

US EPA ARCHIVE DOCUMENT

DP Barcode : D185819  
 PC Code No : 109701  
 EEB Out :

To: Kathryn Davis  
 Product Manager 52  
 Special Review and Reregistration Division (H7508W)

From: Anthony F. Maciorowski, Chief  
 Ecological Effects Branch/EFED (H7507C)

Attached, please find the EEB review of...

Reg./File # : 109701  
 Chemical Name : Permethrin, mixed cis,trans  
 Type Product : Insecticide  
 Product Name : Permethrin products  
 Company Name : ICI Americas Inc.  
 Purpose : Submission of data for reregistration in support of 72-1(b) and (d), 72-2(b), and 72-3(f).

Action Code : 627 Date Due : 03/17/93  
 Reviewer : C. Laird Date In : 12/22/92

EEB Guideline/MRID Summary Table: The review in this package contains an evaluation of the following:

GDLN NO	MRID NO	CAT	GDLN NO	MRID NO	CAT	GDLN NO	MRID NO	CAT
71-1(A)			72-2(A)			72-7(A)		
71-1(B)			72-2(B)	425840-02	Y	72-7(B)		
71-2(A)			72-3(A)			122-1(A)		
71-2(B)			72-3(B)			122-1(B)		
71-3			72-3(C)			122-2		
71-4(A)			72-3(D)			123-1(A)		
71-4(B)			72-3(E)			123-1(B)		
71-5(A)			72-3(F)	425840-01	N	123-2		
71-5(B)			72-4(A)			124-1		
72-1(A)			72-4(B)			124-2		
72-1(B)	425840-04	Y	72-5			141-1		
72-1(C)			72-6			141-2		
72-1(D)	425840-03	Y				141-5		

Y=Acceptable (Study satisfied Guideline)/Concur

P=Partial (Study partially fulfilled Guideline but additional information is needed)

S=Supplemental (Study provided useful information but Guideline was not satisfied)

N=Unacceptable (Study was rejected)/Nonconcur



2006489

100.0 Pesticide Name: Permethrin (10% formulation)

100.3 Submission Purpose:

Submission of four aquatic studies both freshwater and esturine/marine.

101.0 Chemical and Physical Properties:

101.1 Common Name:

Permethrin

103.0 Toxicological Properties:

48-Hour LC<sub>50</sub> for Daphnia magna; 425840-02  
96-Hour Flow-Through LC<sub>50</sub> for Mysid Shrimp; 425840-01  
96-Hour Flow-Through for Bluegill Sunfish; 425840-04  
96-Hout Flow-Through for Rainbow Trout; 425840-03.

105.0 Conclusions:

A. Daphnia magna (EC<sub>50</sub>)

This test is scientifically sound even though the measured concentrations of test material decreased significantly during the study. The 48-hour EC<sub>50</sub> was established and verified as 9.9 ug formulation/l (mean measured concentration). Therefore, permethrin 10% EC formulation would be classified as very highly toxic to daphnids. The NOEC was 2.3 ug/l.

B. Mysid Shrimp (LC<sub>50</sub>)

This study is not scientifically sound. The test concentrations in this flow-through test were not measured. The actual concentrations to which the mysids were exposed are unknown. Under conditions of the test, the 96-hour LC<sub>50</sub> was 0.47 ug formulation/l (nominal concentration). Therefore, permethrin 10% EC formulation would be classified as very highly toxic to mysids. The NOEC was 0.32 ug/l.

Upgraded to core  
based on EEB review  
of D 210636  
N/Cerk  
09/07/95

C. Bluegill Sunfish (LC<sub>50</sub>)

This study is scientifically sound and meets the guideline requirements for a flow-through acute toxicity test using bluegill sunfish. The 96-hour LC<sub>50</sub> was 24 ug formulation/l (mean measured concentration). Therefore, permethrin 10% EC formulation is classified as very highly toxic to bluegill sunfish. The NOEC could not be determined since mortality was noted at all exposure levels.

D. Rainbow Trout (LC<sub>50</sub>)

This study is scientifically sound and meets the guideline requirements for a flow-through acute toxicity test using rainbow trout. The 96-hour LC<sub>50</sub> was 73 ug formulation/l (mean measured concentration). Therefore, permethrin 10% EC formulation is classified as very highly toxic to rainbow trout. The NOEC was 0.48 ug/l.

*Curtis E. Laird 3-3-93*

Curtis E. Laird, Fishery Biologist  
Ecological Effects Branch  
Environmental Fate and Effects Division (H7507C)

*Norman J. Cook 08.17.93*

Norman J. Cook, Head-Section 2  
Ecological Effects Branch  
Environmental Fate and Effects Division (H7507C)

*for Douglas J. Urban 8/19/93*  
Anthony F. Maciorowski, Chief  
Ecological Effects Branch  
Environmental Fate and Effects Division (H7507C)

DP BARCODE: D185819

REREG CASE # 2510

CASE: 819432  
SUBMISSION: S432185

DATA PACKAGE RECORD  
BEAN SHEET

DATE: 12/17/92  
Page 1 of 1

\* \* \* CASE/SUBMISSION INFORMATION \* \* \*

CASE TYPE: REREGISTRATION ACTION: 627 GENERIC DATA SUBMISSION  
CHEMICALS: 109701 Permethrin, mixed cis,trans (ANSI) 100.00 %

ID#: 109701

COMPANY:

PRODUCT MANAGER: 52 KATHRYN DAVIS 703-308-8156 ROOM: CS1 3F3

PM TEAM REVIEWER: KATHRYN DAVIS 703-308-8156 ROOM: CS1 3F3

RECEIVED DATE: 12/10/92 DUE OUT DATE: 03/10/93

\* \* \* DATA PACKAGE INFORMATION \* \* \*

DP BARCODE: 185819 EXPEDITE: N DATE SENT: 12/17/92 DATE RET.: / /

CHEMICAL: 109701 Permethrin, mixed cis,trans (ANSI)

DP TYPE: 999 Miscellaneous Data Package

ADMIN DUE DATE: 03/17/93 CSF: N

LABEL: N

ASSIGNED TO	DATE IN	DATE OUT
DIV : EFED	12/22/92	/ /
BRAN: EEB	12/22/92	/ /
SECT:	/ /	/ /
REVR :	/ /	/ /
CONTR:	/ /	/ /

\* \* \* DATA REVIEW INSTRUCTIONS \* \* \*

PLEASE REVIEW

MRID 42584001 72-3(F)

4258402 72-2(B)

42584003 72-1(D)

42584004 72-1(B)

\* \* \* ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION \* \* \*

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL
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