

Wef
18 OCT 1971



Settled Repto be
Ser 18 Pat W. 10/13/71

Evaluation of data for O,O-Dimethyl
S-E3-mercaptomethyl-1,2,3-benzotriazin
-4(3H)-one 2-phosphorodithioate
(Duthion)

Submitted by Chemagro Corp.
June 15, 1971

I Introduction

1. Registration involved are:

Guthion 50% WP	3125-193
" 2S	" - 123
" Citrus 62.5%	" - 260
" 25% WP	" - 25
" LC	" - 102

2. Crops involved are citrus.

Citrus has a tolerance of 2 ppm
on fruit and 5 ppm on pulp.

3. Registered.

1 app. . 375 lbs A/100 gal (2000 gal mov) 7 day PHI

2 app. 25 day PHI

Chemagro wishes to add 3 more app. (Total 85)

90 days between each app

Fla. Citrus PHI 7 days

Texas. Grapefruit PHI 25 days

Do not prune within 7 days after application

0.375 lb A / 100 gal (7.5 lb A / 2000 gal)

II. Discussion of data

1. It should be noted that spray in 100 gal/A left higher residues than in 500 gal/A. There is no way to tell if this is an application.
2. Label proposes use in up to 2000 gal/A ~~and~~ which is ~~at~~ 7.5 lb A / 2000 gal. Data are insufficient to support 2000 gal/A. One sample in orange at 2800 gal/A had residues 1.94 ppm at 7 days. at 2400 gal/A on grapefruit had residues 0.86 ppm at 7 days.
3. Note that residues on whole fruit appear to be getting higher after 7^{to 14} days then decrease after 14 days from treatment. This is odd but showed up in almost all samples.

4. Some of the data submitted are listed.

	lb/100 gal	No. of gal app.	No. of App	NET Residues PPM			
				PHI	Peel	Pulp	Whole Fruit
Oranges	.375	500	5	7	1.02	.01	.29
	.375	390	5	7	1.31	.02	.41
	"	100	5	7	3.69	.15	1.35
	"	100	5	7	.96	.02	.18
	"	"	"	14	—	—	2.70
	"	2,800	5	7	—	—	1.94
	"	100	5	7	5.04	.40	1.45
Grapefruit	.375	2,400	5	7	3.2	.03	.86
	"	500	5	7	.19	.01	.17
	"	390	5	7	.82	.01	.42
	"	100	5	7	4.84	.03	1.21
	"	100	5	7	7.48	.03	1.72
				14	—	—	2.09
				21	—	—	2.46
Lemons				28	—	—	1.68
	.375	500	5	7	1.22	.09	1.55
		390	5	7	1.64	.02	.60
		100	5	7	1.01	.51	.68
				14	—	—	1.92 3

Data are ~~now~~ not adequate
to support proposed
change in use pattern

III. Conclusion

1. Data are insufficient to support 0.355 lb A/100 gal & the maximum of 7.5 lb A/2000 gal/A.
2. We ~~should~~^{need} like an explanation on why residues in whole fruit appear to be increasing between 7 and 21 day after application.
3. We ~~should~~^{need} like an explanation on why residues from 3.75 lb A/100 gal/A were higher than those of 1.875 lb A/500 gal/A.
4. If air application are interred we need data from air application.

5. 70-15 data are inadequate.

We need all answers to

70-15. Data should include analysis for ~~the~~ compounds other than Guthrie and its oxygen analog.

(1) We need a soil leaching study. Analysis of soil at depths of 0-3, 3-6, 6-9 and 9-12 inches and water filtered through columns.

~~(2) We need a photo-degradation study in water.~~

~~(3) We need silt or soil particles analysis of particles carried off in runoff water.~~

~~(4) We need a fish residue study.~~

~~(5) We need results answers to 2 (a), (b), (c) and 5 in PR 150 line 70-15~~

(4) A fish residue study is needed.

(5) A material balance study in soil is needed.

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IV Recommendation

1. We should object to change in use pattern.
See conclusion

2. Note, we should route this change in use pattern and new data to PTD. The new data does not agree with the old data in P# No. 355. Residue are higher than the toler established tolerance after the 7 Day PTF.

3. 70-15 data inadequate