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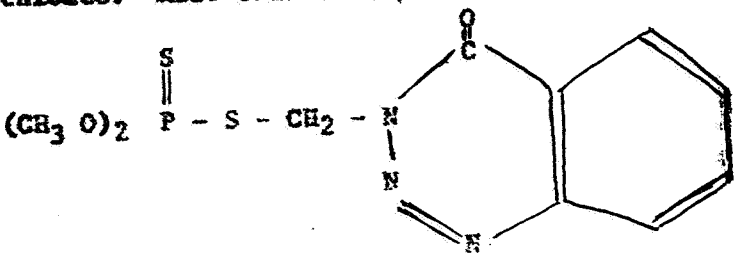
February 3, 1970

Evaluation of Pesticide Petition No. 0F0934
for Ethyl Guthion on Cotton and Potatoes
Filed January 15, 1970, by Chemagro

INTRODUCTION

Chemical name is O,O-Diethyl S-[4-oxo-1,2,3-benzotriazin-3 (4H)-ylmethyl] phosphorodithioate. Also called ethyl Guthion and azinphos ethyl.



An old chemical, usually sold in formulations with (methyl) Guthion as GUTHION M-E SC.

Asking tolerance of 0.1 ppm in cottonseed and potatoes.

Background: These are NR uses. Previous petition 8F0633 was turned down by FDA because of toxicology, metabolitic questions, analytical methods and residues.

Formulation is SC containing

11.1% Ethyl Guthion
11.1% Methyl Guthion
71.8% Pet. Dist
6.0% Inert

Only metabolite is the oxygen analog.

DIRECTIONS FOR USE

S. C.

Cotton	0.5 lb. Act Guthion/A 0.5 lb. Act Ethyl Guthion/A 7 day PHI Do not pasture, do not feed.
Potatoes	0.385 Lb. Act/A Guthion/A 0.385 Lb. Act/A Ethyl Guthion 14 day PHI

ANALYTICAL METHODS

Thermionic emission GLC and colorimetric method (previously accepted). GLC Does not measure the oxygen analog. Not necessary but is only 10% of parent. Alternate GLC method uses a different column. Colorimetric method measures the o-analog also.

DISCUSSION OF DATA

No data ~~true~~ here for potatoes. Previous petition states that this proposed use will ~~bear~~ leave less than 0.1 ppm total residues in potatoes. (14 day 3/8 lb. act ethyl and 3/8 lb. act methyl).

Cotton data show 0.05 ppm total residues (M and E) in undelinted cotton seed. (12 analyses). There are high residues in foliage and gin ~~dust~~ trash, so we need the caution against feeding and grazing. Have data for up to 14 applications on cotton.

Rain data supplied storage stability data supplied. The ~~C~~ uses are presently registered residues in cottonseed meal are generally 0.1 ppm or less.

Soil persistence studies show that half life is something like 60 days. Some residues are found after a year 0.2 - 0.6 ppm. This is a borderline persistence question because 5 - 10% of the residues originally found in soil are still there after 1 year. We need more data on the environmental contamination possibilities. Mr. Ney has asked Chemagro for most of the studies outlined in C-72. If we get such information, we can decide if there is a definite problem.

CONCLUSION

The proposed tolerance is ~~unacceptable~~

We need environmental contamination data as outlined in C-72.

RECOMMENDATION

Favorable opinion.