

US EPA ARCHIVE DOCUMENT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

SEP 19 1986

OFFICE OF  
PESTICID AND TOXIC SUBSTANCES

MEMORANDUM

SUBJECT: Captan. Addendum to Residue Reduction Data  
Submitted in Response to 04/29/85 DCI Letter.  
Accession No. 263843. RCB No. 1334.

FROM: Lynn M. Bradley, Chemist  
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TO: Carol Monroe, PM #73  
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and

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The Captan Task Force has submitted additional analyses of almonds, grapes, oranges and summer squash, to accompany the earlier report of Residue Reduction Data. (Accession No. 262770, see the review of L. M. Bradley, 7/22/86). These data have been incorporated into the tables from that earlier review, and the entire table reproduced here.

These new data are consistent with the conclusions and observations from that 7/22/86 review. We agree with the Task Force's explanation that the high levels of captan in raisin waste are probably due to the captan dust particles remaining behind after good raisins were removed. These levels are well within the raisin tolerance.

Attachment (not CBI)

cc:w/Attachment:Captan, SF., L.M. Bradley(2), RF, Circu, E. Saito(SIS)  
PMSD/ISB

TS-769:CM#2:RM804:LMBradley:wh:9/18/86  
RDI:ARathman:9/17/86

captan almonds

interim tolerances 2 ppm on nuts, 100 ppm on hulls

CA four applications @ 5 lb ai/A (ground) 128 day PHI  
Recoveries 75-100% @ 0.1-0.5 ppm

|          | total | captan | THPI | % THPI |
|----------|-------|--------|------|--------|
| nutmeats | 0.04  | 0.04   | 0.00 | 0.00   |
|          | 0.03  | 0.03   | 0.00 | 0.00   |
| hulls    | 6.45  | 6.40   | 0.05 | 0.78   |
|          | 4.38  | 4.30   | 0.08 | 1.83   |
| shells   | 0.09  | 0.09   | 0.00 | 0.00   |
|          | 0.06  | 0.06   | 0.00 | 0.00   |

CA four applications @ 5 lb ai/A (aerial) 152 day PHI  
Recoveries 71-96% @ 0.05-0.5 ppm

|          | total | captan | THPI | % THPI |
|----------|-------|--------|------|--------|
| nutmeats | 0.00  | 0.00   | 0.00 | 0.00   |
|          | 0.00  | 0.00   | 0.00 | 0.00   |
| hulls    | 0.28  | 0.28   | 0.00 | 0.00   |
|          | 0.19  | 0.19   | 0.00 | 0.00   |
| shells   | 0.01  | 0.01   | 0.00 | 0.00   |
|          | 0.01  | 0.01   | 0.00 | 0.00   |

captan grapes

tolerance 50 ppm raisins 50 ppm

NY 7 applications @ 3lb ai/A 0 PHI  
 recoveries 79-114% @ 0.05-10 ppm

|            | total<br>ppm | captan<br>ppm | THPI<br>ppm | %THPI  | % total<br>remaining |
|------------|--------------|---------------|-------------|--------|----------------------|
| RAC        | 5.08         | 5.00          | 0.08        | 0.02   |                      |
|            | 5.88         | 5.70          | 0.18        | 0.02   |                      |
| washed     | 2.03         | 2.00          | 0.03        | 1.48   | 37.21                |
| PROCESSED  |              |               |             |        |                      |
| dry pomace | 1.08         | 0.62          | 0.46        | 42.59  |                      |
| wet pomace | 2.23         | 0.53          | 1.70        | 76.23  |                      |
| juice      | 2.90         | 0.00          | 2.90        | 100.00 |                      |

CA 7 applications @ 3 lb ai/A 85 day PHI  
 raisins dusted with captan 5%, 7 days PHI  
 recoveries 80-130% @ 0.01-5 ppm

|           | total<br>ppm | captan<br>ppm | THPI<br>ppm | %THPI | % total<br>remaining |
|-----------|--------------|---------------|-------------|-------|----------------------|
| RAC       | 1.93         | 1.90          | 0.03        | 1.55  |                      |
|           | 1.61         | 1.60          | 0.01        | 0.62  |                      |
| washed    | 0.69         | 0.67          | 0.02        | 2.90  | 38.98                |
| PROCESSED |              |               |             |       |                      |
| raisins   | 1.23         | 0.86          | 0.42        | 32.81 |                      |
| waste     | 5.50         | 5.00          | 0.50        | 9.09  |                      |
| off-grade | 24.98        | 24.00         | 0.98        | 3.92  |                      |

WA 5 applications @ 3.0 lb ai/A  
 Recoveries 80-106% @ 0.5-5 ppm

|            | total<br>ppm | captan<br>ppm | THPI<br>ppm | %THPI  |
|------------|--------------|---------------|-------------|--------|
| RAC        | 12.21        | 12.00         | 0.21        | 1.72   |
|            | 10.01        | 9.80          | 0.21        | 2.10   |
| PROCESSED  |              |               |             |        |
| dry pomace | 12.00        | 0.00          | 12.00       | 100.00 |
|            | 5.30         | 0.00          | 5.30        | 100.00 |
| wet pomace | 2.90         | 0.00          | 2.90        | 100.00 |
|            | 3.42         | 0.02          | 3.40        | 99.42  |
| juice      | 3.30         | 0.00          | 3.30        | 100.00 |
|            | 6.20         | 0.00          | 6.20        | 100.00 |

captan oranges

tolerance 25 ppm (interim)

CA 2 applications @ 8 lb ai/A plus one @ 5 lb ai/A 0 PHI  
recoveries 82-120% @ 0.05-1pm

|                       | total<br>ppm | captan<br>ppm | THPI<br>ppm | %THPI  | % total<br>remaining |
|-----------------------|--------------|---------------|-------------|--------|----------------------|
| RAC                   | 2.03         | 2.00          | 0.03        | 1.48   |                      |
|                       | 1.52         | 1.50          | 0.02        | 1.32   |                      |
| washed fruit          | 0.10         | 0.09          | 0.02        | 20.00  | 5.63                 |
| washed peel           | 0.10         | 0.02          | 0.09        | 90.00  | 5.63                 |
| pulp                  | 0.10         | 0.00          | 0.10        | 100.00 | 5.63                 |
| COMMERCIAL PROCESSING |              |               |             |        |                      |
| washed wet fruit      | 0.19         | 0.19          | 0.00        | 0.00   |                      |
| wet peel              | 0.13         | 0.01          | 0.12        | 92.31  |                      |
| dried peel            | 0.00         | 0.00          | 0.00        |        |                      |
| dried fines           | 0.02         | 0.00          | 0.02        | 100.00 |                      |
| juice                 | 0.00         | 0.00          | 0.00        |        |                      |
| molasses              | 0.00         | 0.00          | 0.00        |        |                      |
| cold pressed oil      | 0.00         | 0.00          | 0.00        |        |                      |

AZ 2 applications @ 8 lb ai/A plus one @ 5 lb ai/A 0 PHI  
recoveries 80-101% @ 1-15 ppm

|              | total<br>ppm | captan<br>ppm | THPI<br>ppm | %THPI | % total<br>remaining |
|--------------|--------------|---------------|-------------|-------|----------------------|
| RAC          | 2.33         | 2.30          | 0.03        | 1.29  |                      |
|              | 2.34         | 2.30          | 0.04        | 1.71  |                      |
| washed fruit | 0.49         | 0.40          | 0.09        | 18.37 | 20.99                |
| washed peel  | 0.70         | 0.23          | 0.47        | 67.14 | 29.98                |
| pulp         | 0.02         | 0.01          | 0.01        | 50.00 | 0.86                 |

captan summer squash

tolerance 25 ppm

CA 6 applications @ 2 lb ai/A 0 PHI  
recoveries 80-111% @ 0.2-3 ppm

|               | total<br>ppm | captan<br>ppm | THPI<br>ppm | %THPI  | %total<br>remaining |
|---------------|--------------|---------------|-------------|--------|---------------------|
| RAC           | 0.23         | 0.12          | 0.11        | 47.83  |                     |
|               | 0.21         | 0.14          | 0.07        | 33.33  |                     |
| washed fruit  | 0.04         | 0.01          | 0.03        | 75.00  | 18.18               |
| washed peel   | 0.12         | 0.05          | 0.07        | 58.33  | 54.55               |
| peeled fruit  | 0.01         | 0.00          | 0.01        | 100.00 | 4.55                |
| cooked fruit  | 0.02         | 0.00          | 0.02        | 100.00 | 9.09                |
| water (ug/ml) | 0.02         | 0.00          | 0.02        | 100.00 |                     |

NY 6 applications @ 2 lb ai/A 0 PHI  
recoveries 67-170% @ 0.01-2 ppm

|               | total<br>ppm | captan<br>ppm | THPI<br>ppm | %THPI  | %total<br>remaining |
|---------------|--------------|---------------|-------------|--------|---------------------|
| RAC           | 1.21         | 1.10          | 0.11        | 9.09   |                     |
|               | 1.54         | 1.40          | 0.14        | 9.09   |                     |
| washed fruit  | 0.14         | 0.05          | 0.09        | 64.29  | 10.22               |
| washed peel   | 0.32         | 0.12          | 0.20        | 62.50  | 23.36               |
| peeled fruit  | 0.02         | 0.00          | 0.02        | 100.00 | 1.46                |
| cooked fruit  | 0.04         | 0.00          | 0.04        | 100.00 | 2.92                |
| water (ug/ml) | 0.03         | 0.00          | 0.03        | 100.00 |                     |