

US EPA ARCHIVE DOCUMENT

CASE GS0315 LINDANE

PM PM# 04/05/84

CHEM 009001

Lindane (gamma isomer of benzene hexac

BRANCH EEB DISC 40 TOPIC 05100542

FORMULATION 00 - ACTIVE INGREDIENT

FICHE/MASTER ID 00022923 CONTENT CAT 02

Hill, E.F.; Heath, R.G.; Spann, J.W.; et al. (1975) Lethal Dietary Toxicities of Environmental Pollutants to Birds: Special Scientific Report--Wildlife No. 191. (U.S. Dept. of the Interior, Fish and Wildlife Service, Patuxent Wildlife Research Center; unpublished report)

SUBST. CLASS = S.

DIRECT RVW TIME = 1 (MH) START-DATE 5/1/85 END DATE 5/1/85

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Studies conducted by the Patuxent Wildlife Research Center are accepted as scientifically sound without the need for validation. The studies fulfill our guidelines requirements for avian dietary studies if the Technical grade and an acceptable representative species were tested. The following studies fulfill our guideline requirements:

Species	LC50 (ppm)
Bobwhite	882 (755-1041)
Ring-necked pheasant	561 (445-690)
Mallard	75000

Lindane is moderately toxic to upland gamebirds and practically non-toxic to waterfowl.

D.W. H. PAIS *PAIS* 6-2-73

Table 1. Dietary toxicities of 131 compounds tested in 5-day diets of young bobwhites, Japanese quail, ring-necked pheasants, or mallards (1964-73)--continued

Compound	Species	Age (days) ^a	No. of b conc.	No. birds/ conc.	Toxicity statistics		
					LC ₅₀ ^c (95% C.L.)	Slope ^d (S.D.)	RTD ^e (95% C.L.)
<u>Lindane</u>							
	Bobwhite	9	6	10	882 (755-1041)	2.456 (1.673)	21.1 (17.2 - 26.6)
	Japanese quail	7	6	15	425 (347-520)	3.487 (0.692)	7.1 ^f
	Ring-necked pheasant	10	5	8	561 (445-690)	8.251 (2.752)	10.6 (7.9 - 14.1)
	Mallard	15	6	12	>5000 (12% mortality to 1500 ppm, 17% at 5000 ppm)		
<u>Linuron</u>							
	Japanese quail	14	3	10	>5000 (10% mortality to 1000 ppm, 30% at 5000 ppm)		
	Ring-necked pheasant	10	6	10	3438 (2874-4139)	3.643 (1.889)	53.0 (41.2 - 67.7)
	Mallard	5	6	10	3083 (2419-3990)	3.450 (1.001)	19.5 (14.1 - 27.0)
<u>Malathion</u>							
	Bobwhite	14	6	6	3497 (2959-4117)	5.931 (2.533)	102 (78.2 - 135)
	Japanese quail	14	6	10	2962 (2453-3656)	5.272 (1.330)	45.3 (35.7 - 58.2)
	Ring-necked pheasant	10	6	10	2639 (2220-3098)	5.122 (1.475)	52.5 ^f
	Mallard	16	3	10	>5000 (No mortality to 5000 ppm)		
<u>MCPB</u>							
	Bobwhite	14	3	10	>5000 (No mortality at 2236 ppm, 10% at 5000 ppm)		
	Japanese quail	14	3	12	>5000 (No mortality to 5000 ppm)		
	Ring-necked pheasant	14	3	10	>5000 (No mortality to 5000 ppm)		
	Mallard	10	1	10	>5000 (No mortality at 5000 ppm)		
<u>Mercuric chloride^g</u>							
	Japanese quail	14	7	10	5926 (4950-7896)	6.202 (1.884)	104.9 ^f
	Ring-necked pheasant	10	6	10	3790 (2768-5541)	2.640 (0.778)	60.0 ^f
	Mallard	10	3	8	>5000 (No mortality to 5000 ppm)		

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