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VALIDATION SHEET CRF #_____PAGE_____OF_____

FORMULATION:			IA	IB	T	FW	EC	R		
% a.i.	SC #	CHEMICAL NAME	Validator: Larry Turner					Date: 4/21/79		
94%		brodifacoum	Test Type: Avian 40-day dietary LC_{50} mallard duck							
			Test ID.# ES-E2							

CITATION: Beavers, Joann B. and Robert Fink. 1978. Forty-day dietary LC_{50} - mallard ducks; technical brodifacoum; final report. 18 p. Study conducted by Wildlife International, project 123-128. Submitted by ICI Americas, 10182-26; Acc. #237703, report 16I; 2/27/79.

RESULTS: Mallard duck 40-day dietary LC_{50} = 2.7 ppm (95% c.i. 0.7-10.6 ppm). Mortality was 30% at the lowest dose of 1.0 ppm; 60-90% mortality occurred (somewhat erratically) at 6 doses from 5.62 to 100 ppm. Toxic symptoms included lethargy, weakness, loss of coordination, and prostration; but these symptoms were observed only in a minority of birds. Most birds, but not all, had internal hemorrhage detected during necropsies. Three (6%) control birds died. Among treated birds, the first mortality occurred on Day 4 and the last on Day 24; most mortalities occurred between Day 6 and Day 14.

VALIDATION CATEGORY: Core

CATEGORY RATIONALE: This appears to have been a sound study and meets requirements for an avian dietary test.

CATEGORY REPAIRABILITY: N/A

ABSTRACT: Fourteen day old mallard ducks were exposed for five days to diets containing technical brodifacoum in concentrations of 0 (control), 1, 1.78, 3.16, 5.62, 10, 17.8, 31.6, 56.2, and 100 ppm. A thirty-five day observation period followed the dietary exposure. Ten birds were tested at each level along with 50 control birds. Procedures closely followed the guidelines other than the prolonged observation period, including extra weighings and food consumption data.

Mortality was analyzed statistically according to Finney probit. When checked on the EEB calculator, an essentially identical LC_{50} of 2.76 ppm was obtained with an acceptable chi square value.