US EPA ARCHIVE DOCUMENT

10/92

23

DP Barcode : D181596
PC Code No : 128857
EEB In : 08.18.92
EEB Out :

AUG 31 1992

To: Rebecca Cool
Product Manager 41
Registration Division (H7505C)

From: Douglas J. Urban, Acting Chief
Ecological Effects Branch/EFED (H7507C)

Attached, please find the EEB review of...

Reg./File # : 92CA0039
Chemical Name : Myclobutanil
Type Product : Fungicide
Product Name : Rally 40W
Company Name : State of California
Purpose : Proposed Section 18 for use on Strawberries

Action Code : 510 Date Due : 09-06-92
Reviewer : H. Mansfield

EEB Guideline/MRID Summary Table: The review in this package contains an evaluation of the following:

GDLN NO	MRID NO	CAT	GDLN NO	MRID NO	CAT	GDLN NO	MRID NO	CAT
71-1(A)			72-2(A)			72-7(A)		
71-1(B)			72-2(B)			72-7(B)		
71-2(A)			72-3(A)			122-1(A)		
71-2(B)			72-3(B)			122-1(B)		
71-3			72-3(C)			122-2		
71-4(A)			72-3(D)			123-1(A)		
71-4(B)			72-3(E)			123-1(B)		
71-5(A)			72-3(F)			123-2		
71-5(B)			72-4(A)			124-1		
72-1(A)			72-4(B)			124-2		
72-1(B)			72-5			141-1		
72-1(C)			72-6			141-2		
72-1(D)						141-5		

Y=Acceptable (Study satisfied Guideline)/Concur
P=Partial (Study partially fulfilled Guideline but additional information is needed
S=Supplemental (Study provided useful information but Guideline was not satisfied)
N=Unacceptable (Study was rejected)/Nonconcur

DP BARCODE: D181596

CASE: 283873
SUBMISSION: S423492

DATA PACKAGE RECORD
BEAN SHEET

DATE: 08/17/92

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: EMERGENCY EXEMP ACTION: 510 SEC18-OC F/F USE
CHEMICALS: 128857 Myclobutanil (ANSI) %

ID#: 92CA0039
COMPANY:
PRODUCT MANAGER: 41 REBECCA COOL 703-305-7717 ROOM: CM2 720
PM TEAM REVIEWER: SUSAN STANTON 703-305-6359 ROOM: CM2 716B
RECEIVED DATE: 08/13/92 DUE OUT DATE: 10/02/92

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 181596 EXPEDITE: N DATE SENT: 08/17/92 DATE RET.: / /
CHEMICAL: 128857 Myclobutanil (ANSI)
DP TYPE: 001 Submission Related Data Package
ADMIN DUE DATE: ~~09/16/92~~ 9/6/92 CSF: N LABEL: N

ASSIGNED TO	DATE IN	DATE OUT
DIV : EFED	08/18/92	/ /
BRAN: EEB	08/18/92	/ /
SECT:	/ /	/ /
REVR :	/ /	/ /
CONTR:	/ /	/ /

* * * DATA REVIEW INSTRUCTIONS * * *

Please review California's specific exemption request for the use of myclobutanil on strawberries to determine whether the use poses a risk of unreasonable adverse effects on non-target organisms. This is the first year this use has been requested under section 18 of FIFRA. Please note that applications are already being made under a crisis exemption issued by California on July 28, 1992.

Thanks,
Susan Stanton
305-6359

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL
181592	BAB	08/17/92	~~09/16/92~~	Y	N	N
181595	EAB	08/17/92	~~09/16/92~~	Y	N	N
181597	EFGB	08/17/92	~~09/16/92~~	Y	N	N
181598	RSCB	08/17/92	~~09/16/92~~	Y	N	N
181599	TB-2	08/17/92	~~09/16/92~~	Y	N	N

9/6/92

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EEB REVIEW
Myclobutanil

100.0 Submission Purpose and Label Information

100.1 Submission Purpose and Pesticide Use

Proposed emergency exemption for Rally® 40 W on strawberries in California.

100.2 Formulation Information

ACTIVE INGREDIENT, Myclobutanil: α-butyl-α-(chlorophenyl)-1H-1,2,4-triazole-1-propanitrile.....40%
INERT INGREDIENTS.....60%

100.3 Application Methods, Directions, Rates

Apply 2.5-5.0 ounces of product (.0625-.125 lbs a.i.) per acre through ground application. Applications should be made, as necessary, 14 to 21 days apart, beginning when the disease first appears. A maximum of 6 applications is allowed.

Limitations-- (1) Rally 40W may only be applied to strawberries under production, not nursery stock (2) the chemical should not be applied through any type of irrigation system.

100.4 Target Organisms

Powdery Mildew (*Sphaerotheca macularis*)

100.5 Precautionary Labeling

No environmental hazards labeling was present.

101.0 Hazard Assessment

101.1 Discussion

Powdery mildew has become an increasing problem for strawberry growers in California. Sulfur, the common treatment for controlling the disease, has proven to be ineffective. The state of California has requested an emergency exemption for the use of myclobutanil on strawberries in California. At the time EEB received the request, applications were already being made under a crisis exemption issued by California on July 28, 1992.

There are approximately 22,000 acres of strawberries grown in California. This section 18 request is for the following counties: Monterey, Orange, San Diego, Santa Barbara, Santa Clara, Santa Crus, San Luis Obispo, and Ventura.

101.2 Likelihood of Adverse Effects to Nontarget Organisms

Environmental Fate Data

The data on the following page was obtained from the Environmental Fate and Groundwater Branch response (9/27/88) to terrestrial field dissipation of myclobutanil and 1,2,4-triazole metabolite:

. Stable to hydrolysis at pHs of 5, 7, and 9

. Stable to photolysis in water

. Photolytic half-life in soil --143 days (extrapolation)

. Aerobic half-life in soil --61-71 days

. Anaerobic half-life in soil --no detectable degradation after 60 days

. Leaching --Myclobutanil is moderately mobile (K_ds 1.46 - 9.77 for absorption, .47 - 4.18 for desorption in five soils: clay loam, sand, silt loam, sandy loam, and clay. The degradate is considered highly mobile.

. Bioaccumulation in fish has been waived. The product is not expected to bioaccumulate.

"The above data indicate that myclobutanil is stable and somewhat mobile. Its major route of dissipation will probably be diffusion and dilution since it appears resistant to most environmental breakdown processes"

Terrestrial Hazard

Myclobutanil may be characterized as practically non-toxic on a subacute basis to avian species (Mallard duck, *Anas platyrhynchos* and Bobwhite quail, *Colinus virginianus*, LC_{50}> 5000 ppm).

Myclobutanil may be characterized as slightly toxic on an acute basis to avian species (Bobwhite quail LD_{50} = 510 mg/kg).

Avian reproduction tests showed no adverse effects at 60 ppm (highest level tested) to either quail or mallards.

Mammals

Myclobutanil may be characterized as slightly toxic to mammals with LD_{50}s of 1600 and 2290 mg/kg for male and female rats respectively. The systemic and reproductive NOEL for rats was 50 and 200 ppm, respectively, in a 2 generation reproduction test.

TERRESTRIAL EXPOSURE

The Kenega nomograph was used to compute the maximum expected residues on vegetation from a single application:

ONE APPLICATION (lbs)	SHORT RANGE GRASS	LONG RANGE GRASS	LEAVES/ LEAFY CROPS	FORAGE, INSECTS	PODS WITH SEEDS	FRUITS
.0625	15 ppm	6.9 ppm	7.8 ppm	3.6 ppm	.75 ppm	0.44 ppm
.125	30 ppm	13.8 ppm	15.6 ppm	7.3 ppm	1.5 ppm	0.86 ppm

The expected residues from a single application do not exceed any of the terrestrial hazard triggers. Based on the above calculations, a single myclobutanil application should pose negligible risks to avian and mammalian wildlife.

According to the label, the potential for a maximum of six applications exists. The following table illustrates the maximum residues expected on vegetation following 6 applications at an interval of 14 days. The half-life employed in the calculations is 66 days, the average aerobic soil metabolism.

INITIAL CONCENTRATION (PPM)	TYPE OF VEGETATION	MAXIMUM RESIDUE (PPM)
30	long range grass	129
15.6	leaves/leafy crops	67
.86	fruit	4

The residues that are expected on the strawberry fruit are not expected to pose a hazard to nontarget wildlife. It is possible, however, that the residues on the plants leaves or the range grass that edges a strawberry field may pose a hazard to avian species. No reproductive effects were seen up to a test level of 60 ppm in two avian reproduction studies. Numerous EEB reviews have requested that the avian reproduction studies be repeated with test levels that better reflect expected environmental concentrations of myclobutanil.

Nontarget Insects

Based on a honeybee acute toxicity study with an LD_{50} value > 100 ug/bee, there seems to be little or no hazard to beneficial insects.

Aquatic Hazard

Myclobutanil, with a 96-hour LC_{50} of 4.2 ppm for Rainbow trout (*Salmo gairdneri*) and 2.4 ppm for Bluegill sunfish (*Lepomis macrochirus*), is moderately toxic to both cold and warmwater fish.

The 48-hour EC_{50} for *Daphnia magna* of 11 ppm indicates that myclobutanil is slightly toxic to freshwater invertebrates.

A fish early life stage test with fathead minnow provided an MATC > 2.2 ppm and < 4 ppm.

AQUATIC EXPOSURE

If the maximum application of .125 lbs a.i./acre was applied through ground equipment, the resulting residue expected from a 10 acre drainage basin draining into a 1 acre pond that is 6 inches or 6 feet deep would be .00381 or .04588 ppm, respectively. This concentration is well below any of the aquatic hazard triggers. Myclobutanil does not pose a significant hazard to aquatic organisms as a result of a single application. According to the label instructions, however, multiple applications of myclobutanil are likely. Subsequently, the

EPA Pesticide Residue Fate Simulation computer program was used to estimate the maximum and average residues from drift and runoff from a 10 acre treated area into a 1 acre pond, 6 ft. deep as a result of multiple applications of myclobutanil. The following table indicates the parameters and the results of the computer simulation.

	SET 1	SET 2
EEC/APPLICATION[1]	.00381 ppm	.04588 ppm
# OF APPLICATIONS	6	6
HALF LIFE	66 days	66 days
APPLICATION INTERVAL	14 days	14 days
LENGTH OF SIMULATION	100 days	100 days
RESIDUE	.0016 ppm	.19 ppm

[1] The EEC sheet for a single application is attached (attachment A).

Based on the above calculations, multiple applications of myclobutanil on strawberries pose a negligible risk to freshwater aquatic species.

101.3 Endangered Species Consideration

The use of myclobutanil on strawberries in California is not expected to adversely impact endangered aquatic species. Calculations also indicate that this use of myclobutanil will not affect birds on an acute basis, but chronic or reproductive effects to avian species may not be adequately assessed (see also section 101.2, terrestrial exposure). The endangered birds in the counties of concern for this emergency use exemption are the bald eagle, American peregrine falcon, Arctic peregrine falcon, brown pelican, California clapper rail, light-footed clapper rail, California least tern, least Bell's vireo, coastal California gnatcatcher, and Aleutian Canada goose. With the exception of the Aleutian Canada goose, who might feed on range grass or other vegetation in close proximity to the strawberry fields, the feeding habits of these birds make the consumption of possibly hazardous levels (over 60 ppm, the highest level tested in the avian reproduction studies) of myclobutanil unlikely. It is unknown if geese will be affected by the expected plant residues.

101.4 Adequacy of Toxicity Data

As requested by numerous EEB reviews, the avian reproduction studies be repeated with test levels that better reflect expected environmental concentrations of myclobutanil. It should be noted that the residues on vegetation resulting from multiple

applications of myclobutanil may surpass 60 ppm, the highest concentration tested in two avian reproduction studies. Numerous EEB reviews have requested that the avian reproduction studies be repeated with test levels that better reflect expected environmental concentrations of myclobutanil.

101.5 Adequacy of Labeling

The environmental hazards section of the labeling should read:

"Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high-water mark. Drift and runoff may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwater or rinsates."

102.0 Classification

Not classified.

103.0 Conclusions

The available data indicates that fish, invertebrate, and insect species will not be at risk, on either an acute or a chronic basis, from this use of myclobutanil on strawberries. Birds are not expected to be at risk from the acute toxicity. The chronic toxicity or reproductive effects of myclobutanil to avian species may not be adequately assessed at this time. Please also see sections 101.2 and 101.3 for a more detailed explanation of possible chronic toxicity to avian endangered and nonendangered species.

Heather Mansfield, Zoologist, Section 2
Ecological Effects Branch
Environmental Fate and Effects Division (H7507C)

Heather Mansfield 8/26/92

Curtis E. Fain 8-27-92
for Allen Vaughan, Acting Head, Section 2
Ecological Effects Branch
Environmental Fate and Effects Division (H7507C)

Douglas J. Urban, Acting Chief
Ecological Effects Branch
Environmental Fate and Effects Division (H7507C)

Douglas J. Urban 8/28/92

MYCLOBUTANIL-STRAWBERRIES

Attachment A

EEC CALCULATION SHEET

I. For un-incorporated ground application

A. Runoff

.125 lb(s) x 0.05 (5% runoff) x 10 (A) (from 10 A. drainage basin) = .0625 lb(s) (tot.runoff)

EEC of 1 lb a.i. direct application to 1 A. pond 6-foot deep = 61 ppb

Therefore, EEC = 61 ppb (7.4) x .0625 (lb) = 3.81 ppb = .00381 ppm
45.88 ppb = .04588 ppm

II. For incorporated ground application

A. Runoff

___ lb(s) ÷ ___ (cm) (depth of incorporation) x 0.0_ (_% runoff) x 10 (A) (10 A d.basin) = ___ lb(s) (tot.runoff)

Therefore, EEC = 61 ppb x ___ (lbs) = ___ ppb

III. For aerial application (or mist blower)

A. Runoff

___ lb(s) x 0.6 (appl. efficiency) x 0.0 (_% runoff) x 10 (A) (10 A. d.basin) = ___ lb(s) (tot.runoff)

B. Drift

___ lb(s) x 0.05 (5 % drift) = ___ lb(s) (tot. drift)

Tot. loading = ___ lb(s) (tot. runoff) + ___ lb(s) (tot. drift) = ___ lb(s)

Therefore, EEC = 61 ppb x ___ (lbs) = ___ ppb

DAILY ACCUMULATED PESTICIDE RESIDUES---MULTP. APPL.

Chemical name ----------	MYCLOBUTANIL
Initial concentration (ppm) -----	.00381
Half-life ----------	66
A number of application --------	6
Application interval ----------	14
Length of simulation (day) -----	100

6' deep pond

DAY	RESIDUE (PPM)
0	.00381
1	3.770196E-03
2	3.730808E-03
3	3.691831E-03
4	3.653261E-03
5	3.615094E-03
6	3.577327E-03
7	3.539953E-03
8	3.502971E-03
9	3.466374E-03
10	3.43016E-03
11	3.394324E-03
12	3.358862E-03
13	3.323772E-03
14	7.099048E-03
15	7.024882E-03
16	6.951491E-03
17	6.878867E-03
18	6.807002E-03
19	6.735887E-03
20	6.665515E-03
21	6.595878E-03
22	6.52697E-03
23	6.458781E-03
24	6.391304E-03
25	6.324532E-03
26	6.258458E-03
27	6.193074E-03
28	9.938373E-03
29	9.834545E-03
30	.0097318
31	9.630129E-03
32	9.529521E-03
33	9.429963E-03
34	9.331445E-03
35	9.233957E-03
36	9.137488E-03
37	9.042026E-03
38	8.947561E-03
39	8.854084E-03
40	8.761583E-03
41	8.670049E-03
42	1.238947E-02
43	1.226003E-02
44	1.213195E-02
45	.0120052
46	1.187978E-02

49	1.151132E-02
50	1.139106E-02
51	1.127206E-02
52	1.115429E-02
53	1.103776E-02
54	1.092245E-02
55	1.080834E-02
56	1.450542E-02
57	1.435388E-02
58	1.420392E-02
59	1.405553E-02
60	1.390869E-02
61	1.376338E-02
62	1.361959E-02
63	.0134773
64	.0133365
65	1.319717E-02
66	1.305929E-02
67	1.292286E-02
68	1.278785E-02
69	1.265425E-02
70	1.633205E-02
71	1.616143E-02
72	1.599258E-02
73	.0158255
74	1.566017E-02
75	1.549656E-02
76	1.533467E-02
77	1.517446E-02
78	1.501593E-02
79	1.485906E-02
80	1.470382E-02
81	.0145502
82	1.439819E-02
83	1.424777E-02
84	1.409892E-02
85	1.395163E-02
86	1.380587E-02
87	1.366164E-02
88	1.351891E-02
89	1.337767E-02
90	1.323791E-02
91	1.309961E-02
92	1.296276E-02
93	1.282733E-02
94	1.269332E-02
95	1.256071E-02
96	1.242949E-02
97	1.229963E-02
98	1.217113E-02
99	1.204398E-02
100	1.191815E-02

Maximum residue ---------- 1.633205E-02
Average residue ---------- 1.048771E-02

DAILY ACCUMULATED PESTICIDE RESIDUES---MULTP. APPL.

Chemical name ----------	MYCLOBUTANIL
Initial concentration (ppm) -----	.04588
Half-life ----------	66
A number of application --------	6
Application interval ----------	14
Length of simulation (day) -----	100

6" deep pond

DAY	RESIDUE (PPM)
0	.04588
1	4.540068E-02
2	4.492637E-02
3	4.445701E-02
4	4.399256E-02
5	4.353295E-02
6	4.307815E-02
7	.0426281
8	4.218276E-02
9	4.174206E-02
10	4.130597E-02
11	4.087443E-02
12	4.044741E-02
13	4.002484E-02
14	8.548669E-02
15	8.459359E-02
16	8.370982E-02
17	8.283528E-02
18	8.196988E-02
19	8.111351E-02
20	.0802661
21	7.942753E-02
22	7.859773E-02
23	7.777661E-02
24	7.696405E-02
25	7.615998E-02
26	7.536432E-02
27	7.457698E-02
28	.1196778
29	.1184275
30	.1171903
31	.115966
32	.1147544
33	.1135556
34	.1123692
35	.1111953
36	.1100336
37	.108884
38	.1077465
39	.1066208
40	.1055069
41	.1044047
42	.1491939
43	.1476353

44	.1460929
45	.1445666
46	.1430563
47	.1415617
48	.1400828
49	.1386193
50	.1371711
51	.1357381
52	.13432
53	.1329167
54	.1315281
55	.130154
56	.1746742
57	.1728493
58	.1710435
59	.1692566
60	.1674883
61	.1657385
62	.164007
63	.1622936
64	.1605981
65	.1589202
66	.15726
67	.155617
68	.1539913
69	.1523825
70	.1966705
71	.1946158
72	.1925826
73	.1905707
74	.1885797
75	.1866096
76	.18466
77	.1827308
78	.1808218
79	.1789327
80	.1770633
81	.1752135
82	.173383
83	.1715716
84	.1697791
85	.1680054
86	.1662502
87	.1645134
88	.1627946
89	.1610939
90	.1594109
91	.1577455
92	.1560975
93	.1544667
94	.1528529
95	.151256
96	.1496758
97	.1481121
98	.1465647
99	.1450335
100	.1435183

Maximum residue ---------- .1966705
Average residue ---------- .1262929

DAILY ACCUMULATED PESTICIDE RESIDUES---MULTP. APPL.

Chemical name ----------	MYCLOBUTANIL
Initial concentration (ppm) -----	30
Half-life ----------	66
A number of application --------	6
Application interval ----------	14
Length of simulation (day) -----	100

DAY	RESIDUE (PPM)
0	30
1	29.68658
2	29.37644
3	29.06954
4	28.76584
5	28.46531
6	28.16793
7	27.87365
8	27.58245
9	27.29429
10	27.00913
11	26.72696
12	26.44774
13	26.17143
14	55.89801
15	55.31403
16	54.73615
17	54.16431
18	53.59844
19	53.03848
20	52.48437
21	51.93605
22	51.39347
23	50.85654
24	50.32523
25	49.79947
26	49.2792
27	48.76437
28	78.25491
29	77.43736
30	76.62835
31	75.82779
32	75.0356
33	74.25168
34	73.47595
35	72.70833
36	71.94873
37	71.19705
38	70.45324
39	69.7172
40	68.98885
41	68.2681
42	97.55489
43	96.53571

residues on long range grass

44	95.52716
45	94.52917
46	93.54159
47	92.56434
48	91.59729
49	90.64035
50	89.69341
51	88.75636
52	87.82909
53	86.91152
54	86.00353
55	85.10503
56	114.2159
57	113.0227
58	111.8419
59	110.6735
60	109.5172
61	108.3731
62	107.2409
63	106.1205
64	105.0118
65	103.9147
66	102.8291
67	101.7548
68	100.6918
69	99.6398
70	128.5988
71	127.2553
72	125.9258
73	124.6103
74	123.3084
75	122.0202
76	120.7454
77	119.484
78	118.2357
79	117.0004
80	115.7781
81	114.5685
82	113.3716
83	112.1872
84	111.0151
85	109.8553
86	108.7076
87	107.5719
88	106.4481
89	105.336
90	104.2355
91	103.1466
92	102.0689
93	101.0026
94	99.94741
95	98.90324
96	97.86996
97	96.84749
98	95.83571
99	94.83448
100	93.84372

Maximum residue ---------- 128.5988
Average residue ---------- 82.58034

DAILY ACCUMULATED PESTICIDE RESIDUES---MULTP. APPL.

Chemical name ----------	MYCLOBUTANIL
Initial concentration (ppm) -----	15.6
Half-life ----------	66
A number of application --------	6
Application interval ----------	14
Length of simulation (day) -----	100

DAY	RESIDUE (PPM)
0	15.6
1	15.43702
2	15.27575
3	15.11616
4	14.95824
5	14.80196
6	14.64732
7	14.4943
8	14.34287
9	14.19303
10	14.04475
11	13.89802
12	13.75282
13	13.60914
14	29.06697
15	28.7633
16	28.4628
17	28.16544
18	27.87119
19	27.58001
20	27.29187
21	27.00675
22	26.7246
23	26.4454
24	26.16912
25	25.89572
26	25.62518
27	25.35747
28	40.69255
29	40.26743
30	39.84675
31	39.43046
32	39.01851
33	38.61087
34	38.2075
35	37.80833
36	37.41334
37	37.02247
38	36.63569
39	36.25295
40	35.8742
41	35.49941
42	50.72854
43	50.19857

residues on leaves

44	49.67413
45	49.15517
46	48.64163
47	48.13346
48	47.63059
49	47.13299
50	46.64057
51	46.15331
52	45.67113
53	45.194
54	44.72184
55	44.25462
56	59.39228
57	58.7718
58	58.15779
59	57.5502
60	56.94895
61	56.35399
62	55.76525
63	55.18265
64	54.60614
65	54.03565
66	53.47113
67	52.91251
68	52.35971
69	51.8127
70	66.8714
71	66.17278
72	65.48145
73	64.79735
74	64.12038
75	63.4505
76	62.78762
77	62.13166
78	61.48255
79	60.84023
80	60.20462
81	59.57564
82	58.95324
83	58.33734
84	57.72787
85	57.12477
86	56.52798
87	55.93741
88	55.35302
89	54.77473
90	54.20248
91	53.63621
92	53.07586
93	52.52136
94	51.97266
95	51.42969
96	50.89239
97	50.3607
98	49.83457
99	49.31393
100	48.79874

Maximum residue ---------- 66.8714

Average residue ---------- 42.94179

DAILY ACCUMULATED PESTICIDE RESIDUES---MULTP. APPL.

Chemical name ----------	MYCLOBUTANIL
Initial concentration (ppm) -----	.86
Half-life ----------	100
A number of application --------	6
Application interval ----------	14
Length of simulation (day) -----	100

DAY	RESIDUE (PPM)
0	.86
1	.8540595
2	.8481602
3	.8423015
4	.8364833
5	.8307053
6	.8249671
7	.8192687
8	.8136096
9	.8079896
10	.8024084
11	.7968658
12	.7913614
13	.7858951
14	1.640467
15	1.629135
16	1.617882
17	1.606706
18	1.595608
19	1.584586
20	1.573641
21	1.562771
22	1.551976
23	1.541256
24	1.530609
25	1.520037
26	1.509537
27	1.49911
28	2.348755
29	2.332531
30	2.316419
31	2.300418
32	2.284528
33	2.268748
34	2.253076
35	2.237513
36	2.222057
37	2.206709
38	2.191466
39	2.176328
40	2.161295
41	2.146366
42	2.99154
43	2.970876
44	2.950355

residues on fruit

45	2.929975
46	2.909736
47	2.889637
48	2.869677
49	2.849855
50	2.830169
51	2.81062
52	2.791206
53	2.771925
54	2.752778
55	2.733763
56	3.57488
57	3.550186
58	3.525664
59	3.50131
60	3.477124
61	3.453107
62	3.429254
63	3.405566
64	3.382043
65	3.358681
66	3.335481
67	3.312441
68	3.28956
69	3.266838
70	4.104272
71	4.075922
72	4.047767
73	4.019807
74	3.99204
75	3.964465
76	3.937081
77	3.909886
78	3.882878
79	3.856057
80	3.829421
81	3.802969
82	3.7767
83	3.750613
84	3.724705
85	3.698977
86	3.673426
87	3.648052
88	3.622853
89	3.597828
90	3.572976
91	3.548296
92	3.523786
93	3.499446
94	3.475273
95	3.451267
96	3.427428
97	3.403753
98	3.380242
99	3.356893
100	3.333705

Maximum residue ---------- 4.104272
Average residue ---------- 2.650759