

US EPA ARCHIVE DOCUMENT

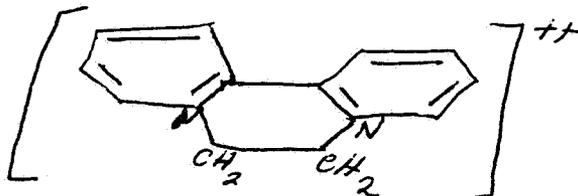
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Evaluation of Pesticide Petition Number 7F0594  
6,7-dihydrodipyrdo (1,2-a:2',1'-c) pyrazidinium (Diquat)  
Submitted by Chevron Chemical Company  
Filed April 10, 1967.

INTRODUCTION

Diquat is the common name for the divalent cation 6,7-dihydrodipyrdo (1,2-a:2',1'-c) pyrazidinium. The structure of the cation is:

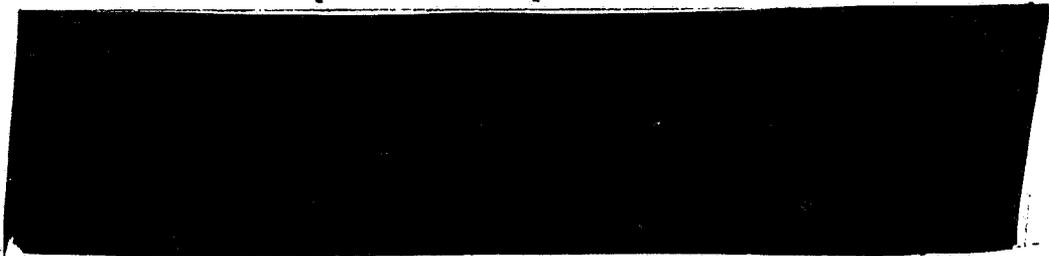


Diquat breakdown is 80% in four to six days by sunlight to tetrahydro-oxo-pyrido-pyrazinium salt.

There was no metabolic breakdown noted in potatoes, tomatoes, and maize plants, nor in broadbean and alligatorweed.

Stable on potatoes when stored up to seven months.

The name of the product is Diquat. The formulation is:



Chevron is proposing a 0.05 ppm tolerance for Diquat cation in or on sugarcane.

DIRECTIONS FOR USE

Sugarcane to prevent flowering (tasseling of cane) - 1 pt./A (0.25 lbs. A/A) plus 1 oz. nonionic spreader/A. Apply during flower initiation period (in Hawaii first three weeks of September). Apply by aircraft in 1 to 10 gallons water/A.

Do not apply within five months of harvest.

BEST AVAILABLE COPY

Do not feed forage from treated crops to livestock.

Keep livestock out of treated fields and crop areas.

ANALYTICAL METHOD

Colorimetric method previously evaluated and approved for an experimental permit.

DISCUSSION OF DATA

Some of the data submitted are listed as follows:

DOSAGE LBS. A/A	PHI	R E S I D U E S I N P P M			STALKS LEAVES
		WHOLE CANE	NEW LEAVES	JUICE	
1	1	0.29	---	---	---
1	5	0.11	---	---	---
1	13	0.05	---	---	---
0.25	53	0.00	0.00	---	---
0.25	197	---	---	0.00	0.00
0.25	193	---	---	0.00	0.00

RADIO ACTIVE	STUDY	WHOLE CANE	BAGASSE	CLARIFIED CONC. JUICE	DRIED FILTER CAKE
0.5	7	0.17	0.47	0.11	10.11
"	14	0.30	0.79	0.30	9.63
"	28	0.19	0.49	0.10	7.21
"	56	0.10	0.06	0.05	5.27
"	84	0.08	0.17	0.05	2.75
"	140	0.01	0.03	0.01	0.47
"	213	0.01	0.03	0.01	0.88
"	234	0.00	0.00	0.00	---

CONCLUSION

The PHI on the label in section B is five months, and in section D eight months. Mr. Dye of Chevron agreed to change the PHI in section D to five months.

It is our understanding that the dried filter cake is no longer fed.

RECOMMENDATION

A favorable opinion is given.

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TPN 07F0574

0.05

MAR 24 1966

Suppl. Com. Location	Posage	PFI	Whole Core	Residues in Core	pieces	Method	Test No.	Suppl. Date	14D-gauge	Whole Core	melankton	Whole Core	Whole Core
Ala., Hawaii	1	1	0.29	-	-	-	269		0.5	0.13	0.44	0.18	3.96
"	1	5	0.11	-	-	-	"			0.17	0.47	0.11	10.1
"	1	13	0.05	-	-	-	"		14	0.19	0.52	0.15	3.81
Waikiki, Oahu, Hawaii	0.45	53	0.00	0.00	-	341	"		28	0.20	0.79	0.20	9.63
"	"	270	0.00	-	-	"	"			0.16	0.49	0.12	5.84
"	0.25	197	-	-	0.00	369	"			0.19	0.49	0.10	7.21
"	"	311	-	-	0.00	"	"		56	0.10	0.06	0.05	3.27
Waikiki, Oahu, Hawaii	0.25	193	-	-	0.00	370	"		84	0.07	0.09	0.05	2.41
"	"	200	-	-	0.00	"	"			0.08	0.17	0.05	2.75
"	"	207	-	-	0.00	"	"			0.08	0.17	0.05	2.68
Demerits, Oahu	1	186	-	-	0.00	340	"		140	0.01	0.02	0.01	0.47
"	3	186	-	-	0.00	"	"			0.01	0.03	0.01	0.21
"	15	194	-	-	0.00	"	"		213	0.01	0.08	0.01	0.88
"	15	-	-	-	0.00	"	"		234	0.01	0.08	0.01	0.22
"	15	-	-	-	0.00	"	"			0.01	0.08	0.01	0.22
"	15	-	-	-	0.00	"	"			0.01	0.08	0.01	0.22

Dr. W. L. ...  
 by ...  
 Dr. Robert ...

APR 24 1967

OPINION  
DRAFT FOR CHEMISTS

*JMR*

*William Stokes*

TO : Frank J. McFarland, Assistant to the Director  
EPA, Food and Drug Administration  
Department of Health, Education, and Welfare

FROM : ~~Justus C. Ward~~, Director, Pesticides Regulation Division  
ARS, U.S. Department of Agriculture

SUBJECT : Pesticide Petition No. 7F0594 requesting (a) tolerance~~(s)~~ for  
① ~~Chemical Company~~, submitted by Chevron  
Chemical Company, and filed April 10, 1967.

We have completed our examination of the residue data, analytical (~~method~~ -  
methods) employed, and other pertinent information contained in this petition  
for (a) (tolerance - ~~tolerances~~) of 0.05 part~~(s)~~ per million (ppm) for  
② ~~a~~ *resulting from the use of Diquat dibromide*  
in or on sugar cane.

In accordance with the requirements of Public Law 518, 83rd Congress, we herein  
offer an opinion as to whether the proposed (tolerance - ~~tolerances~~) reasonably  
(~~reflect~~ - reflects) the (amount - ~~amounts~~) of (residue - ~~residues~~) likely to  
result when this pesticide chemical is used as proposed.

It is the opinion of this Department that the proposed (tolerance - ~~tolerances~~)  
reasonably (~~reflect~~ - reflects) the (amount - ~~amounts~~) of (residue - ~~residues~~)  
likely to result.

*cation*  
① *Diquat* [6,7-dihydrodipyrido(1,2-a:2',1'-c)  
pyrazidinium]

② *Diquat* ~~dibromide~~ *cation* [6,7-dihydrodipyrido  
(1,2-a:2',1'-c) pyrazidinium] ~~anion~~  
*expressed as the cation* 6,7-dihydrodipyri  
(1,2-a:2',1'-c) pyrazidinium.

di quater cation [6,7-dihydrodipyrido  
(1,2-a:2',1'-c) pyrazidinium