2-27-74

ENVIRONMENTAL CHEMISTRY REVIEW FOR: Propanil, Stam
Petition No. OF0932
REG. NO. 707-75, 94, 108, 109, 110 and 112

I. INTRODUCTION

See evaluation dated March 3, 1970 and April 5, 1972.

II. DISCUSSION OF DATA

1. Technical Stam (93.1%) was continuously fed into a 550 liter tank at the rate of 120 l/hr which contained crayfish and catfish over a period of 20 days. This resulted in a fish exposure of 0.05 to 1.0 ppm calculated as stam.

Samples of treated fish were taken at 3,7,10,14, 21 and 28 days of exposure and 3,7, 14 and 28 days withdrawal. Samples of the treated water were also taken for analysis.

Analysis was carried out on the eviscerated catfish and crayfish (tail removed) using Test Method 23 entitled "Determination of Microquantities of Stam F-34 in Plant Tissue". The sensitivity of this method is estimated to be 0.1 ppm.

	Residues in Water (ppm calc as Stam)			
	0.05 ppm aquaria		1 ppm aquaria	
Exposure Day	Crayfish	Catfish	Crayfish	Catfish
0	0.04	0.10	-	-
3	0.06	0.08	1.4	1.5
7	0.06	0.06	1.7	1.7
10	0.10	0.15	1.7	1.2
14	0.15.	0.15	1.4	1.7
21	0.08	0.08	0.9	1.0
28	0.08	0.05	1.5	1.2
Ave.	0.08	0.09	1.4	1.4

TABLE III

Summarized Results
of Fish Analyses

Exposure Day	Residues in Fish (ppm calc as Stam) 0.05 ppm exposure			1.0 ppm exposure		
	Crayfish Tails	Catfish (Edible Tissue)	Viscera	Crayfish Tails	Catfish (Edible Tissue)	Viscera
3	0.17	1.43 1.46		1.70	11.8	
7	0.29	1.52 1.64		1.66	9.6	
10	0.33	2.08	3.3	0.67	7.4	
	0.51	1.50		1.67	10.6	44.5
	0.25	1.78		1.33	7.5	
14	0.50	1.67		3.54	9.0	
21	0.18	2.00		2.86	9.6	
28	0.71	1.17		3.43	11.4	
	0.87	1.51	8.50	2.92	13.3	127
	0.95	1.17		2.72	11.6	
Withdrawal Day						
3	0.54	1.10		1.40	1.31	
7	0.13	0.83		0.86	0.89	
14	0.09	0.19	NDR	0.18	0.63	3.7
28	NDR	NDR	NDR	NDR	0.60	0.63
	"	"		"	0.44	
	"	"		"	0.53	
	"	"		"	0.55	
	"	"		"	0.45	
	"			"	0.43	

CONCLUSION

a. There appears to be no real build of residues in crayfish or catfish. It is hard to determine if plateau levels have been reached as residues in edible tissue were somewhat higher at 28 days.

b. Accumulation and action:

	Tail	Edible Tissue	Viscera
Crayfish	3% 10X		
Catfish		5.2 to 40.6X	106X

c. Residue decline during withdrawal.

d. Note residues in crayfish ocaked about every 14 day. This has been noted in other crayfish studies.

IV. RECOMMENDATION

A. RL Registration.

Questions as outlined in the April 5, 1972 evaluation of OF0932 need to be repeated. These questions should be sent to the petitioner with the deletion of questions 4 & 5.

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