

REney:ow
7/21/71

70-15 comments
cut end

Evaluation of Data for O,O-Dimethyl
S-[3-mercaptopomethyl-1,2,3-benzotriazin-4(3H)-
one]phosphorodithioate (Guthion)

Submitted by Chemagro Corp.
June 15, 1971

I. Introduction

1. Registration involved are:

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

2. Crops involved are citrus. Citrus has a tolerance of
2 ppm on fruit and 5 ppm on pulp. (7.5 lbs A/A).

3. Registered

1 app. .375 lb A/100 gal (2000 gal max.)	7 day PHI
2 app. " " " " " " " " " "	28 day PHI

Chemagro wishes to add 3 more app. (total of 5)
90 days between each application.

Fla. Citrus PHI 7 days
Texas Grapefruit PHI 28 days

Do not prune within 7 days after application.

0.375 lb A/100 gal (7.5 lbs A/2000 gal per A).

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 air application.

2. Label proposes use in up to 2000 gal/A which is 7.5 lbs A/2000 gal. Data are insufficient to support 2000 gal/A. One sample on orange at 2800 gal/A high residues 1.94 ppm at 7 day. At 2400 gal/A on grapefruit had residues of 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 it showed up in almost all samples.

4. Some of the data submitted are listed.

	Lbs A/ 100 gal.	No. of gal. app.	No. of App.	PHI	NET RESIDUES PPM		
					Peel	Pulp	Whole Fruit
Oranges	.375	500	5	7	1.02	.01	.29
	"	390	5	7	1.31	.02	.41
	"	100	5	7	3.69	.15	1.35
	"	100	5	7	.96	.02	.18
	"	"	"	14	—	—	2.70
	"	2800	5	7	—	—	1.94
	"	100	5	7	5.04	.40	1.45
Grape- fruit	.375	2400	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
				28	—	—	1.68
Lemons	.375	500	3	7	1.22	.09	.55
		390	5	7	1.64	.02	.60
		100	5	7	1.01	.51	.68
				14	—	—	1.92

Data are not adequate to support proposed change in use pattern.

III. Recommendations

A. Object to change in use pattern for the following reasons:

1. Reanalyses of some reserve samples by the colorimetric method in PAM 11, which is the method of choice for enforcing Guthion tolerances. This should include validation data for recovery of the oxygen analog and benzazimide metabolites.

2. Additional data for Florida citrus and Texas grapefruit reflecting longer PHI's to show at what point maximum residues are reached. This should include the maximum number of proposed applications with and without oil; 100, 500, 1000, and 2000 gallons of water per acre; and in high and low rainfall areas. If air applications are intended, residue data will be needed to support that use.

3. An explanation on why residues appear to increase in whole fruit from a 7 to 21 day PHI.

B. To continue registration on citrus we need the following:

1. Additional data for Florida citrus and Texas grapefruit reflecting longer PHI's to show at what point maximum residues are reached. This should include data from one and two applications; with and without oil; in 100, 500, 1000, and 2000 gallons per water per acre; and in high and low rainfall areas.

*Submitted
PR D Ltr
3/27/72*

C. RL for environmental data submitted in support of PR Notice 70-15 are inadequate.

Data to supplement PR Notice 70-15 are as follows and should be submitted within one year.

1. Soil leaching study using labeled material. Soil should be Lakeland fine sand, sandy loam and silty clay loam. Breakthrough point should be determined. Soil should be fortified and left undisturbed for one week and 1 month before eluting starts.

2. A soil degradation study is needed. Labeled material should be used to determine material balance. Samples should be collected at PHI's of 0 day, 1 week, 3, 6, 12, and 20 weeks.

3. Answers to 2(a), (b), (C), (d), and 5 (a), and (b), and (c) in PR Notice 70-15.

4. Runoff studies should have included separate analysis silt, soil particles from runoff water.

5. A fish residue study is needed.