13
4	R 9924	R 11124	P	14	14	0	1	0	13
5	R 9925	R 11125	P	15	15	0	1	0	14
6	R 9926	R 11126	P	10	10	0	0	0	10
7	R 9927	R 11127	P	11	11	0	0	0	11
8	R 9928	R 11128	P	14	14	0	1	0	13
9	R 9929	R 11129	P	14	14	0	0	0	14
10	R 9930	R 11130	P	10	10	0	0	0	10
11	R 9931	R 11131	P	12	12	0	1	0	11
12	R 9932	R 11132	P	14	14	0	0	1	13
13	R 9933	R 11133	P	15	15	0	0	1	14
14	R 9934	R 11134	P	11	11	0	0	0	11
15	R 9935	R 11135	P	14	14	0	0	0	14
16	R 9936	R 11136	P	13	13	0	1	1	11
17	R 9937	R 11137	P	12	12	0	0	0	12
18	R 9938	R 11138	P	17	14	0	1	1	12
19	R 9939	R 11139	P	14	12	0	1	0	11
20	R 9940	R 11140	P	15	14	0	1	0	13
21	R 9941	R 11141	P	12	11	0	0	0	11
22	R 9942	R 11142	P	14	14	0	2	0	12
23	R 9943	R 11143	P	14	14	0	0	0	14
24	R 9944	R 11144	NP	-	-	-	-	-	-
25	R 9945	R 11145	P	14	14	0	0	0	14
26	R 9946	R 11146	P	14	14	0	0	0	14
27	R 9947	R 11147	P	11	11	0	0	0	11
28	R 9948	R 11148	P	13	13	0	1	0	12
29	R 9949	R 11149	P	9	2	0	1	0	1
30	R 9950	R 11150	P	12	12	0	0	0	12

P/NP:Pregnant/Non Pregnant D:Dead

RALLIS AGROCHEMICAL RESEARCH STATION
Peenya, Bangalore-560 058.

APPENDIX 46

DOMINANT LETHAL TEST IN WISTAR RATS WITH GLYPHOSATE TECHNICAL

INDIVIDUAL SIRE GROSS PATHOLOGICAL (NECROPSY) FINDINGS

Dosage: mg/kg Route: Oral

Group Dose	Sl. No.	Sire No.	Changes Observed
G1 0	1 - 30	R 9831 - R 9860	NAD
G2 200	1 - 30	R 9861 - R 9890	NAD
G3 1000	1 - 30	R 9891 - R 9920	NAD
G4 5000	1 - 4	R 9921 - R 9924	NAD
	5	R 9925	Testis:(right) Atrophy
	6 - 10	R 9926 - R 9930	NAD
	11	R 9931	Lungs: Focal consolidation
	12 - 13	R 9932 - R 9933	NAD
	14	R 9934	Lungs: Petechiae
	15 - 18	R 9935 - R 9938	NAD
	19	R 9939	Testis:(right) Atrophy
	20 - 24	R 9940 - R 9944	NAD
	25	R 9945	Testis:(right) Atrophy
	26 - 30	R 9946 - R 9950	NAD

NAD:No Abnormality Detected

APPENDIX 47

DOMINANT LETHAL TEST IN WISTAR WITH GLYPHOSATE TECHNICAL

Derivations of Fertility Indices

a) Pregnancy (%)

$$= \frac{\text{Number pregnant}}{\text{Number mated}} \times 100$$

b) Mean number of Corpora Lutea (CL)/group

$$= \frac{\text{Total number of corpora lutea}}{\text{Number of pregnancies}}$$

c) Mean number of implantations/group

$$= \frac{\text{Total number of implantations}}{\text{Number of pregnancies}}$$

d) Mean number of live implants/group

$$= \frac{\text{Total number of live fetuses}}{\text{Number of pregnancies}}$$

e) Mean number of small moles/group

$$= \frac{\text{Total number of small moles}}{\text{Number of pregnancies}}$$

f) Mean number of large moles/group

$$= \frac{\text{Total number of large moles}}{\text{Number of pregnancies}}$$

g) Pre-implantation loss (%)

$$= \frac{\text{Total number of CL - Number of implantations}}{\text{Total number of Corpora lutea (CL)}} \times 100$$

contd...

APPENDIX 47 contd.

h) Implantation (%)

$$= \frac{\text{Number of implantations}}{\text{Number of CL}} \times 100$$

i) Early embryonic death (%)

$$= \frac{\text{Number of small moles}}{\text{Total number of implantations}} \times 100$$

j) Late embryonic death (%)

$$= \frac{\text{Number of large moles}}{\text{Total number of implantations}} \times 100$$

k) Total post implantation loss (%)

$$= \frac{\text{(Early + Late) embryonic death}}{\text{Total number of implantations}} \times 100$$

RALLIS AGROCHEMICAL RESEARCH STATION
Peenya, II Phase, Bangalore-560 058

APPENDIX 48

TOXICOLOGY DEPARTMENT
CONTAMINANT ANALYSIS REPORT FOR BEDDING MATERIAL (PADDY HUSK)

ANALYSED BY: LANDWIRTSCHAFTLICHE UNTERSUCHUNGS UND
FORSCHUNGSANSTALT INSTITUT FUR TIERGESUNDHEIT
UND LEBENSMITTELQUALITAT KIEL., GERMANY

AGRICULTURAL EXPERIMENTAL RESEARCH STATION AND
INSTITUTE FOR ANIMAL HEALTH AND FOOD STUFF QUALITY
KIEL, GERMANY

REFERENCE: PADDY HUSK
Sample No. 002
Dated: 12/11/1991
Sampling Date: 11/12/1991

ANALYSIS REPORT
Reference No. 91/Fr/
Code No. SO 12441
Report No. QVM 1397/09/01/1992

I. **POLYCHLORINATED BIPHENYLES (PCB)**

	mg/kg
a. PCB EK 28	n.b. < 0.005
b. PCB EK 52	n.b. < 0.005
c. PCB EK 101	n.b. < 0.005
d. PCB EK 138	n.b. < 0.005
e. PCB EK 153	n.b. < 0.005
f. PCB EK 180	n.b. < 0.005

II. **AFLATOXINS**

	mcg/kg
a. Aflatoxin B1 n.a/d	< 3
(in the range between 1-3)	
b. Aflatoxin B2 n.a/d	< 1
c. Aflatoxin G1 n.a/d	< 1
d. Aflatoxin G2 n.a/d	< 1

n.a/d= not appreciable/determinable

III. **CHLORINATED HYDROCARBONS**

	mg/kg
a. Hexachlorbenzol(HCB)	n.b.< 0.002
b. alpha-HCH	0.212
c. beta-HCH	0.092
d. gama-HCH (Lindan)	0.042
e. delta-HCH	0.034
f. Quintozen	n.b. < 0.002
g. Heptachlor	n.b. < 0.002
h. Heptachlorepoxid	n.b. < 0.002
i. alpha-Chlordan	n.b. < 0.002
j. gama-Chlordan	n.b. < 0.002
k. alpha-Endosulfan	n.b. < 0.002
l. beta-Endosulfan	n.b. < 0.002
m. Aldrin	n.b. < 0.002
n. Dieldrin	n.b. < 0.002
o. Endrin	n.b. < 0.002
p. p.p-DDE	n.b. < 0.002
q. o.p-DDT	n.b. < 0.002
r. p.p-DDD	n.b. < 0.002
s. p.p-DDT	0.011

IV. **ORGANOPHOSPHATES**

	mg/kg
Epsilon-HCH	0.008

V. **PHOSPORIC ACID ESTERS**

	mg/kg
a. Chlorthion	n.b. < 0.01
b. Disulfoton	n.b. < 0.01
c. Malathion	n.b. < 0.01
d. Parathion (-methyl)	n.b. < 0.01
e. Parathion (-athyl)	n.b. < 0.01
f. Sulfotepp	n.b. < 0.01
g. Fenthion	n.b. < 0.01
h. Diazinon	n.b. < 0.01
i. Dimethoate	n.b. < 0.01
j. Trichlorphon	n.b. < 0.01
k. Fenitrothion	n.b. < 0.01
l. Bromophos (-methyl)	n.b. < 0.01
m. Bromophos (-athyl)	n.b. < 0.01
n. Chlorfenvinphos	n.b. < 0.01
o. Chlorpyriphos (-athyl)	n.b. < 0.01
p. Chlorpyriphos (-methyl)	n.b. < 0.01
q. Pirimiphos (-methyl)	n.b. < 0.01
r. Methidathion	n.b. < 0.01
s. Ethion	n.b. < 0.01

n.b = Less than the limit of detection

APPENDIX 49

DECLARED RAT FEED COMPOSITION
(AS REPORTED BY MANUFACTURERS)

M/S LIPTON INDIA LIMITED, BANGALORE-560 052

Sl. No.	Contents	Values
1	Moisture Content (Max. %)	10.0
2	Crude Protein (Min. %)	21.0
3	Ether Extract (Min. %)	5.0
4	Crude Fibre (Max. %)	4.0
5	Ash (Max. %)	8.0
6	Calcium (Min. %)	1.0
7	Phosphorus (Min. %)	0.6
8	Nitrogen Free Extract (%)	53.0
	MINERALS	
9	Fe (mg/kg)	123 to 125
10	Cu (mg/kg)	19 to 21
11	Mn (mg/kg)	92 to 95
12	Zn (mg/kg)	35 to 38
13	Co (mcg/kg)	576 to 580
	VITAMINS	
14	Vitamin A (IU)	16500 to 22000
15	Vitamin D-3 (IU)	3300 to 4000
16	Vitamin B-1 (mg)	6 to 8
17	Vitamin B-2 (mg)	8 to 12
18	Vitamin B-6 (mg)	6 to 8
19	Vitamin B-12 (mg)	1 to 2
20	Vitamin E (mg)	60 to 70
21	Vitamin K (mg)	5 to 7
22	Pantothenic Acid (mg)	4 to 6
23	Niacin (mg)	10 to 15
24	Folic Acid (mg)	2 to 3
25	Choline Chloride (mg)	100 to 120

RALLIS AGROCHEMICAL RESEARCH STATION
Peenya, II Phase, Bangalore-560 058

APPENDIX 50

RALLIS AGROCHEMICAL RESEARCH STATION
21 & 22, PEENYA INDUSTRIAL AREA, II PHASE
BANGALORE 560 058

ANALYSIS REPORT - ANIMAL DIET SAMPLE

FROM: Soil Science Department, RARS, Bangalore-560 058
TO: Toxicology Department, RARS, Bangalore 560 058

Our Ref. No.SS/TF/49 Date: 30/11/91

Sample Details: Name : Rat Feed Sampling Date: 10/10/91
Batch No. : LP NO. 20985
Supplier : M/s Kamadhenu Agencies Bangalore-42
Manufacturer: M/s Lipton India Ltd., Bangalore-52

ANALYSIS RESULTS
(Analysis on "as is basis")

NO.	PARAMETER	(%)
1.	Moisture	12.8
2.	Crude protein (Nx6.25)	22.2
3.	Crude fat (Ether extract)	5.8
4.	Crude fibre	10.7
5.	Total ash	7.1
6.	Acid insoluble ash	1.9
7.	Nitrogen free extract	41.4
8.	Calcium (Ca)	----
9.	Phosphorus (P)	----

TOXI-888/1992
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Soil Chemist
for RALLIS INDIA LIMITED

RALLIS AGROCHEMICAL RESEARCH STATION
Peenya, II Phase, Bangalore-560 058

APPENDIX 51

TOXICOLOGY DEPARTMENT
CONTAMINANT ANALYSIS REPORT FOR RAT FEED

ANALYSED BY: LANDWIRTSCHAFTLICHE UNTERSUCHUNGS UND
FORSCHUNGSANSTALT INSTITUT FUR TIERGESUNDHEIT
UND LEBENSMITTELQUALITAT KIEL., GERMANY

AGRICULTURAL EXPERIMENTAL RESEARCH STATION AND
INSTITUTE FOR ANIMAL HEALTH AND FOOD STUFF QUALITY
KIEL, GERMANY

REFERENCE: RAT-FEED

Batch No. LP No. 19486
Dated: 11/12/1991
Sampling Date: 17/12/1991

ANALYSIS REPORT

Reference No. 91/Fr/
Code No. SO 12442
Report No. QVM 1398/09/01/1992

I. POLYCHLORINATED BIPHENYLES (PCB)

		mg/kg
a.	PCB EK 28	n.b. < 0.005
b.	PCB EK 52	n.b. < 0.005
c.	PCB EK 101	n.b. < 0.005
d.	PCB EK 138	n.b. < 0.005
e.	PCB EK 153	n.b. < 0.005
f.	PCB EK 180	n.b. < 0.005

II. AFLATOXINS

		mcg/kg
a.	Aflatoxin B1	97.0
b.	Aflatoxin B2	11.8
c.	Aflatoxin G1 n.d/d	< 3
d.	Aflatoxin G2 n.d/d	< 1

n.d/d= not definable/detectable

III. CHLORINATED HYDROCARBONS

		mg/kg
a.	Hexachlorbenzol(HCB)	n.b.< 0.002
b.	alpha-HCH	1.260
c.	beta-HCH	0.128
d.	gama-HCH (Lindan)	0.266
e.	delta-HCH	0.078
f.	Quintozen	n.b. < 0.002
g.	Heptachlor	n.b. < 0.002
h.	Heptachlorepoxid	n.b. < 0.002
i.	alpha-Chlordan	n.b. < 0.002
j.	gama-Chlordan	n.b. < 0.002
k.	alpha-Endosulfan	n.b. < 0.002
l.	beta-Endosulfan	n.b. < 0.002
m.	Aldrin	n.b. < 0.002
n.	Dieldrin	n.b. < 0.002
o.	Endrin	n.b. < 0.002
p.	p.p-DDE	n.b. < 0.002
q.	o.p-DDT	< 0.025
r.	p.p-DDD	n.b. < 0.002
s.	p.p-DDT	0.055

IV. ORGANOPHOSPHATES

		mg/kg
	Epsilon-HCH	0.016

V. PHOSPORIC ACID ESTERS

		mg/kg
a.	Chlorthion	n.b. < 0.01
b.	Disulfoton	n.b. < 0.01
c.	Malathion	< 0.031
d.	Parathion (-methyl)	n.b. < 0.01
e.	Parathion (-athyl)	n.b. < 0.01
f.	Sulfotepp	n.b. < 0.01
g.	Fenthion	n.b. < 0.01
h.	Diazinon	n.b. < 0.01
i.	Dimethoate	n.b. < 0.01
j.	Trichlorphon	n.b. < 0.01
k.	Fenitrothion	n.b. < 0.01
l.	Bromophos (-methyl)	n.b. < 0.01
m.	Bromophos (-athyl)	n.b. < 0.01
n.	Chlorfenvinphos	n.b. < 0.01
o.	Chlorpyriphos (-athyl)	n.b. < 0.01
p.	Chlorpyriphos (-methyl)	n.b. < 0.01
q.	Pirimiphos (-methyl)	n.b. < 0.01
r.	Methidathion	n.b. < 0.01
s.	Ethion	n.b. < 0.01

n.b = Less than the limit of detection

RALLIS AGROCHEMICAL RESEARCH STATION
Peenya, Bangalore-560 058.

APPENDIX 52

RALLIS AGROCHEMICAL RESEARCH STATION
21 & 22, PEENYA INDUSTRIAL AREA, II PHASE
BANGALORE 560 058

ANALYSIS REPORT - WATER SAMPLE

FROM: Soil Science Department
RARS, Bangalore-560 058

TO: Toxicology Department
RARS, Bangalore 560 058

Our Ref. No. SS/TW/14 Date: 31/12/1991

Sample Details:
Source of Collection: Outlet of the Aquaguard (At use point)
Date of Collection : 22/11/1991

ANALYSIS RESULTS

Sl. No.	PARAMETER	CONTENT	Sl. No.	PARAMETER	CONTENT (ppm)
1.	Colour	Colour-less	11.	Chemical Oxygen Demand	35
2.	Odour	Odour-less	12.	Total hardness as $CaCO_3$	400
3.	Turbidity	Clear	13.	Calcium as $CaCO_3$	72
4.	pH	8.3	14.	Magnesium as $CaCO_3$	44
5.	Electrical Conductivity mmho/cm	1.18	15.	Chlorides as Cl^-	145
6.	Total Solids, (ppm)	845	16.	Sulphate as SO^{-2}_4	31
7.	Suspended Solids, (ppm)	79	17.	Carbonates as CO^{-2}_3	32
8.	Dissolved Solids (ppm)	766	18.	Bicarbonates as HCO^-_3	358
9.	Dissolved Oxygen, (ppm)	5.4	19.	Sulphides as S^{-2}	--
10.	Biochemical Oxygen Demand 5 days at 20^o C, (ppm)	3.2	20.	Fluorides as F^-	0.1

Soil Chemist
for RALLIS INDIA LIMITED

RALLIS AGROCHEMICAL RESEARCH STATION
Peenya, II Phase, Bangalore-560 058

APPENDIX 53

TOXICOLOGY DEPARTMENT

CONTAMINANT ANALYSIS REPORT FOR WATER SAMPLE

ANALYSED BY: DR.GERHARD KREBS, ANALYTIK, EUPENER STRASSE, 150, 5000 KOLN 41, GERMANY

REFERENCE: WATER SAMPLE
Sample No. 12
Date of Sampling: 20/11/1991

ANALYSIS REPORT
Reference No. 91/8721
Dated: 10/01/1992

SL. No.	PARAMETERS	UNIT	RESULTS
1.	alpha-HCH	mcg/l	< 0.1
2.	beta-HCH	mcg/l	< 0.1
3.	gamma-HCH	mcg/l	< 0.1
4.	delta-HCH	mcg/l	< 0.1
5.	Heptachlor	mcg/l	< 0.1
6.	o.p'-DDE	mcg/l	< 0.1
7.	Dieldrin	mcg/l	< 0.1
8.	p.p'-DDE	mcg/l	< 0.1
9.	p.p'DDD	mcg/l	< 0.1
10.	o.p'-DDT	mcg/l	< 0.1
11.	p.p'-DDT	mcg/l	< 0.1
12.	Malathion	mcg/l	< 0.1
13.	Bal 28	mcg/l	< 0.05
14.	Bal 51	mcg/l	< 0.05
15.	Bal 101	mcg/l	< 0.05
16.	Bal 138	mcg/l	< 0.05
17.	Bal 154	mcg/l	< 0.05
18.	Bal 180	mcg/l	< 0.05
19.	Nitrite	mg/l	0.01
20.	Nitrate	mg/l	27.5
21.	Lead	mg/l	0.008
22.	Cadmium	mg/l	< 0.0002
23.	Mercury	mg/l	< 0.00002
24.	Arsenic	mg/l	< 0.001
25.	Selenium	mg/l	0.003

Koln. dated 10/01/1992
Dr. [redacted]

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Bundesgesundheitsamt

- GLP-Bundesstelle -

GUTE LABORPRAXIS
GOOD LABORATORY PRACTICE

GLP-Bescheinigung / Statement of Compliance

(gemäß / according to § 19b Abs.2 Nr.3 Chemikaliengesetz)

Eine GLP-Inspektion wurde durchgeführt in / A GLP inspection was carried out at

Prüfeinrichtung / Test facility

RALLIS INDIA LIMITED
Agrochemical Research Station
Bangalore 560 058
India

Prüfkategorien / Area of Expertise

Prüfungen auf toxikologische Eigenschaften an Ratte, Maus, Kaninchen und Vogel
Toxicity studies with rat, mouse, rabbit and bird

Datum der Inspektion / Date of Inspection

30.03.-02.04.1992

Auf der Grundlage des Inspektionsberichtes und der Besprechung über zu erfolgende Maßnahmen wird hiermit bestätigt, daß in dieser Prüfeinrichtung die obengenannten Prüfungen zum Zeitpunkt der Inspektion unter Einhaltung der GLP-Grundsätze durchgeführt wurden.

Based on the inspection report and the discussion of follow up activities it can be confirmed, that at time of inspection the test facility were conducting the aforementioned studies in compliance with the Principles of Good Laboratory Practice.

27. October 1992

[redacted]

Leiter GLP-Bundesstelle
GLP Federal Office