

US EPA ARCHIVE DOCUMENT

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February 12, 1971

Reevaluation No. 1 of Pesticide Petition No. 1F1024  
for 2,4,5,6-tetrachloroisophthalonitrile (Daconil)  
and its metabolite 4-hydroxy-2,5,6-trichloroisophthalonitrile  
Submitted by Diamond Shamrock Corporation  
Filed September 2, 1970

## I. Introduction

1. See our evaluation dated October 20, 1970.
2. See our opinion dated October 26, 1970, and sent on November 5, 1970.
3. On November 19, 1970, petitioner submitted a letter answering some of the questions raised in our opinion, and requested a meeting to discuss additional questions at a later date.
4. On November 23, 1970, petitioner submitted a letter acknowledging receipt of PR Notice 70-15, and claiming that Daconil would not present an environmental contamination problem.

## II. Discussion

We received replies to questions (1) and (2) of our opinion.

1. We asked if chlorobenzoic acids would be present as a residue in crops or soil

Petitioner replied that none have been detected, and cited a reference which stated that even moderately hindered nitriles are inert toward hydrolysis for all practical purposes. It was further argued that any acidic compounds would be carried through the analytical procedure for the metabolite DAC-3701. No chromatographic peaks for dimethyl tetrachloroisophthalate (a known compound) or 2,4,5,6-tetrachloro-3-cyanobenzoic acid methyl ester were observed.

2. We requested recovery data on representative fortified samples stored at room conditions and frozen storage at intervals of 0, 6, 12, 18, and 24 days. The study should include surface extraction of sample and maceration of similar samples for analysis.

Petitioner replied citing C<sup>14</sup> studies that residue values for Daconil obtained by surface stripping are as valid as

## II. Discussion (Cont.)

those obtained by macerating the sample. However, residues of the metabolite DAC-3701 can only be determined by macerating the sample using acidified acetone as the extracting solvent.

Some storage data on milk and cantaloupe were included in the letter.

The cantaloupe samples were macerated with the extracting solvent. Analyses were made soon after harvest and after 10 months storage. The data are listed.

	Date Analyzed	PPM Residue	Mean
Daconil 2787	Fresh 8-26-69	.80, .95, 1.83, 1.22, .77, 1.15	1.12
"	Frozen 6-26-69	1.06, .71, 1.56, 1.21, .82	1.07
DAC-3701	Fresh 8-26-69	0.02, 0.05, 0.07	0.05
"	Frozen 6-26-69	0.08, 0.07, 0.03, 0.08	0.07

Above data on cantaloupe are insufficient. We should have data on surface vs maceration extraction.

Petitioner states that "It would be difficult to fortify certain types of commodities with known quantities of Daconil 2787 and DAC-3701 and store frozen for a month before analyzing."

## III. Conclusions

1. No chlorobenzoic acids have been detected during residue analyses for Daconil and its metabolite. Many of the chlorinated benzoic acids are well known growth regulant type herbicides. Application of Daconil at dosage rates as high as 76 lbs/acre gave no appearance of deleterious or formative effects on plants.

Chlorobenzoic acids do not appear to be decomposition products of Daconil.

2. Some recovery data on stored samples were submitted, but not as much as was requested. We should have data on surface extracted vs. macerated samples for several representative crops. Petitioner claims this type of data is difficult to obtain, and that maceration is only necessary for analysis of the metabolite DAC-3701.

**III. Conclusions (Cont.)**

3. Receipt of PR 70-15 Notice was acknowledged. Petitioner claims environmental data was included in Petitions 7F0599 and 1F1024.
4. Petitioner requests a meeting at the earliest possible convenience to discuss additional questions on residues.

**IV. Recommendation**

No opinion is required.