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SUMMARY OF

CHICKEN TOXICITY, REPRODUCTION AND RESIDUE STUDY ON AROCLORS 1242, 1254 and 1260

A summary of the results of the parameters studied are presented in Tables I through V. The figures presented are preliminary and may be subject to change, however the trends which they convey are not expected to change.

Because of the poor hatchability noted at 10 ppm with Aroclor 1242, 1 ppm may be considered as the highest no effect level. A concentration of 10 ppm may be considered as the highest no effect level for Aroclor 1254. No adverse effects are noted thus far at the highest concentration of Aroclor 1260 tested (100 ppm).

No significant gross pathologic abnormalities were noted in any of the test animals.

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REPORT TO

MONSANTO CHEMICAL COMPANY

SUBACUTE DERMAL TOXICITY OF

AROCLOR 1254

I. Introduction and Outline of Procedure

A sample identified as Aroclor 1254 was received from Monsanto Chemical Company for evaluation of 20-day subacute dermal toxicity in albino rabbits.

Skin applications of the test material, in the form of a corn oil solution, were made daily to four test groups consisting of two rabbits each (one male and one female) for a period of 20 days. These test groups corresponded to daily dermal doses of 10, 50, 100 and 200 mg/kg/day respectively.

In addition to the four test groups, a treated control group of two rabbits was also employed. The animals in this group received daily dermal applications of corn oil comparable to the volume administered to the highest test dose group.

The rabbits in all groups were housed individually over the period of investigation and observations were made with respect to body weight effects, incidence of mortality, reactions displayed and status of the

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TABLE I

CHICKEN TOXICITY, REPRODUCTION AND RESIDUE STUDY
ON AROCLOR 1242, 1254 and 1260

SUMMARY OF BODY WEIGHT DATA

Group and Test Material	Concentration (ppm)	Mean Body Weight Data - Kilograms 0 Day:		Through Dosing:		At Sacrifice:	
		Male	Female	Male	Female	Male	Female
I Control	-	1.27	0.95	2.43	1.89	2.44	1.88
II 1242	1	1.27	0.95	2.68	1.88	2.70	1.86
III 1242	10	1.28	0.95	2.11	1.82	2.13	1.79
IV 1242	100	1.28	0.96	2.05	1.88	2.06	1.91
V 1254	1	1.28	0.96	2.26	1.93	2.27	1.94
VI 1254	10	1.28	0.96	2.30	1.84	2.28	1.85
VII 1254	100	1.28	0.95	1.83	1.81	1.97	1.66
VIII 1260	1	1.28	0.96	2.11	1.84	2.17	1.97
IX 1260	10	1.28	0.95	2.52	1.92	2.57	2.01
X 1260	100	1.28	0.95	2.05	1.86	2.26	1.98

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TABLE II

CHICKEN TOXICITY, REPRODUCTION AND RESIDUE STUDY
ON AROCLOR 1242, 1254 and 1260

SUMMARY OF EGG PRODUCTION DATA

Group and Test Material	Concentration (ppm)	Time on Test for 50% of Population to Lay (weeks)	Time on Test for eggs to Average 50 grams or better (weeks)	Number of Eggs Produced: Total	Normal	Blemished
I Control	-	8	14	527	405	122
II 1242	1	8	11	466	352	114
III 1242	10	8	11	443	327	116
IV 1242	100	*	17	112	89	23
V 1254	1	8	12	516	381	135
VI 1254	10	8	11	531	400	131
VII 1254	100	**	19	106	67	39
VIII 1260	1	8	11	442	289	153
IX 1260	10	8	14	466	347	119
X 1260	100	8	14	543	361	182

* 30% of the hens produced eggs after 10 weeks and a maximum of 40% produced eggs after 12 weeks on test.
** A maximum of 43% of the hens produced eggs after 9 weeks on test.

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TABLE III

CHICKEN TOXICITY, REPRODUCTION AND RESIDUE STUDY
ON AROCLOR 1242, 1254 and 1260

SUMMARY OF EGG QUALITY DATA

Group and Test Material	Concentration (ppm)	Mean Shell Thickness without membrane Thousands of an inch No. Examined	Thickness	Mean Specific Gravity Number Examined	Sp. Gr.
I Control	-	143	14.9	139	1.105
II 1242	1	162	14.2	144	1.102
III 1242	10	134	13.8	128	1.104
IV 1242	100	25	12.5	29	1.096
V 1254	1	182	14.1	162	1.103
VI 1254	10	210	14.3	146	1.119
VII 1254	100	41	10.9	31	1.090
VIII 1260	1	201	14.4	139	1.106
IX 1260	10	208	15.0	136	1.101
X 1260	100	275	14.0	190	1.101

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TABLE IV

CHICKEN TOXICITY, REPRODUCTION AND RESIDUE STUDY
ON AROCLOR 1242, 1254 and 1260

SUMMARY OF HATCHABILITY, SURVIVAL AND CHICK WEIGHT DATA

Group and Test Material	Concentration (ppm)	Hatching Data Day 1 Number Alive	Hatching Data Day 1 Body Weight (grams)	Survival Date Day 30 Number Alive	Survival Date Day 30 Body Weight (grams)
I Control	-	91	39.8	75	249
II 1242	1	70	36.6	66	278
III 1242	10	17	21.6	9	256
IV 1242	100	0	-	0	-
V 1254	1	98	37.7	85	245
VI 1254	10	91	36.2	76	245
VII 1254	100	0	-	0	-
VIII 1260	1	84	40.8	75	279
IX 1260	10	110	35.7	102	259
X 1260	100	130	37.2	111	237

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TABLE V

CHICKEN TOXICITY, REPRODUCTION AND RESIDUE STUDY
ON AROCLOR 1242, 1254 and 1260

SUMMARY OF PARENTAL MORTALITY DATA

Group and Test Material	Concentration (ppm)	Mortality During Dosing Period	
		Male	Female
I Control	-	2	8
II 1242	1	0	4
III 1242	10	0	6
IV 1242	100	2	11
V 1254	1	2	6
VI 1254	10	1	5
VII 1254	100	1	8
VIII 1260	1	1	6
IX 1260	10	0	4
X 1260	100	2	3

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