PROPICONAZOLE (160)

The first draft was prepared by Professor Eloisa Dutra Caldas

University of Brasilia, Brasília/DF, Brazil

EXPLANATION

The triazole fungicide propiconazole was first evaluated by the JMPR in 1987 and has been reviewed for residues in 1991, 1994, and within the periodic review programme in 2007, when a number of maximum residue levels being recommended. Propiconazole has an ADI of 0–0.07 mg/kg bw and an ARfD of 0.3 mg/kg bw. The compound was scheduled at the Fort-fourth Session of the CCPR (2012) for the evaluation of residues in additional crops by the 2013 JMPR. Information and data on citrus, stone fruits and tomato following post-harvest applications of propiconazole were submitted.

Residue definition for plant and animal commodities is *propiconazole* for compliance with the MRL, and *propiconazole plus all metabolites convertible to 2,4-dichlorobenzoic acid, expressed as propiconazole* for the estimation of the dietary intakes.

METHODS OF RESIDUE ANALYSIS

Stability of pesticide residues in stored analytical samples

A storage stability study was conducted with citrus (IR-4 PR 09715), with samples fortified with 5 mg/kg propiconazole and stored at -20 ºC. The results are shown in Table 1.

Table 1 Stability of propiconazole residues in citrus fruit and processed fractions, and cherries and of total residues in tomato stored under frozen conditions (-20 ºC)

Matrix	Fortification (mg/kg)	Storage interval (days)	% remaining
Citrus fruit	5	207	87, 91, 90
Orange juice	5	155	96, 95, 95
Dried orange pulp	5	154	104, 102, 105
Orange oil	5	224	102, 97, 108
Cherries without pits and stems	0.5	189	108, 89, 93
Tomato [a]	0.5	160	84, 86, 81

[a] measured by the common moiety method.

USE PATTERN

The post-harvest trials on citrus fruits, stone fruits, and tomato submitted in this dossier were conducted in the United States. The recommended use patterns in the US for post-harvest applications of propiconazole on the commodities relevant for this submission are summarized in Table 2.

Table 2 Registered post-harvest use of propiconazole (WP, 45%) in the USA

Commodity	Application Method	No.	Rate	PHI (days)
Citrus[b]	In-Line Dip/Drench[a]	2	0.027-0.054 kg a.i/ 100 L	NA
	In-line aqueous or fruit coating spray	2	0.90-1.8 g ai/1000 kg fruits	NA
Stone fruit	In-Line Dip/Drench[a]	1	0.067-0.0135 kg ai/100 L	NA
	In-line aqueous or fruit coating spray	1	0.28-0.56 g ai/1000 kg fruits	NA
Tomato	In-Line Dip/Drench[a]	1	0.014-0.27 g ai/100 L	NA
	High volume (dilute spray) application	1	2.2-4.5 g ai/1000 kg fruit	NA

[a] dip fruits for a minimum of 30 seconds and allow to drain;

[b] treat fruit once before storage and once after storage, just prior to marketing

RESIDUES RESULTING FROM SUPERVISED TRIALS ON CROPS

Supervised residue trials conducted with propiconazole in Canada and USA were submitted to the Meeting. Studies were conducted according to GLP, and concurrent determination of residues in untreated crops gave residues < LOQ, unless specified otherwise. Residues of propiconazole arising from use patterns with the rate or PHI within ± 25% of the GAP are underlined and were considered for estimation of maximum residue levels and STMRs. All the trials were conducted using a WP formulation.

Residues of propiconazole were analysed by LC-MS/MS. Samples were analysed within a storage period that was shown not to impact the residue levels, according to storage stability studies evaluated previously by the JMPR.

Citrus fruits

A total of twelve post-harvest trials on citrus were conducted in 2006 in the United States. Fruits were treated with the first application, allowed to dry, then the second application was made. Except for trials CA131, CA134, CA135, CA136, the samples were washed before the second application. Table 3 summarizes the results.

Table 3 Propiconazole residues in citrus fruit from post-harvest treatments from trials conducted in USA in 2006 using (IR-4 PR 09715)

State	Crop (variety)	Treatment	Rate, kg ai/hL	no.	Propiconazole [mean]	Trial
Florida,	Orange (Orlando Tangelo)	Dip for 30 sec.	0.048	2	0.96, 0.77 [0.87]	09715.06-FL42
California	Orange (Washington Navel)	Dip for 30 sec	0.048	2	2.16, 2.33 [2.2]	09175.06-CA131
California	Orange (Valencia)	Dip for 30 sec	0.048	2	5.66, 4.15 [4.9]	09175.06-CA 132
California	Orange (Valencia)	Dip for 30 sec	0.048	2	2.18, 2.49 [2.3]	09175.06-CA 133
Florida	Orange (Roberts mandarin)	Dip for 30 sec	0.048	2	2.38, 2.40 [2.4]	09175.06-FL43
California	Orange (W. Murcott mandarin)	Dip for 30 sec	0.048	2	3.40, 3.36 [3.4]	09175.06-CA134
California	Orange (W. Murcott mandarin)	Dip for 30 sec	0.048	2	2.41, 2.50 [2.5]	09175.06-CA135
California	Orange (Dancy mandarin)	Dip for 30 sec	0.048	2	2.48, 4.90 [3.7]	09175.06-CA136
Texas,	Grapefruit (Red Rio)	Dip for 30 sec	0.048	2	0.93, 0.90 [0.9]	09175.06-TX41
California	Grapefruit (Marsh)	Dip for 30 sec	0.048	2	1.17, 1.44 [1.3]	09175.06-CA137
California	Lemon (Eureka)	Dip for 30 sec	0.048	2	3.19, 2.79 [3.0]	09175.06-CA138
California	Lemon (Eureka)	Dip for 30 sec	0.048	2	1.92, 2.29 [2.1]	09175.06-CA 140
California,	Orange (W. Murcott mandarin)	In-line fruit coating spray	1.7 + 1.6 g ai/ 1000 kg fruit	2	2.32, 2.24 [2.3]	09175.06-CA135
California	Orange (Dancy mandarin)	In-line fruit coating spray	1.7 + 1.6 g ai/ 1000 kg fruit	2	1.18, 1.51 [1.3]	09175.06-CA136
California	Grapefruit (Marsh)	In-line fruit coating spray	1.6 + 1.7 g ai/ 1000 kg fruit	2	1.41, 1.19 [1.3]	09175.06-CA137
California	Lemon (Eureka)	In-line fruit coating spray	1.7 + 1.6 g ai/ 1000 kg fruit	2	1.10, 1.14 [1.1]	09175.06-CA138
California	Lemon (Eureka)	In-line fruit coating spray	1.6 + 1.6 g ai/ 1000 kg fruit	2	0.92, 0.94 [0.9]	09175.06-CA 140

Note: For risk assessment purposes, following the residue definition, total residues were calculated by applying a factor of 1.1 to convert propiconazole only residues to total residues of propiconazole and metabolites convertible to 2,4-DCBA.

Stone fruits

A total of nine post-harvest trials on stone fruits were conducted in 2007 in the United States. Propiconazole was applied to harvested mature fruits either as a high-volume spray, low-volume spray or dipped for 30 seconds. Fruit wax was included in each of the tank mixes, except in the dip in the GA*17 peach trial. Fruits were allowed to air dry following treatment. The results are shown in Table 4.

Table 4 Propiconazole residues in stone fruits without stone from post-harvest treatments from trials conducted in USA using WP formulation in 2007/2008 (IR-4 PR 09787)

State	Crop (variety)	Treatment Method	Rate	no.	Propiconazole only	Total residues	Trial
California	Peach (Flavorcrest)	Dip for 30 seconds	0.014 kg/hL	1	1.68, 1.77 [1.7]	2.52 c=0.06	09787.07-CA88
New Jersey	Peach (Blake)	Dip for 30 seconds	0.014 kg/hL	1	1.16, 1.18 [1.2]	0.73 c=0.05	09787.07-NJ30
Georgia	Peach (Organic}	Dip for 30 seconds	0.014 kg/hL	1	2.17, 2.04 [2.1]	2.35, 2.23 [2.3] c=0.07	09787.08-GA*17
California	Peach (O'Henry)	Dip for 30 seconds	0.014 kg/hL	1	1.24, 1.46 [1.4]	1.06 c=0.07	09787.07-CA116
California,	Plum (Friar)	Dip for 30 seconds	0.014 kg/hL	1	0.16, 0.20 [0.18]	0.11	09787.07-CA86,
California	Plum (Casselman)	Dip for 30 seconds	0.014 kg/hL	1	0.22, 0.18 [0.20]	0.13	09787.07-CA87,
Michigan	Cherry (Hedelfingen)	Dip for 30 seconds	0.014 kg/hL	1	1.0, 0.70 [0.85]	2.23	09787.07-MI14,
Oregon	Cherry (Lapins)	Dip for 30 seconds	0.014 kg/hL	1	0.65, 0.69 [0.67]	0.78	09787.07-OR14,
California	Peach (Flavorcrest)	High volume in-line spray application	0.60 g ai/1000 kg fruit	1	0.14, 0.14 [0.14]	0.33 c=0.06	09787.07-CA88
		Low volume in-line spray application	0.57 g ai/1000 kg fruit	1	0.46, 0.52 [0.49]	0.43	
California	Peach (O'Henry)	High volume in-line spray application	0.57 g ai/1000 kg fruit	1	0.19, 0.20 [0.20]	0.13 c=0.07	09787.07-CA116
		Low volume in-line spray application	0.57 g ai/1000 kg fruit	1	0.43, 0.56 [0.50]	0.42 c=0.07	
California	Plum (Friar)	Low volume in-line spray application	0.57 g ai/1000 kg fruit	1	0.16, 0.15 [0.16]	0.13	09787.07-CA86
California	Plum (Casselman)	Low volume in-line spray application	0.58 g ai/1000 kg fruit	1	0.18, 0.20 [0.19]	0.40	09787.07-CA87,
California	Cherry (Bing)	High volume in-line spray application	0.56 g ai/1000 kg fruit	1	0.17, 0.16 [0.17]	0.24	09787.07-CA89,

c= residues in control samples

Tomato

A total of six post-harvest trials on tomato were conducted in the United States in 2009. Mature tomatoes were collected from the field, rinsed with water, allowed to dry, and treated with propiconazole and fludioxonil in a tank mix, except in two trials. In the NC19 and NC32 trials, the tomatoes were collected and placed in storage at 14 to 20 °C until treatment within 1 to 3 days; the tomatoes were not rinsed prior

to treatment. For the dip application, the fruit was dipped in the test solution for approximately 30 seconds and drained. For the drench application, the test solution was applied with either a watering can or a drench plate. For the spray application, the test solution was applied as the fruit passed under the nozzle on brush rollers. The fruit was allowed to air dry following treatment. The results are shown in Table 5.

Table 5 Propiconazole residues in tomato from post-harvest treatments from trials conducted in USA in 2009 using WP formulation (IR-4 PR 10182)

Location	Variety	Treatment Method	Rate	no.	Propiconazole only [Mean]	Total residues[1]	
New York	Polbig	Dip for 30 seconds	27 g ai/100L	1	0.532, 0.412 [0.47]	0.515, 0.331 [0.42]	10182.09-NY12
Florida	AGRI-SET 761	Dip for 30 seconds	27 g ai/100L	1	0.654, 0.948 [0.80]	0.631, 0.621 [0.63]	10182.09-FL06
North Carolina (Amelia)		Dip for 30 seconds	27 g ai/100L	1	0.541, 0.573 [0.56]	0.583, 0.572 [0.58]	10182.09-NC19
		Drenching	27 g ai/100L	1	0.765, 0.965 [0.87]	1.13, 0.958 [1.0]	
California	Shady Lady	Dip for 30 seconds	27 g ai/100L	1	0.474, 0.464 [0.47]	0.436, 0.555 [0.50]	10182.09-CA98
		Drenching	27 g ai/100L	1	0.394, 0.520 [0.46]	0.331, 0.426 [0.38]	
Florida	IL-7108	Dip for 30 seconds	27 g ai/100L	1	0.784, 0.806 [0.80]	0.800, 0,840 [0.82]	10182.09-FL68
North Carolina	Red Cherry	Dip for 30 seconds	27 g ai/100L	1	1.12, 1.11 [1.1]	1.23, 1.02 [1.1]	10182.09-NC32
		Drenching	27 g ai/100L	1	1.50, 1.26 [1.4]	1.35, 1.52 [1.4]	
North Carolina	Amelia	In-line spray	4.5 g ai/ 1000 kg fruit	1	0.677, 0.809 [0.74]	0.752, 0.678 [0.72]	10182.09-NC19
California	Shady Lady	In-line spray	4.5 g ai/1000 kg fruit	1	0.324, 0.407 [0.37]	0.364, 0.284 [0.32]	10182.09-CA98
North Carolina	Red Cherry	In-line spray	4.5 g ai/1000 kg fruit	1	1.4, 1.53 [1.5]	1.25, **1.76** [1.5]	10182.09-NC32

FATE OF RESIDUES IN STORAGE AND PROCESSING

Effect of processing on the nature of the residues

The hydrolytic stability of [triazolyl-U-^{14}C]-propiconazole was investigated in aqueous buffer solutions at three pH values and temperatures to simulate processing practices (Adam D., 2008; Report No. T005078). The study was performed at pH 4 and 90 ºC to simulate pasteurisation, pH 5 and 100 ºC to simulate baking/brewing/boiling and at pH 6 and 120 ºC to simulate sterilisation.

Buffer solutions containing [triazolyl-U-^{14}C]-propiconazole at an initial concentration of 1.7 mg/L (significantly less than its water solubility of 100 mg/L at 20 ºC) were incubated in closed high-pressure glass vessels in oil baths. The temperatures were maintained constant throughout incubation time (max ± 0.2 ºC) and no significant variation of the pH values were observed in the buffered solutions. At time 0 and after 20 or 60 minutes incubation, duplicate samples per pH value (except at time 0) were taken, measured for total radioactivity by liquid scintillation counting (LSC), and analysed to determine the nature of degradates by high-performance liquid chromatography (HPLC). Selected samples were additionally analysed by two-dimensional thin layer chromatography (2D-TLC) to confirm the HPLC results. Mean recoveries of applied radioactivity were 99.0±1.3% (pH 4), 99.9% (pH 5) and 99.8±0.5% (pH 6). The results from analysis of the buffer solutions following incubation are summarised in Table 6.

Table 6 Analysis of ^{14}C-propiconazole in buffer solutions before and after incubation

Duplicate	Percentage of initial radioactivity (mg parent equivalents/litre solution)					
	pH 4 (90ºC)		pH 5 (100ºC)		pH 6 (120ºC)	
	0 min	20 min	0 min	60 min	0 min	20 min
A	100 (1.696)	98.8 (1.675)	100 (1.676)	99.4 (1.666)	100 (1.673)	100.2 (1.675)
B	100 (1.696)	97.2 (1.647)	100 (1.676)	100.3 (1.682)	100 (1.673)	99.0 (1.656)
Mean	100 (1.696)	98.0 (1.661)	100 (1.676)	99.9 (1.674)	100 (1.673)	99.6 (1.666)

RESIDUES IN PROCESSED COMMODITIES

Orange samples collected in trial 06-CA133 (Table 3) were processed to oil, juice and dried pomace using procedures simulating commercial practice.

Oranges were washed, peeled by abrasion and a cold water mist was sprayed into the peeler to trap the highly volatile oil. The resulting emulsion of water and oil was treated with 0.2% of a pectinase enzyme preparation and allowed to react overnight at approximately 20 ºC. The oil emulsion was passed through a screen separator, the peels were resuspended to extract any clinging oil and then passed through a centrifuge to separate solids, water, and the oil stream. The oil stream was centrifuged, kept frozen for at least 16 hours, filtered, anhydrous sodium sulfate added, and filtered again to obtain the oil.

Oranges were processed through a juice extractor, the juice processed through a finisher equipped with a 0.051-cm screen to remove coarse pulp and peel pieces, and then heated in a small steam jacketed kettle to 90 °C.

The peel from the juice extraction process was shredded and ground, combined with the other peel solid fractions (from oil separation) and blended with lime slurried water. The neutralized peel/pulp fraction was passed through a continuous screw press, resulting in fractions of expressed liquid and wet pulp. The wet pulp was spread on stainless steel trays and dried at 65 to 75 °C until reaching approximately 92% dry matter (dried orange pomace).

All processed samples were shipped frozen to the analytical laboratory within 85 days of processing for analysis of propiconazole. The results are shown in Table 7.

Table 7 Residues of propiconazole in orange processed fractions

Matrix	Residues of propiconazole (mg/kg)	Processing factor
Orange (RAC)	0.94	-
Juice	<0.01	<0.011
Dried Pulp	1.29	1.4
Oil	174	185

APPRAISAL

Propiconazole was evaluated by the JMPR for residues in 1987, 1991, 1994, and within the periodic review program in 2007, when a number of maximum residue levels were recommended. Propiconazole has an ADI of 0–0.07 mg/kg bw and an ARfD of 0.3 mg/kg bw. Information and residue trial data on citrus, stone fruits and tomato following post-harvest applications of propiconazole were submitted to current Meeting.

The residue definition for plant and animal commodities is *propiconazole* for compliance with the MRL and *propiconazole plus all metabolites convertible to 2,4-dichlorobenzoic acid, expressed as propiconazole* for the estimation of the dietary intakes.

Methods of analysis

Methods of analysis evaluated by the 2007 JMPR are divided into two groups. Methods where only propiconazole is analysed involves mostly LC-MS/MS detection, with LOQ of 0.01 mg/kg for citrus and tomato and of 0.05 mg/kg for stone fruits. The common moiety method measure all residues convertible to 2,4-dichlorobenzoic (2,4-DCBA) and are performed using mostly GC-MSD (after derivatisation of 2,4-DCBA to its methyl ester) with an LOQ of 0.05 mg/kg.

Stability of residues in stored analytical samples

A study to investigate the stability of residues in analytical samples in peach submitted to the 2007 JMPR showed that residues of propiconazole in peach samples are stable up to 36 months after frozen storage. New studies evaluated by the present Meeting have shown that propiconazole residues were stable for up to 207 days in orange, 154 days in juice and dried pulp, and 224 days in orange oil and 189 days in cherries. Propiconazole residues measured using the common moiety method in tomato (fortified with propiconazole at 0.5 mg/kg level) were stable up to 160 days, and the samples in the residue trials were analysed within this period. No storage stability study for total residues was performed in stone fruits (samples were stored for at least 560 days).

Results from supervised residue trials on crops

The 2007 JMPR agreed that, based on metabolism study, a factor of 3 needs to be applied to convert parent residues to total residues (all residues convertible to 2,4-DCBA and expressed as propiconazole). Data evaluated by the present Meeting are from post harvested uses, and it is unlikely that propiconazole metabolites are formed between treatment and sample preparation for analysis. Furthermore, residues of propiconazole will be used for dietary exposure assessment, without using the factor of 3.

Citrus fruits

In USA, propiconazole can be applied twice as post-harvest treatment as in line dip/drench twice at up to 0.054 kg ai/hL or in-line aqueous or fruit coating spray at up to 1.8 g ai/1000 kg fruit. Seventeen post-harvest trials on citrus were conducted in 2006 in USA according to GAP rate, but in eight trials the samples were washed before the second application.

In four trials conducted in orange using dip application conducted according to GAP, residues of propiconazole were 2.2, 2.5, 3.4 and 3.7 mg/kg (highest level of duplicate sample was 4.9 mg/kg).

The Meeting estimates a maximum residue level of 9 mg/kg, a STMR of 2.95 mg/kg and a HR of 4.9 mg/kg for propiconazole in oranges.

Stone fruits

In USA, propiconazole can be applied once as post-harvest treatment in stone fruits using in line dip/drench twice at up to 0.014 kg ai/hL or in-line aqueous or fruit coating spray at up to 0.56 g ai/1000 kg fruit. Nine post-harvest trials on stone fruits were conducted in 2007 in USA according to GAP. In all trials, fruits without stone was analysed, but the Meeting agreed that the residues found in whole fruit is within 10% (higher) of that found in the fruits withouth the stones and consider the data appropriate.

Residues of propiconazole from trials conducted using dip application were 1.2, 1.4, 1.7 and 2.1 mg/kg in peaches (highest value of duplicate samples of 2.2 mg/kg), 0.18 and 0.20 mg/kg in plums (highest value of duplicate samples of 0.22 mg/kg) and 0.67 and 0.85 mg/kg in cherry.

Residue of propiconazole in fruits without stone from trials conducted using in-line aqueous application were 0.14, 0.20, 0.49 and 0.50 mg/kg in peaches, 0.16 and 0.19 mg/kg in plum and 0.17 mg/kg in cherry.

The Meeting agreed that trials conducted using dip application in peach gave the highest residues and recommends a maximum residue level of 5 mg/kg (Po), a STMR of 1.55 mg/kg and a HR of 2.2 mg/kg for propiconazole in peaches.

Residues in plums from dip and spray application are similar and can be grouped as 0.16, 0.18, 0.19 and 0.20 mg/kg. The Meeting recommends a maximum residue level of 0.6 mg/kg, a STMR of 0.185 mg/kg and a HR of 0.22 mg/kg for propiconazole in plums.

The Meeting agreed that there is not enough trials to estimate a maximum residue level for cherry.

Tomato

In USA, propiconazole can be used in tomato as a post-harvest treatment in line dip or drench at up to 0.27 kg ai/hL or high volume spray application at 4.5 g ai/1000 kg fruit. Nine post-harvest trials on tomato were conducted in 2009 in USA according to GAP.

In six trials using dip or drench application, residues of propiconazole in tomatoes were 0.47 (2), 0.80 (2), 0.87 and 1.4 mg/kg. In three trials using in-line spray, residues were 0.37, 0.74 and 1.5 mg/kg.

The Meeting agreed that the dip/drench and the in-line spray trials gave similar results that can be grouped as (n=9) 0.37, 0.47 (2), 0.74, 0.80 (2), 0.87 and 1.4 and 1.5 mg/kg (highest level among the samples was 1.5 mg/kg)

The Meeting estimates a maximum residue level of 3 mg/kg, a STMR of 0.80 mg/kg and a HR of 1.5 mg/kg for propiconazole in tomato.

Fate of residues in storage and processing

Effect on the nature of the residues during processing

The hydrolytic stability of [triazolyl-U-^{14}C]-propiconazole was investigated in aqueous buffer solutions at three pH values and temperatures to simulate processing practices The study was performed at pH 4 and 90 ºC for 20 minuts to simulate pasteurisation, pH 5 and 100 ºC for 60 min to simulate baking/brewing/boiling, and at pH 6 and 120 ºC for 20 min to simulate sterilisation. Only the parent compound was detected in the buffer solutions throughout the study, indicating that propiconazole is hydrolytically stable under the conditions of the tests.

Residues in processed commodities

In one study, orange were processed to oil, juice and dried pomace using procedures simulating commercial practice. Residues of propiconazole in oranges were 0.94 mg/kg, not detected in juice (< 0.01 mg/kg), 1.29 mg/kg in dried pulp and 174 mg/kg in oil, giving processing factors of < 0.011 for orange juice and of 184 for orange oil.

Based on a STMR of 1.95 mg/kg in oranges, the Meeting estimated a STMR-P of 0.02 mg/kg in orange juice.

Residues in animal commodities

Dried orange fruit can contribute to animal diets and is listed on the OECD animal diet. However, in commercial practice, post-harvest treatment is normally reserved for high value commodities and is unlikely that dried fruit from treated fruits would be fed to livestock. The Meeting considered that the esitmations for propiconazole in orange will not change the dietary burden calculated by the 2007 JMPR meeting, and confirms its previous recommendations for animal commodities

RECOMMENDATIONS

Residues: For plant and animal commodities is *propiconazole* for compliance with the MRL and *propiconazole plus all metabolites convertible to 2,4-dichlorobenzoic acid, expressed as propiconazole* for the estimation of the dietary intakes.

CCN	Commodity name	Recommended maximum residue level (mg/kg)		STMR (P) mg/kg	HR (P) mg/kg
		New	Previous		
FS 0247	Peach	5 (Po)		1.55	2.2
FS 0014	Plums (including prunes)	0.6 (Po)		0.185	0.22
FC 0004	Oranges, Sweet, Sour (including Ordange-like hybrids): several cultivars	9 (Po)		2.95	4.9
JF 0004	Orange juice			0.02	
VO 0448	Tomato	3 (Po)		0.80	1.5

DIETARY RISK ASSESSMENT

Long-term intake

The IEDI of propiconazole based on the STMRs estimated by this and previous Meetings for the 13 GEMS/Food regional diets were 1–20% of the maximum ADI of 0–0.07 mg/kg bw (see Annex 3 of the 2013 Report). The Meeting concluded that the long-term dietary intake of residues of propiconazole is unlikely to present a public health concern.

Short-term intake

The ARfD for propiconazole is 0.3 mg/kg bw. The International Estimated Short-Term Intake (IESTI) for propiconazole was calculated for the plant commodities for which STMRs, HRs and maximum residue levels were estimated by the current Meeting and for which consumption data were available. The results are shown in Annex 4 of the 2013 Report. The IESTI represented a maximum of 100% of the ARfD for oranges (children 2–6 years). The Meeting concluded that the short-term intake of propiconazole residues from uses considered by the current Meeting were unlikely to present a public health concern.

REFERENCES

Author, year	Study Title
Thompson, 2011	Propiconazole: Magnitude of the Residue on Citrus following Post-harvest Treatment. IR-4 Project, Princeton, N.J., USA. Report No: IR-4 PR No. 09715. 2011. GLP, Unpublished. Syngenta File No: CGA064250_50280
Thompson, 2011	Propiconazole: Magnitude of the Residue on Stone Fruits (Peach, Cherry, Plum) following Post-harvest Application. IR-4 Project, Princeton, N.J., USA Report No: IR-4 PR No.09787. 2011. GLP. Unpublished. Syngenta File No: CGA064250_50481
Corley, 2011	Propiconazole + Fludioxonil: Magnitude of the Residue on Tomato following Post-harvest Application. IR-4 Project, Princeton, N.J., USA. Report No: IR-4 PR 10182. 2011. GLP. Unpublished. Syngenta File No: GA064250_50357
Adam, 2008	Aqueous Hydrolysis at 90, 100 and 120ºC. RCC Ltd., 4452 Itingen, Switzerland. Syngenta Report No. T005078. GLP. Unpublished. Syngenta File No: CGA 064250_10674