

Commodities: Mandarins - Oranges - Grapefruits - Lemons

GAP/ trial ref.	Country	Mode of treatment	Application rate			Stage of treatment/ date(s) of treatment	NE of appl	PHI (d)	Residue (mg/kg)	Portion analyzed	Pests controlled/ Method of analysis, residues analyzed
			kg ai/ha	Water (l/ha)	kg ai/hl						
<i>Citrus GAP</i>	<i>Italy</i>	<i>Foliar treatment (stem paint)</i>	<i>0.0035 kg/tree</i>	-	-	<i>Not specified</i>	<i>2</i>	<i>30</i>			<i>Phytophthora spp.</i>
Metalaxyl-M residue data											
2071/96	Italy /Oranges	Foliar treatment (drench)	5 g/plant	5 l /plant		71/81-85 BBCH	2	30 30 30	<0.04 <0.02 <0.03	Peel Pulp Whole fruit	Method REM 181.01 LOD : 0.02 mg/kg Tree density : 625 trees/ha
2072/96	Italy /Oranges	Foliar treatment (drench)	5 g/plant	25 l /plant		59-61/85 BBCH	2	30 30 30	<0.04 <0.02 <0.03	Peel Pulp Whole fruit	Method REM 181.01 LOD : 0.02 mg/kg Tree density : 625 trees/ha
<i>Citrus GAP</i>	<i>Spain</i>	<i>Foliar treatment (skirt spray)</i>	<i>0.00035 kg/tree</i>	-	-	<i>Not specified</i>	<i>2</i>	<i>15</i>			<i>Phytophthora spp.</i>
Metalaxyl-M residue data											
2021/97	Spain/Mandarin e	Foliar treatment (WP)	0.200	4000		78-79/79-80 BBCH	2	0B 0 7 15 30 30 30	0.04 0.37 0.20 0.20 0.25 <0.02 0.11	Fruit Fruit Fruit Fruit Peel Pulp Whole fruit	Method REM 181.01 Tree density : 800 trees/ha.
2022/97	Spain/Mandarin e	Foliar treatment (WP)	0.200	2220		79/79-80 BBCH	2	0B 0 7 15 30	0.14 0.39 0.13 0.12 0.14	Fruit Fruit Fruit Fruit Peel	Method REM 181.01 Tree density : 550 trees/ha.

Residue trials - Citrus fruit - page 2

GAP/ trial ref.	Country	Mode of treatment	Application rate			Stage of treatment/ date(s) of treatment	NE of appl	PHI (d)	Residue (mg/kg)	Portion analyzed	Pests controlled/ Method of analysis, residues analyzed
			kg ai/ha	Water (l/ha)	kg ai/hl						
								30 30	<0.02 0.06	Pulp whole fruit	
2023/97	Spain /Mandarine	Foliar treatment	0.200	3000		73/78 BBCH	2	0B 0 7 15 30 30 30	0.07 0.28 0.13 <u>0.15</u> 0.13 <0.02 0.06	Fruit Fruit Fruit Fruit Peel Pulp Whole fruit	Method REM 181.01 Tree density : 952 trees/ha.
2153/97	Spain/orange	Soil (GR) and foliar treatment (WP)	2X 10 + 2X 0.200			79/83/83/85	4	0B 0 7 15 15 15 30 30 30	0.02 0.12 0.07 <0.02 0.22 0.11 <0.02 <u>0.11</u> 0.06	Whole fruit Whole fruit Whole fruit Pulp Peel Whole fruit Pulp Peel Whole fruit	Method REM 181.01 mod.
2154/97	Spain/orange/M andarin	Soil (GR) and foliar treatment (WP)	2X 10 + 2X 0.200			74/81/83/85 BBCH	4	15 15 15	<0.02 0.15/0.17 <u>0.07</u>	Pulp Peel Whole fruit	Method REM 181.01 mod. 2 soil applic.+ 2 foliar applic. Tree density : 416 trees/ha.

Residue trials - Citrus fruit - page 3

GAP/ trial ref.	Country	Mode of treatment	Application rate			Stage of treatment/ date(s) of treatment	NE of appl	PHI (d)	Residue (mg/kg)	Portion analyzed	Pests controlled/ Method of analysis, residues analyzed
			kg ai/ha	Water (l/ha)	kg ai/hl						
2155/97	Spain/Mandarin e	Soil (GR) and foliar treatment (WP)	2X 10 + 2X 0.200			74/81/81/83 BBCH	4	15 15 15 15	<0.02 0.30 0.28 0.14	Pulp Peel Peel Whole fruit	Method REM 181.01 mod. 2 soil applic.+ 2 foliar applic. Tree density : 555 trees/ha.
2033/96	Spain /Oranges	Foliar treatment (WP)	0.200	2000		85-87 BBCH	1	0 3 7 14 21 21 21	0.13 <0.02 <0.02 <0.02 <0.03 <0.02 <0.04	Whole fruit Whole fruit Whole fruit Whole fruit Whole fruit Pulp Peel	Method REM 181.01 LOD : 0.02 mg/kg
2034/96	Spain /Oranges	Foliar treatment (WP)	0.200	2000		85-87 BBCH	1	0 3 7 14 21 21 21	0.16 <0.02 <0.02 <0.02 <0.03 <0.02 <0.04	Whole fruit Whole fruit Whole fruit Whole fruit Whole fruit Pulp Peel	Method REM 181.01 LOD : 0.02 mg/kg
2035/96	Spain/ Oranges	Foliar treatment (WP)	0.200	2000		81 BBCH	1	0 3 7 14 21 21	0.18 0.10 0.07 0.06 0.06 <0.02	Whole fruit Whole fruit Whole fruit Whole fruit Whole fruit Pulp	Method REM 181.01 Tree density : 444 trees/ha

Residue trials - Citrus fruit - page 4

GAP/ trial ref.	Country	Mode of treatment	Application rate			Stage of treatment/ date(s) of treatment	NE of appl	PHI (d)	Residue (mg/kg)	Portion analyzed	Pests controlled/ Method of analysis, residues analyzed
			kg ai/ha	Water (l/ha)	kg ai/hl						
								21	0.11	Peel	
2036/96	Spain /Oranges	Foliar treatment (WP)	0.200	2000		81 BBCH	1	0 3 7 14 21 21 21	0.19 0.10 0.06 0.06 <0.03 <0.02 <0.04	Whole fruit Whole fruit Whole fruit Whole fruit Whole fruit Pulp Peel	Method REM 181.01 Tree density : 377 trees/ha
Metalaxyl residue data											
2011/86	Chile/lemons	foliar spray (WP)			0.015	24/04/86 ? 28/04/86	2	10	0.51	fruits	Method REM 16/76 mod.
2011/86	Chile/lemons	foliar spray (WP)	0.17	1500			1	14 28 42	0.23/0.09 0.10/0.11 0.12/0.14	fruits, unwashed/washed	Method REM 16/76 mod.
2010/86	Chile/oranges	foliar spray (WP)	0.17	1500		27/06/86	1	14 28 42	0.03/0.03 0.04/0.03 0.03/0.02	fruits, unwashed/washed	Method REM 16/76 modified, metalaxyl
2061/92	Spain/oranges	foliar spray, knapsack sprayer (WP)	0.264	1322		81 DZ	1	0 7 14 2 21 2 43 2 0 7 14 2	0.22/0.03 0.15 0.11/<0.0 0.10/<0.0 0.09/<0.0 0.39 0.29/0.02 0.21/<0.0 2	oranges whole fruit whole fruit whole fruit peel/pulp peel peel/pulp peel/pulp	Method REM 16/76 mod.

Residue trials - Citrus fruit - page 5

GAP/ trial ref.	Country	Mode of treatment	Application rate			Stage of treatment/ date(s) of treatment	NE of appl	PHI (d)	Residue (mg/kg)	Portion analyzed	Pests controlled/ Method of analysis, residues analyzed
			kg ai/ha	Water (l/ha)	kg ai/hl						
								21	0.20/<0.0 2	peel/pulp	
								43	0.17/<0.0 2	peel/pulp	
2062/92	Spain/oranges	foliar spray, knapsack sprayer (WP)	0.25	1253		81 DZ	1	0 7 14 21 43 0 7 14 21 43	1.03/0.04 0.17 0.20 0.08 0.12 2.03 0.34/<0.0 2 0.40/0.02 0.16/<0.0 2 0.24/<0.0 2	oranges whole fruit whole fruit whole fruit whole fruit peel peel/pulp peel/pulp peel/pulp peel/pulp	Method REM 16/76 mod.
2063/92	Spain/oranges	foliar spray, knapsack sprayer (WP)	0.571	2857		81 DZ	1	0 7 14 21 43 0 7 14 21 43	0.69/0.06 0.34 0.19 0.20 0.11 1.32 0.68/0.02 0.37/0.02 0.43/<0.0 2 0.23/<0.0 2	oranges whole fruit whole fruit whole fruit whole fruit peel peel/pulp peel/pulp peel/pulp	Method REM 16/76 mod.
2064/92	Spain/oranges	foliar spray, knapsack	0.400	2000		81 DZ	1	0	0.58/0.03	oranges	Method REM 16/76 mod.

Residue trials - Citrus fruit - page 6

GAP/ trial ref.	Country	Mode of treatment	Application rate			Stage of treatment/ date(s) of treatment	NE of appl	PHI (d)	Residue (mg/kg)	Portion analyzed	Pests controlled/ Method of analysis, residues analyzed
			kg ai/ha	Water (l/ha)	kg ai/hl						
		sprayer (WP)						7 14 21 43 0 7 14 21 2 43 2	0.15 0.16 0.13 0.07 1.09 0.29/0.02 0.30/0.02 0.26/<0.0 0.14/<0.0	whole fruit whole fruit whole fruit whole fruit peel peel/pulp peel/pulp peel/pulp peel/pulp	
2065/92	Spain/oranges	foliar spray, knapsack sprayer (WP)	0.600	3000		81 DZ	1	0 7 14 21 41 0 7 14 21 2 41 2	0.58/0.02 0.24 0.17 0.17 0.15 1.07/0.02 0.44/0.02 0.32/0.02 0.37/<0.0 0.30/<0.0	Oranges whole fruit whole fruit whole fruit whole fruit peel peel/pulp peel/pulp peel/pulp peel/pulp	Method REM 16/76 mod.
2066/92	Spain/oranges	foliar spray, knapsack sprayer (WP)	0.58	2909		81 DZ	1	0 7 14 21 43 0 7 14 21	0.74/0.10 0.20 0.14 0.14 0.15 1.52 0.44/0.02 0.30/0.02 0.33/<0.0	Oranges whole fruit whole fruit whole fruit whole fruit peel peel/pulp peel/pulp peel/pulp	Method REM 16/76 mod.

Residue trials - Citrus fruit - page 7

GAP/ trial ref.	Country	Mode of treatment	Application rate			Stage of treatment/ date(s) of treatment	NE of appl	PHI (d)	Residue (mg/kg)	Portion analyzed	Pests controlled/ Method of analysis, residues analyzed
			kg ai/ha	Water (l/ha)	kg ai/hl						
								43	2 0.34/<0.0 2	peel/pulp	
<i>GAP</i>	<i>Italy/Spain</i>	<i>Soil application</i>	<i>0.001 kg/m²</i>	-	-	<i>Root growth flushes, vegetative growth begins</i>	2	15			<i>Phytophthora spp.</i>
Metalaxyl-M residue data											
2063/97	Italy/ Mandarine	Soil drench	5.0 g/plant	10 l/plant		59/79 BBCH	2	0B 0 7 15 30 30 30	<0.02 <0.02 <0.02 <0.02 <0.04 <0.02 <0.03	Fruit Fruit Fruit Fruit Peel Pulp Whole fruit	Method REM 181.01 Tree density : 625 trees/ha Plot size : 4 trees/64 m ²
2064/97	Italy /Mand.	Soil drench	5.0 g/plant	25 l/plant		59/7-81 BBCH	2	30 30 30	<0.04 <0.02 <0.03	Peel Pulp Whole fruit	Method REM 181.01 Plot size : 4 trees/64 m ²
Metalaxyl residue data											
2079/83	Brazil/oranges	manual application (GR) to soil	2 g ai/m ²			fructification	1	76	0.12	oranges	Method REM 16/76
2080/83	Brazil/oranges	manual application (GR)	3 g ai/m ²			fructification	1	76	0.23	oranges	Method REM 16/76
2081/83	Brazil/oranges	manual application (GR)	2 g ai/m ²			fructification	1	114	0.08	oranges	Method REM 16/76
2082/83	Brazil/oranges	manual application (GR)	3 g ai/m ²			fructification	1	114	0.18	oranges	Method REM 16/76
2209/84	Italy/oranges	manual application (GR)	1.25 g ai /tree			ripening	2	37/43 / 51	<0.02	fruits	Method REM 16/76
2178/80	Sth	soil application	2 g ai			Trees 4 m in diameter	2	26	0.02/0.19	pulp/peel	Method REM 16/76

Residue trials - Citrus fruit - page 8

GAP/ trial ref.	Country	Mode of treatment	Application rate			Stage of treatment/ date(s) of treatment	NE of appl	PHI (d)	Residue (mg/kg)	Portion analyzed	Pests controlled/ Method of analysis, residues analyzed
			kg ai/ha	Water (l/ha)	kg ai/hl						
	Afri./oranges	(GR)	/m ²					66	<0.02/0.2 1	pulp/peel	
2179/80	Sth Afri./oranges	soil application (GR)	2 g ai /m ²			Trees 4 m in diameter	2	26 70	<0.02/0.0 5 <0.02/0.0 4	pulp/peel pulp/peel	Method REM 16/76
2180/80	Sth Afri./oranges	soil application (GR)	2 g ai /m ²			Trees 4 m in diameter	2	26 70	<0.02/0.1 4 <0.02/0.1 6	pulp/peel pulp/peel	Method REM 16/76
2268/81	Sth Afri./oranges	soil application (GR)	2 g ai /m ²				2	95	<0.02- 0.02 0.16 (0.12 to 0.23)	Pulp peel	Method REM 16/76
2306/82	Sth Afri./oranges	Manual application (GR)	2 g ai /m ²			Fruits from pea to golf ball size	2	0 7 14 28 56 188	0.39 0.20 0.20 0.40 0.17 0.22	oranges	Method REM 16/76, metalaxyl
2307/82	Sth Afri./oranges	Manual application (GR)	2 g ai /m ²				2	0 188	0.25 0.16	oranges	Method REM 16/76
AG-A7178	US/oranges	post dripline / hand shaker (GR)	8.96				3	1 9 15	0.14/0.79 0.31/0.76 0.09/0.38	oranges	Method AG-395, (2.6- dimethylanilin) Residues expressed as total metalaxyl

Residue trials - Citrus fruit - page 9

GAP/ trial ref.	Country	Mode of treatment	Application rate			Stage of treatment/ date(s) of treatment	NE of appl	PHI (d)	Residue (mg/kg)	Portion analyzed	Pests controlled/ Method of analysis, residues analyzed
			kg ai/ha	Water (l/ha)	kg ai/hl						
AG-A7204	US/oranges	post dripline / granular applicator (GR)	8.96				3	1 7 15	0.32/0.42 0.29/0.40 0.27/0.33	oranges	Method AG-395, (2.6- dimethylaniline) Residues expressed as total metalaxyl
AG-A7299	US/grapefruit	post dripline / granular applicator (GR)	8.96				3	0 7 14	<0.05/0.0 7 <0.05 <0.05	grapefruit	Method AG-395, (2.6- dimethylaniline) Residues expressed as total metalaxyl
2145/83	Italy/mandarines	manual application (GR)	1.25 g ai /tree			flowering and walnut size	2	127- 154	<0.02	mandarines	Method REM 16/76
AG-A7199	US/lemons	post dripline / granular applicator (GR)	8.96				3	1 7 15	<0.05 0.71/0.73 0.92/0.60	lemons	Method AG-395, (2.6- dimethylaniline) Residues expressed as total metalaxyl