US EPA ARCHIVE DOCUMENT

108801

VALIDATION SHEET

CRF #_____ PAGE 1 OF 1

FORMULATION:			IA	IB	T	FW	EC	R		
% a.i.	SC #	CHEMICAL NAME	Validator: Labuda						Date: 02 December, 1977	
Tech.		CGA-24705 (Metolachlor)	Test Type: Warmwater Fish Acute 96-hour LC_{50}							
			Test ID.# ESF-4							

CITATION: Sachesse, K., and L. Ullman. 1974. Acute Toxicity to Rainbow Trout, Crucian Carp, Channel Catfish, Bluegill, and Guppy of Technical CGA-24705. Ciba-Geigy, Ltd.

Validation Category: Core

RESULTS: 96-hour LC_{50} for Ictalurus punctatus (?) was reported to be 4.9 ppm (95% C.I. = 3.6-6.8 ppm).

VALIDATION CATEGORY RATIONALE: The species tested was Ictalurus punctatus rather than Ictalurus ameiurus as reported.

CATEGORY REPAIRABILITY/RATIONALE: NA

Test Species Ictalurus ameiurus (?) PROBIT ANALYSIS WORK SHEET Chemical Metolachlor

Date Tested 4 Jan. 1974

Source Aquarium Basle, Switzerland

Exp. Period 96 hours Analysis by: Sachsse, K., + L. Ullmann; DVM, 1974 (Name) (Title) (Date)

Concentration PPM	No. dead/ /No. tested	Observed % Mortality	Expected % Mortality	O-E	Contributions to Chi (Nomo #1)
10	12/12	100			
6.5	7/12	58			
2.1	1/12	8			
1	0/12	0			

Total Fish Tested = _____

Number of Doses (K) = _____

Degrees of freedom (K-2) = _____

Chi^2 = Total Cont. to Chi $\times \frac{\text{Total Total fish}}{K}$ = 2.334

Chi^2 (p=.05) for 2 deg of freedom = 5.99

DETERMINE fLC_{50}:

LC_{84} _____

LC_{50} _____

LC_{16} _____

$S = \frac{LC_{84}/LC_{50} + LC_{50}/LC_{16}}{2}$ = _____

N' (Fish used between 16% and 84% E) = _____

$\sqrt{N'}$ = _____

$fLC_{50} = S^{2.77/\sqrt{N'}} = S$ _____ (Nomo. #2) = _____

DETERMINE fS:

R (Largest/Smallest dose plotted) _____

S (As determined above) _____

A (Nomo. #3 using R and S) _____

$fS = A^{10(K-1)/K\sqrt{N'}} = A$ _____ (Nomo. #2) = _____

DETERMINE fLC_y:

$(fS)^x = fS^{2.33 \text{ or } 1.30}$ (Table 3 and Nomo. #2) = _____

fLC_y (Nomo. #4 using $(fS)^x$ and fLC_{50}) = _____

RESULTS (LC_x and Confidence Limits at p = .05):

LC_1 = _____

Lower Limit (LC_1/LC_y) _____

Upper Limit ($LC_1 \times LC_y$) _____

LC_{50} = _____

Lower Limit (LC_{50}/fLC_{50}) _____

Upper Limit ($LC_{50} \times fLC_{50}$) _____

LC_{99} = _____

Lower Limit (LC_{99}/LC_y) _____

Upper Limit ($LC_{99} \times LC_y$) _____

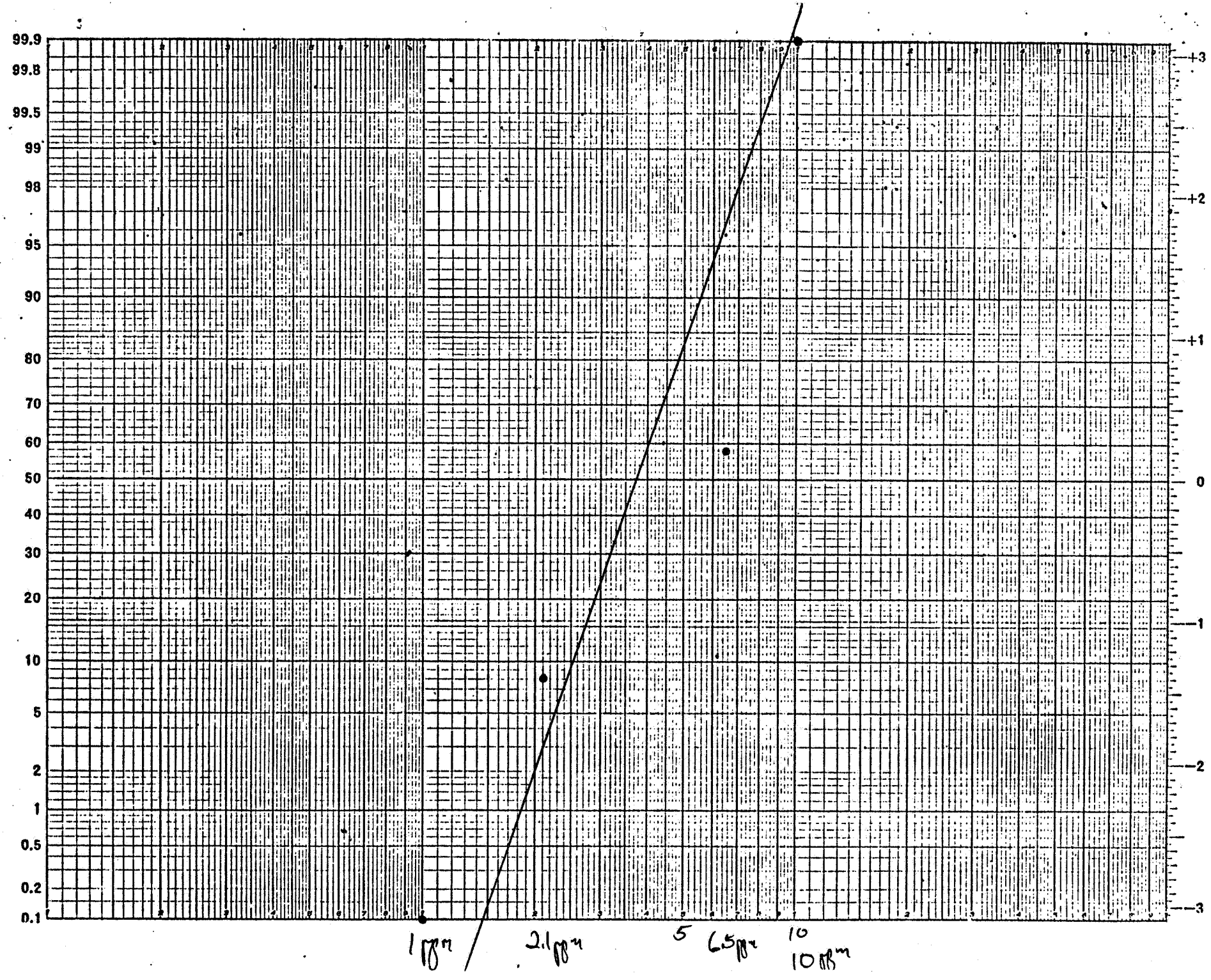
99.9
99.8
99.5
99
98
95
90
80
70
60
50
40
30
20
10
5
2
1
0.5
0.2
0.1
+3
+2
+1
0
−1
−2
−3
1 μm
2.1 μm
5
6.5 μm
10
10 μm

Table 7
Bluegill
Dec 16, 77
Dual

	1.	
	0.	Count
		do
	10.	Funny
	0.	Probit
	21.	as
	75.	CHI²
	49.	
	100.	

4.	N
0.671	R^2
0.510	S
0.180	M
12.128	LD50
0.042	LDCL
3475.075	UPCL
7.120	LD10
0.024	LDCL
2111.190	UPCL
20.658	LD90
0.060	LDCL
7155.062	UPCL
95.	%CON
2.	DF
4.303	TVAL

0.671	×
1.342	÷
1.	−
0.671	=
4.07902356	
4.07902356	ΣX
2.019661208	=

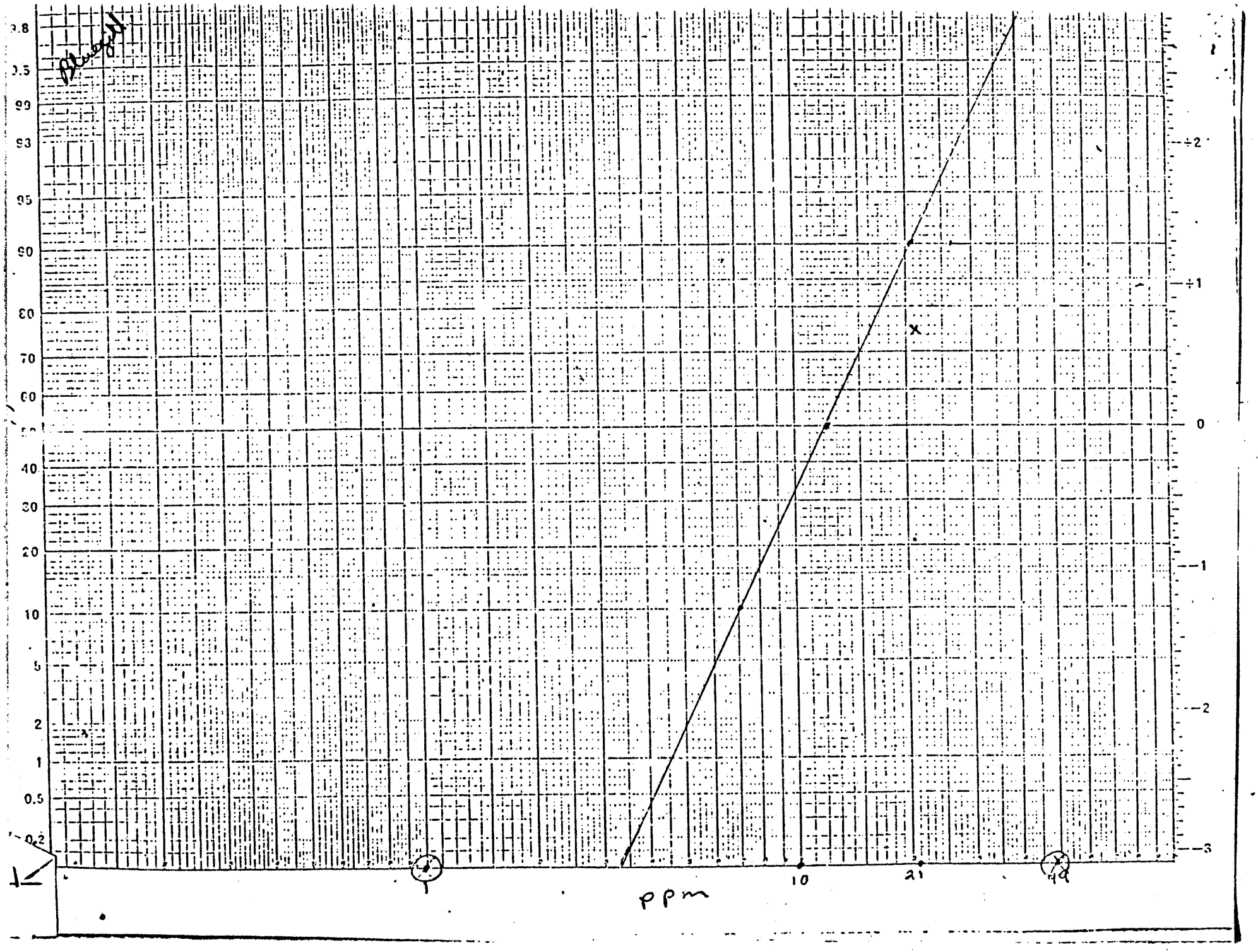
99.8
99.5
99
98
95
90
80
70
60
50
40
30
20
10
5
2
1
0.5
0.2
+2
+1
0
-1
-2
-3
1
10
21
49
ppm

Table 8

~~gappy~~

561553

Done Dec 19

Finney Probit

Dual

1.	
0.	
12.	
6.5	
1.	
12.	
10.	
9.	
12.	
21.	
12.	
12.	

Total Chi^2 = 5.997 0.00

11.001	M
-5.326	YINT
1.233	LW M
0.000	CHI^2
8.683	LD50
7.631	LDCL
9.879	UPCL
6.639	LD10
5.420	LDCL
8.133	UPCL
11.355	LD90
9.133	LDCL
14.118	UPCL