

REASONED OPINION

Reasoned opinion on the review of the existing maximum residue levels (MRLs) for 1,3-dichloropropene according to Article 12 of Regulation (EC) No 396/2005¹

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ABSTRACT

According to Article 12 of Regulation (EC) No 396/2005, the European Food Safety Authority (EFSA) has reviewed the Maximum Residue Levels (MRLs) currently established at European level for the pesticide active substance 1,3-dichloropropene. Considering that this active substance is no longer authorised within the European Union, that no MRLs are established by the Codex Alimentarius Commission, and that no import tolerances were notified to EFSA, residues of 1,3-dichloropropene are not expected to occur in any plant or animal commodity. Available data were also not sufficient to derive an LOQ for enforcement against potential illegal uses.

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KEY WORDS

1,3-dichloropropene, MRL review, Regulation (EC) No 396/2005, consumer risk assessment, nematicide

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SUMMARY

A decision not to include 1,3-dichloropropene in Annex I to Directive 91/414/EEC entered into force on 10 February 2011. EFSA is therefore required to provide a reasoned opinion on the review of the existing MRLs for that active substance in compliance with Article 12(1) of Regulation (EC) No 396/2005. Considering that the use of 1,3-dichloropropene is no longer authorised within the European Union and that no import tolerances were notified by the designated rapporteur Member State (Spain), EFSA based its assessment mainly on the conclusions derived by EFSA in the framework of Directive 91/414/EEC.

On 19 February 2013 EFSA issued a draft reasoned opinion that was circulated to Member States' experts for consultation. No comments were received by 26 April 2013 and the following conclusions are derived.

The toxicological profile of 1,3-dichloropropene was evaluated in the framework of Directive 91/414/EEC, which resulted in an ADI and an ARfD being established at 0.025 mg/kg bw per d and 0.2 mg/kg bw, respectively.

Considering that the use of 1,3-dichloropropene is no longer authorised within the EU (authorisations for emergency situations in plant protection granted in application of Article 53 of Regulation (EC) No 1107/2009 are not considered in the context of this Reasoned Opinion), that no CXLs are available for this active substance and that no uses authorised in third countries were notified to the RMS, residues of 1,3-dichloropropene are not expected to occur in any plant commodity. Nevertheless, primary crop metabolism of 1,3-dichloropropene was investigated for three different crop groups (fruits and fruiting vegetables, root and tuber vegetables, pulses and oilseeds). 1,3-dichloropropene residues are expected to be incorporated into natural plant constituents because naturally occurring plant constituents represented the majority of the radioactive residue in tomatoes, oranges, sugar beets and soybeans. Consequently, parent 1,3-dichloropropene is considered to be the only relevant residue for enforcement against a potential illegal use in plants. Parent 1,3-dichloropropene can be enforced with a LOQ of 0.01 mg/kg in acidic, high oil content and high water content commodities. No confirmatory method is available for the determination in dry commodities.

Residues of 1,3-dichloropropene are also not expected to occur in livestock. Moreover, studies on the metabolism of 1,3-dichloropropene in lactating cow and laying hens demonstrated that negligible residues are present in the edible tissues, eggs and milk. In eggs and hens tissues, parent compound and its cysteine conjugate are the most relevant indicators for enforcement against a potential illegal use on crops. However, no validated analytical methods for enforcement of residues in product of animal origin are available.

A risk assessment is in principle not required considering that the use of 1,3-dichloropropene is no longer authorised in the EU and that no import tolerances have been notified. Nevertheless, the default MRL of 0.01 mg/kg, as defined by Regulation (EC) No 396/2005, provides a satisfactory level of protection for the European consumer.

Based on the above assessment, the existing EU MRLs in plants commodities, exceeding the value 0.01 mg/kg are in principle no longer required. Considering however that the enforcement against potential illegal uses falls under the remit of risk managers, EFSA is not in a position to recommend whether the default MRL of 0.01 mg/kg, as defined by Regulation (EC) No 396/2005, should apply or whether the setting of a specific LOQ is necessary. Available data indicate that the default MRL of 0.01 mg/kg is sufficiently protective and could be enforced in practice, although this was not fully demonstrated in dry commodities.

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BACKGROUND

Regulation (EC) No 396/2005⁴ establishes the rules governing the setting and review of pesticide MRLs at European level. Article 12(1) of that regulation stipulates that EFSA shall provide, within 12 months from the date of the inclusion or non-inclusion of an active substance in Annex I to Directive 91/414/EEC⁵, a reasoned opinion on the review of the existing MRLs for that active substance. As a decision not to include 1,3-dichloropropene in Annex I to Directive 91/414/EEC entered into force on 10 February 2011, EFSA initiated the review of all existing MRLs for that active substance and a task with the reference number EFSA-Q-2011-00173 was included in the EFSA Register of Questions.

According to the legal provisions, EFSA shall base its reasoned opinion in particular on the relevant assessment report prepared under Directive 91/414/EEC. It should be noted, however, that the few representative uses evaluated in the framework of that directive might no longer be relevant because the use of active substances that are not included in Annex I is not allowed within the EU. Moreover, non-included substances might still be authorised in third countries, requiring the establishment of import tolerances in Regulation (EC) No 396/2005.

In order to gain an overview of the pesticide residues data that have been considered for the setting of import tolerances, EFSA developed the Pesticide Residues Overview File (PROFile). The PROFile is an inventory of all pesticide residues data relevant to the risk assessment and MRL setting for a given active substance. This includes data on:

- the nature and magnitude of residues in primary crops;
- the nature and magnitude of residues in processed commodities;
- the nature and magnitude of residues in rotational crops;
- the nature and magnitude of residues in livestock commodities and;
- the analytical methods for enforcement of the proposed MRLs.

Spain, the designated rapporteur Member State (RMS) in the framework of Directive 91/414/EEC, was asked to complete the PROFile for 1,3-dichloropropene and to prepare a supporting evaluation report. However, submission of the requested information was not considered necessary as no import tolerances were notified to the RMS.

A draft reasoned opinion was issued by EFSA on 19 February 2013 and submitted to Member States (MS) for commenting. No comments were received by 26 April 2013.

TERMS OF REFERENCE

According to Article 12 of Regulation (EC) No 396/2005, EFSA shall provide a reasoned opinion on:

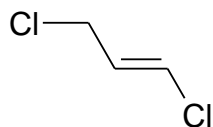
- the inclusion of the active substance in Annex IV to the Regulation, when appropriate;
- the necessity of setting new MRLs for the active substance or deleting/modifying existing MRLs set out in Annex II or III of the Regulation;
- the inclusion of the recommended MRLs in Annex II or III to the Regulation;
- the setting of specific processing factors as referred to in Article 20(2) of the Regulation.

⁴ Regulation (EC) No 396/2005 of 23 February 2005. OJ L 70, 16.3.2005, p. 1-16.

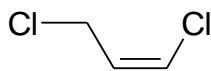
⁵ Council Directive 91/414/EEC of 15 July 1991, OJ L 230, 19.8.1991, p. 1-32.

THE ACTIVE SUBSTANCE AND ITS USE PATTERN

1,3-dichloropropene is the ISO common name for (*EZ*)-1,3-dichloropropene (IUPAC).



E or *trans*-isomer



Z or *cis*-isomer

1,3-dichloropropene is an unclassified nematicide (in terms of chemical class). It penetrates the nematodes through the cuticle and orifices (in particular the mouth) and acts by destroying the ability of cells to transport and use oxygen. It has the potential to disrupt physiological processes that depend on enzyme activity. Additionally, it has, depending on the dose rate, various secondary effects (insecticidal, herbicidal, fungicidal) on a variety of organisms. In general, an application of 1,3-dichloropropene by soil injection and/or drip irrigation is followed by partial sterilisation of the soil.

1,3-dichloropropene was evaluated in the framework of Directive 91/414/EEC with Spain being the designated rapporteur Member State (RMS). The representative use supported for the peer review process was the soil injection or drip irrigation on tomatoes and peppers at a rate of 170-283 kg a.s./ha, both indoor and outdoor. During this initial peer review, a high number of concerns were identified by EFSA regarding the fate and behaviour in the environment, ecotoxicology, mammalian toxicology and consumer exposure. A decision on non-inclusion of the active substance in Annex I to Directive 91/414/EEC was therefore published by means of Commission Decision 2007/619/EC⁶, which entered into force on 15 October 2007. According to this Commission Decision, any period of grace granted by Member States in accordance with the provisions of Article 4(6) of Directive 91/414/EEC should have expired on 20 March 2009 at the latest. In accordance with Article 13 of Regulation (EC) No 33/2008⁷, 1,3-dichloropropene was then subject to a resubmission procedure and a second peer-review was carried out by EFSA. However, the additional data and information provided did not permit eliminating all the specific concerns that led to the non-inclusion. Consequently, a final decision on non-inclusion was published by means of Commission Decision 2011/36/EC⁸, entering into force on 10 February 2011.

The EU MRLs for 1,3-dichloropropene are established in Annex IIIA of Regulation (EC) No 396/2005. All existing EU MRLs, which are established for the parent compound only, are summarised in Appendix B to this document. CXLs for 1,3-dichloropropene are not available.

According to the decision of non-inclusion in Annex I of Directive 91/414/EEC, plant protection products containing 1,3-dichloropropene are no longer authorised in EU Member States (authorisations for emergency situations in plant protection granted in application of Article 53 of Regulation (EC) No 1107/2009 are not considered in the context of this Reasoned Opinion). For the purpose of this MRL review, the RMS did not report any use authorised in third countries that might have a significant impact on international trade.

ASSESSMENT

Considering that the use of 1,3-dichloropropene is no longer authorised within the EU (authorisations for emergency situations in plant protection granted in application of Article 53 of Regulation (EC) No 1107/2009 are not considered in the context of this Reasoned Opinion), that no CXLs are available for this active substance and that no uses authorised in third countries were notified to the RMS, European consumers are not expected to be exposed to residues of this active substance and a consumer risk assessment is, in principle, not required. Risk managers might have the interest, however, to enforce

⁶ Decision 2007/619/EC of 20 September 2007, OJ L 249, 25.9.2007, p. 11-13.

⁷ Commission Regulation (EC) No 33/2008 of 17 January 2008. OJ L 15, 18.01.2008, p.5.

⁸ Decision 2011/36/EC of 20 January 2011, OJ L 18, 21.1.2011, p. 42-43.

the potential illegal use of 1,3-dichloropropene within the EU as well as the presence of illegitimate residue levels in imported products. In order to assist risk managers in applying the most appropriate enforcement measures, EFSA assessed the available data with particular attention for the analytical methods, the toxicological reference values and the nature of residues in plants and livestock. The assessment of EFSA is mainly based on the conclusion on the peer review of the pesticide risk assessment of the active substance 1,3-dichloropropene (EFSA, 2009) as well as the Draft Assessment Report (DAR), its addendum and the Additional Report prepared under Council Directive 91/414/EEC (Spain, 2004, 2005, 2009).

1. Methods of analysis

1.1. Methods for enforcement of residues in food of plant origin

During the peer review under Directive 91/414/EEC, an analytical method using GC-ECD, confirmed by other GC-ECD methods or GC-MS methods for different matrices, and its ILV were evaluated and validated for the determination of parent 1,3-dichloropropene in plant matrices with an LOQ of 0.005 mg/kg for each isomer separately in high water content (bell pepper), high oil content (oilseed rape), acidic (oranges) and dry (wheat grain) commodities (Spain, 2004, 2005). Nevertheless, no confirmatory method is available for dry commodities.

No multi-residue method is reported for the analysis of the 1,3-dichloropropene in plant commodities.

Hence it is concluded that 1,3-dichloropropene can be enforced in food of plant origin with an LOQ of 0.01 mg/kg in high water content, high oil content, acidic and dry commodities. Nevertheless, no confirmatory method is available for its determination in dry commodities.

1.2. Methods for enforcement of residues in food of animal origin

No analytical method is available for the determination of parent 1,3-dichloropropene in food of animal origin. Hence there is no evidence that 1,3 dichloropropene can be enforced in food of animal origin.

2. Mammalian toxicology

The toxicological assessment of 1,3-dichloropropene was peer reviewed under Directive 91/414/EEC and toxicological reference values were established by EFSA (2009). These toxicological reference values are summarised in Table 2-1.

Table 2-1: Overview of the toxicological reference values

	Source	Year	Value	Study relied upon	Safety factor
Parent compound					
ADI	EFSA	2009	0.025 mg/kg bw per d	2-year rat	100
ARfD	EFSA	2009	0.2 mg/kg bw	2-week dog	100

3. Residues

3.1. Nature and magnitude of residues in plant

Considering that the use of 1,3-dichloropropene is no longer authorised within the EU (authorisations for emergency situations in plant protection granted in application of Article 53 of Regulation (EC) No 1107/2009 are not considered in the context of this Reasoned Opinion), that no CXLs are available for this active substance and that no uses authorised in third countries were notified to the RMS, residues of 1,3-dichloropropene are not expected to occur in any plant commodity. Nevertheless, metabolism of

1,3-dichloropropene was investigated for soil application on fruits and fruiting vegetables (oranges, tomatoes), on pulses and oilseeds (soya bean) and on root and tuber vegetables (sugar beet), using ¹⁴C-labelled 1,3-dichloropropene (Spain, 2004). The characteristics of these studies are summarised in Table 3-1.

Table 3-1: Summary of available metabolism studies in plants

Group	Crop	Label position	Application and sampling details				
			Method, F or G ^(a)	Rate (kg a.s./ha)	No	Sampling (DAT)	Remarks
Fruits and fruiting vegetables	Oranges	¹⁴ C-1,3-dichloropropene	Soil, G	123	1	33, 48, 63	
	Tomatoes	¹⁴ C-1,3-dichloropropene	Soil, F	403	1	139	Tomatoes planted 24 DAT
			Soil, G	177	1	Foliage: 44, 51, 61, 93 Immature fruit: 93	Tomatoes planted 4, 8, 12, 16, 20 DAT
Root and tuber vegetables	Soya bean	¹⁴ C-1,3-dichloropropene	Soil, F	403	1	83, 176	Soya bean planted 24 DAT
Pulses and oilseeds	Sugar beet	¹⁴ C-1,3-dichloropropene	Soil, F	275	1	173	Sugar beets planted 14 DAT

(a): Outdoor/field application (F) or glasshouse/protected/indoor application (G)

At harvest, TRR in tomato fruits and foliage were 0.30 mg eq/kg and 2.24 mg eq/kg, respectively. No 1,3-dichloropropene per se was detected in any fruit or foliage sample at harvest. The 3-chloro allyl alcohol⁹ was present at levels ≤0.033 mg eq/kg in both fruit and foliage. In tomato fruits, the majority of radioactive residues was characterised as composed of sucrose, carbohydrates, and cellulose. In foliage, the radioactive residue was shown to be comprised of plant pigments, sugars, small organic acids and bases. Even though a high amount of applied 1,3-dichloropropene is expected to be volatile, the results of the study support a degradation pathway for 1,3-dichloropropene which results in the incorporation of the radioactive atoms into natural plant constituents.

In orange fruits, the radioactive residue increased with time from application, indicating that radioactivity was absorbed and translocated throughout the orange tree. Comprehensive characterisation of orange fruit residues demonstrated incorporation of the radiolabel into natural plant constituents, primarily organic acids such as malonic and citric acid.

Characterisation of the sugar beet radioactive residue was conducted in multiple ways. Natural incorporation of the radioactivity was demonstrated by isolating ¹⁴CO₂ in a fermentation experiment as well as through isolation of radioactive protein, amino acids, organic acids, sucrose, cellulose and hemicelluloses. In soybeans, the radioactive residue was shown to be comprised of fatty acids, amino acids, sugars, and cellulose. In soybean forage, the radioactive residue was characterised as composed of pigments, osazones, organic acids, sugars, and cellulose.

⁹ (2Z)-3-chloroprop-2-en-1-ol; see appendix C

Based upon the findings in the metabolism studies, naturally occurring plant constituents represented the majority of the radioactive residue in tomatoes, oranges, sugar beets and soybeans. Additional information on uptake, translocation and accumulation of ^{14}C -1,3-dichloropropene and/or ^{14}C -3-chloroallyl alcohol in bush beans, tomato and carrot are available from a published report, corresponding with the findings in the primary crop metabolism studies summarised above.

Consequently, parent 1,3-dichloropropene is considered to be the only relevant residue for enforcement against a potential illegal use in plants. Validated analytical methods for enforcement of this compound are available (see also section 1.1), except for dry commodities where a confirmatory method is still missing.

3.2. Nature and magnitude of residues in livestock

Residues of 1,3-dichloropropene are also not expected to occur in livestock. Nevertheless, studies on the metabolism of 1,3-dichloropropene in lactating goats and laying hens were submitted and evaluated in the framework of Directive 91/414/EEC (Spain, 2004). In these studies, high dosing rates were administered to lactating goats (13 mg/kg feed) and laying hens (11 mg/kg feed).

In lactating goat and laying hens, the majority of the dose was excreted (50 – 55 % and 74 – 75% AR, respectively) or expired as $^{14}\text{CO}_2$ (25 % AR in goat). In individual samples of milk or goat tissues, radioactivity did not account for more than 1 % of the AR (*i.e.* maximum of 1.1 mg eq./kg). No analysis was performed in milk and goat tissues but further extractions allowed to characterise the radioactive residues in several small fractions (max 0.04 mg eq./kg). These extractions also demonstrated that radioactivity was mainly incorporated into natural products such as protein, glycogen, fatty acids, glucose and lactose. The high level of incorporated radioactivity might result from the complete degradation of 1,3-dichloropropene to carbon unit(s), biosynthetic precursor, which would reincorporate into a multitude of natural constituents.

In eggs and hens tissues, radioactivity did not account for more than 2.5 % of the AR. Some radioactivity was incorporated into natural animal biochemicals (fatty acids in eggs) but the major components were identified as 1,3-dichloropropene (54 % TRR in fat, 0.14 mg eq./kg), its cysteine conjugate¹⁰ (54 % TRR in muscle, 0.22 mg eq./kg; 28 % TRR in liver, 0.18 mg eq./kg; 14 % TRR in egg yolk, 0.06 mg eq./kg; and 12 % TRR in fat, 0.03 mg eq./kg) and the mercapturic acid of 1,3-dichloropropene¹¹ (21 % TRR in muscle, 0.09 mg eq./kg).

Giving the high dosing rates used in the studies, no significant residues are expected in the edible tissues, eggs and milk. Although 1,3-dichloropropene and its cysteine conjugate are the most relevant indicators for enforcement against a potential illegal use on crops but no validated analytical methods for enforcement of residues in product of animal origin are available (see section 1.2).

4. Consumer risk assessment

A risk assessment is in principle not required considering that the use of 1,3-dichloropropene is no longer authorised in the EU (authorisations for emergency situations in plant protection granted in application of Article 53 of Regulation (EC) No 1107/2009 are not considered in the context of this Reasoned Opinion) and that no import tolerances have been notified. In order to assess whether the reported LOQs are sufficiently protective for European consumers, chronic and acute intake calculations assuming the toxicological reference values proposed by the RMS and the default MRL of 0.01 mg/kg, as defined by Regulation (EC) No 396/2005, for commodities of plant and animal origin were performed using revision 2 of the EFSA PRIMo (EFSA, 2007).

The detailed results of the chronic and acute intake calculations are reported in Appendix A to this document. The highest chronic exposure was calculated for the French toddler, representing 3 % of the

¹⁰ see appendix C

¹¹ see appendix C

ADI. The highest acute exposure is calculated for potatoes and represents 0.8 % of the ARfD. EFSA highlights that the above calculation does not reflect real exposure of consumers to 1,3-dichloropropene residues; it is a theoretical calculation indicating that the default MRL of 0.01 mg/kg provides a satisfactory level of protection for the European consumer.

CONCLUSIONS AND RECOMMENDATIONS

The toxicological profile of 1,3-dichloropropene was evaluated in the framework of Directive 91/414/EEC, which resulted in an ADI and an ARfD being established at 0.025 mg/kg bw per d and 0.2 mg/kg bw, respectively.

Considering that the use of 1,3-dichloropropene is no longer authorised within the EU (authorisations for emergency situations in plant protection granted in application of Article 53 of Regulation (EC) No 1107/2009 are not considered in the context of this Reasoned Opinion), that no CXLs are available for this active substance and that no uses authorised in third countries were notified to the RMS, residues of 1,3-dichloropropene are not expected to occur in any plant commodity. Nevertheless, primary crop metabolism of 1,3-dichloropropene was investigated for three different crop groups (fruits and fruiting vegetables, root and tuber vegetables, pulses and oilseeds). 1,3-dichloropropene residues are expected to be incorporated into natural plant constituents because naturally occurring plant constituents represented the majority of the radioactive residue in tomatoes, oranges, sugar beets and soybeans. Consequently, parent 1,3-dichloropropene is considered to be the only relevant residue for enforcement against a potential illegal use in plants. Parent 1,3-dichloropropene can be enforced with a LOQ of 0.01 mg/kg in acidic, high oil content and high water content commodities. No confirmatory method is available for the determination in dry commodities.

Residues of 1,3-dichloropropene are also not expected to occur in livestock. Moreover, studies on the metabolism of 1,3-dichloropropene in lactating cow and laying hens demonstrated that negligible residues are present in the edible tissues, eggs and milk. In eggs and hens tissues, parent compound and its cysteine conjugate are the most relevant indicators for enforcement against a potential illegal use on crops. However, no validated analytical methods for enforcement of residues in product of animal origin are available.

A risk assessment is in principle not required considering that the use of 1,3-dichloropropene is no longer authorised in the EU and that no import tolerances have been notified. Nevertheless, the default MRL of 0.01 mg/kg, as defined by Regulation (EC) No 396/2005, provides a satisfactory level of protection for the European consumer.

Based on the above assessment, the existing EU MRLs in plants commodities, exceeding the value 0.01 mg/kg are in principle no longer required. Considering however that the enforcement against potential illegal uses falls under the remit of risk managers, EFSA is not in a position to recommend whether the default MRL of 0.01 mg/kg, as defined by Regulation (EC) No 396/2005, should apply or whether the setting of a specific LOQ is necessary. Available data indicate that the default MRL of 0.01 mg/kg is sufficiently protective and could be enforced in practice, although this was not fully demonstrated in dry commodities.

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APPENDIX A – PESTICIDE RESIDUES INTAKE MODEL (PRIMO)

1,3-dichloropropene			
Status of the active substance:	Included	Code no.	
LOQ (mg/kg bw):	0,01	proposed LOQ:	
Toxicological end points			
ADI (mg/kg bw/day):	0,025	ARfD (mg/kg bw):	0,2
Source of ADI:	EFSA	Source of ARfD:	EFSA
Year of evaluation:	2009	Year of evaluation:	2009

Chronic risk assessment								
		TMDI (range) in % of ADI minimum - maximum						
		0 3						
		No of diets exceeding ADI:						

Highest calculated TMDI values in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities	pTMRs at LOQ (in % of ADI)
3,0	FR toddler	1,7	PRODUCTS OF ANIMAL ORIGIN	0,7	VEGETABLES	0,5	FRUIT (FRESH OR FROZEN)	3,0
2,8	UK Infant	1,7	PRODUCTS OF ANIMAL ORIGIN	0,4	SUGAR PLANTS	0,3	VEGETABLES	2,8
2,7	UK Toddler	0,9	PRODUCTS OF ANIMAL ORIGIN	0,9	SUGAR PLANTS	0,3	FRUIT (FRESH OR FROZEN)	2,7
2,6	NL child	1,3	PRODUCTS OF ANIMAL ORIGIN	0,6	FRUIT (FRESH OR FROZEN)	0,5	VEGETABLES	2,6
2,6	FR infant	1,1	PRODUCTS OF ANIMAL ORIGIN	0,8	VEGETABLES	0,6	FRUIT (FRESH OR FROZEN)	2,6
2,4	DE child	0,9	PRODUCTS OF ANIMAL ORIGIN	0,9	FRUIT (FRESH OR FROZEN)	0,3	VEGETABLES	2,4
1,9	WHO Cluster diet B	0,6	VEGETABLES	0,5	CEREALS	0,3	FRUIT (FRESH OR FROZEN)	1,9
1,8	DK child	0,9	PRODUCTS OF ANIMAL ORIGIN	0,4	CEREALS	0,3	VEGETABLES	1,8
1,5	SE general population 90th percentile	0,7	PRODUCTS OF ANIMAL ORIGIN	0,4	VEGETABLES	0,2	FRUIT (FRESH OR FROZEN)	1,5
1,4	ES child	0,7	PRODUCTS OF ANIMAL ORIGIN	0,2	FRUIT (FRESH OR FROZEN)	0,2	CEREALS	1,4
1,3	IE adult	0,4	FRUIT (FRESH OR FROZEN)	0,4	VEGETABLES	0,3	CEREALS	1,3
1,2	WHO cluster diet E	0,4	VEGETABLES	0,3	PRODUCTS OF ANIMAL ORIGIN	0,2	CEREALS	1,2
1,2	WHO cluster diet D	0,4	VEGETABLES	0,3	CEREALS	0,3	PRODUCTS OF ANIMAL ORIGIN	1,2
1,1	WHO regional European diet	0,4	PRODUCTS OF ANIMAL ORIGIN	0,4	VEGETABLES	0,1	CEREALS	1,1
1,1	WHO Cluster diet F	0,3	PRODUCTS OF ANIMAL ORIGIN	0,3	VEGETABLES	0,2	CEREALS	1,1
0,9	NL general	0,3	PRODUCTS OF ANIMAL ORIGIN	0,2	VEGETABLES	0,2	FRUIT (FRESH OR FROZEN)	0,9
0,8	ES adult	0,3	PRODUCTS OF ANIMAL ORIGIN	0,2	FRUIT (FRESH OR FROZEN)	0,2	VEGETABLES	0,8
0,8	UK vegetarian	0,2	SUGAR PLANTS	0,2	VEGETABLES	0,1	PRODUCTS OF ANIMAL ORIGIN	0,8
0,7	FR all population	0,2	FRUIT (FRESH OR FROZEN)	0,2	PRODUCTS OF ANIMAL ORIGIN	0,1	VEGETABLES	0,7
0,7	PT General population	0,3	FRUIT (FRESH OR FROZEN)	0,2	VEGETABLES	0,2	CEREALS	0,7
0,7	UK Adult	0,2	PRODUCTS OF ANIMAL ORIGIN	0,2	SUGAR PLANTS	0,1	VEGETABLES	0,7
0,7	DK adult	0,3	PRODUCTS OF ANIMAL ORIGIN	0,1	VEGETABLES	0,1	FRUIT (FRESH OR FROZEN)	0,7
0,7	IT kids/toddler	0,3	CEREALS	0,2	VEGETABLES	0,1	FRUIT (FRESH OR FROZEN)	0,7
0,6	LT adult	0,2	PRODUCTS OF ANIMAL ORIGIN	0,2	VEGETABLES	0,1	CEREALS	0,6
0,6	FI adult	0,3	PRODUCTS OF ANIMAL ORIGIN	0,1	VEGETABLES	0,1	FRUIT (FRESH OR FROZEN)	0,6
0,5	IT adult	0,2	CEREALS	0,2	VEGETABLES	0,1	FRUIT (FRESH OR FROZEN)	0,5
0,4	PL general population	0,2	VEGETABLES	0,1	FRUIT (FRESH OR FROZEN)	0,0	PULSES, DRY	0,4

Conclusion:
 The estimated Theoretical Maximum Daily Intakes (TMDI), based on pTMRs were below the ADI.
 A long-term intake of residues of 1,3-dichloropropene is unlikely to present a public health concern.

Acute risk assessment /children						Acute risk assessment / adults / general population						
<p>The acute risk assessment is based on the ARfD.</p> <p>For each commodity the calculation is based on the highest reported MS consumption per kg bw and the corresponding unit weight from the MS with the critical consumption. If no data on the unit weight was available from that MS an average European unit weight was used for the IESTI calculation.</p> <p>In the IESTI 1 calculation, the variability factors were 10, 7 or 5 (according to JMPR manual 2002), for lettuce a variability factor of 5 was used.</p> <p>In the IESTI 2 calculations, the variability factors of 10 and 7 were replaced by 5. For lettuce the calculation was performed with a variability factor of 3.</p> <p>Threshold MRL is the calculated residue level which would leads to an exposure equivalent to 100 % of the ARfD.</p>												
Unprocessed commodities	No of commodities for which ARfD/ADI is exceeded (IESTI 1):			No of commodities for which ARfD/ADI is exceeded (IESTI 2):			No of commodities for which ARfD/ADI is exceeded (IESTI 1):			No of commodities for which ARfD/ADI is exceeded (IESTI 2):		
	---			---			---			---		
	IESTI 1		*)	**) **)	IESTI 2		*)	**) **)	IESTI 1		*)	**) **)
	Highest % of ARfD/ADI	Commodities	pTMRL/ threshold MRL (mg/kg)	Highest % of ARfD/ADI	Commodities	pTMRL/ threshold MRL (mg/kg)	Highest % of ARfD/ADI	Commodities	pTMRL/ threshold MRL (mg/kg)	Highest % of ARfD/ADI	Commodities	pTMRL/ threshold MRL (mg/kg)
	0,8	Potatoes	0,01 / -	0,8	Melons	0,01 / -	0,3	Pumpkins	0,01 / -	0,3	Pumpkins	0,01 / -
0,8	Melons	0,01 / -	0,6	Milk and milk	0,01 / -	0,2	Watermelons	0,01 / -	0,2	Watermelons	0,01 / -	
0,7	Oranges	0,01 / -	0,6	Watermelons	0,01 / -	0,2	Melons	0,01 / -	0,2	Melons	0,01 / -	
0,6	Milk and milk	0,01 / -	0,5	Potatoes	0,01 / -	0,2	Chinese cabbage	0,01 / -	0,2	Chinese cabbage	0,01 / -	
0,6	Watermelons	0,01 / -	0,5	Pineapples	0,01 / -	0,2	Cauliflower	0,01 / -	0,2	Cauliflower	0,01 / -	
No of critical MRLs (IESTI 1)						No of critical MRLs (IESTI 2)						
---						---						
Processed commodities	No of commodities for which ARfD/ADI is exceeded:			No of commodities for which ARfD/ADI is exceeded:			No of commodities for which ARfD/ADI is exceeded:			No of commodities for which ARfD/ADI is exceeded:		
	---			---			---			---		
	IESTI 1		*)	**) **)	IESTI 2		*)	**) **)	IESTI 1		*)	**) **)
	Highest % of ARfD/ADI	Processed commodities	pTMRL/ threshold MRL (mg/kg)	Highest % of ARfD/ADI	Processed commodities	pTMRL/ threshold MRL (mg/kg)	Highest % of ARfD/ADI	Processed commodities	pTMRL/ threshold MRL (mg/kg)	Highest % of ARfD/ADI	Processed commodities	pTMRL/ threshold MRL (mg/kg)
	0,3	Apple juice	0,01 / -	0,1	Orange juice	0,01 / -	0,0	Apple juice	0,01 / -	0,0	Bread/pizza	0,01 / -
0,2	Orange juice	0,01 / -	0,0	Apple juice	0,01 / -	0,0	Wine	0,01 / -	0,0	Pineapples preserved	0,01 / -	
0,2	Carrot, juice	0,01 / -	0,0	Bread/pizza	0,01 / -	0,0	Pineapples preserved	0,01 / -				
0,2	Grape juice	0,01 / -										
0,1	Peach juice	0,01 / -										
<p>*) The results of the IESTI calculations are reported for at least 5 commodities. If the ARfD is exceeded for more than 5 commodities, all IESTI values > 90% of ARfD are reported.</p> <p>**) pTMRL: provisional temporary MRL</p> <p>***) pTMRL: provisional temporary MRL for unprocessed commodity</p>												
<p>Conclusion:</p> <p>For 1,3-dichloropropene IESTI 1 and IESTI 2 were calculated for food commodities for which pTMRLs were submitted and for which consumption data are available. No exceedance of the ARfD/ADI was identified for any unprocessed commodity.</p> <p>For processed commodities, no exceedance of the ARfD/ADI was identified.</p>												

APPENDIX B – EXISTING EU MAXIMUM RESIDUE LIMITS (MRLs)

(Pesticides - Web Version - EU MRLs - File created on 17/01/2013 17:00)

Code number	Groups and examples of individual products to which the MRLs apply ^(a)	1,3-dichloropropene
100000	1. FRUIT FRESH OR FROZEN; NUTS	0,05*
110000	(i) Citrus fruit	0,05*
110010	Grapefruit (Shaddocks, pomelos, sweeties, tangelo, uglı and other hybrids)	0,05*
110020	Oranges (Bergamot, bitter orange, chinotto and other hybrids)	0,05*
110030	Lemons (Citron, lemon)	0,05*
110040	Limes	0,05*
110050	Mandarins (Clementine, tangerine and other hybrids)	0,05*
110990	Others	0,05*
120000	(ii) Tree nuts (shelled or unshelled)	0,05*
120010	Almonds	0,05*
120020	Brazil nuts	0,05*
120030	Cashew nuts	0,05*
120040	Chestnuts	0,05*
120050	Coconuts	0,05*
120060	Hazelnuts (Filbert)	0,05*
120070	Macadamia	0,05*
120080	Pecans	0,05*
120090	Pine nuts	0,05*
120100	Pistachios	0,05*
120110	Walnuts	0,05*
120990	Others	0,05*
130000	(iii) Pome fruit	0,05*
130010	Apples (Crab apple)	0,05*
130020	Pears (Oriental pear)	0,05*
130030	Quinces	0,05*
130040	Medlar	0,05*
130050	Loquat	0,05*
130990	Others	0,05*
140000	(iv) Stone fruit	0,05*
140010	Apricots	0,05*
140020	Cherries (sweet cherries, sour cherries)	0,05*
140030	Peaches (Nectarines and similar hybrids)	0,05*
140040	Plums (Damson, greengage, mirabelle)	0,05*

Code number	Groups and examples of individual products to which the MRLs apply ^(a)	1,3-dichloropropene
140990	Others	0,05*
150000	(v) Berries & small fruit	0,05*
151000	(a) Table and wine grapes	0,05*
151010	Table grapes	0,05*
151020	Wine grapes	0,05*
152000	(b) Strawberries	0,05*
153000	(c) Cane fruit	0,05*
153010	Blackberries	0,05*
153020	Dewberries (Loganberries, Boysenberries, and cloudberrys)	0,05*
153030	Raspberries (Wineberries)	0,05*
153990	Others	0,05*
154000	(d) Other small fruit & berries	0,05*
154010	Blueberries (Bilberries cowberries (red bilberries))	0,05*
154020	Cranberries	0,05*
154030	Currants (red, black and white)	0,05*
154040	Gooseberries (Including hybrids with other ribes species)	0,05*
154050	Rose hips	0,05*
154060	Mulberries (arbutus berry)	0,05*
154070	Azarole (mediteranean medlar)	0,05*
154080	Elderberries (Black chokeberry (appleberry), mountain ash, azarole, buckthorn (sea shallowthorn), hawthorn, service berries, and other treeberries)	0,05*
154990	Others	0,05*
160000	(vi) Miscellaneous fruit	0,05*
161000	(a) Edible peel	0,05*
161010	Dates	0,05*
161020	Figs	0,05*
161030	Table olives	0,05*
161040	Kumquats (Marumi kumquats, nagami kumquats)	0,05*
161050	Carambola (Bilimbi)	0,05*

Code number	Groups and examples of individual products to which the MRLs apply ^(a)	1,3-dichloropropene
161060	Persimmon	0,05*
161070	Jambolan (java plum) (Java apple (water apple), pomerac, rose apple, Brazilian cherry (grumichama), Surinam cherry)	0,05*
161990	Others	0,05*
162000	(b) Inedible peel, small	0,05*
162010	Kiwi	0,05*
162020	Lychee (Litchi) (Pulasan, rambutan (hairy litchi))	0,05*
162030	Passion fruit	0,05*
162040	Prickly pear (cactus fruit)	0,05*
162050	Star apple	0,05*
162060	American persimmon (Virginia kaki) (Black sapote, white sapote, green sapote, canistel (yellow sapote), and mammey sapote)	0,05*
162990	Others	0,05*
163000	(c) Inedible peel, large	0,05*
163010	Avocados	0,05*
163020	Bananas (Dwarf banana, plantain, apple banana)	0,05*
163030	Mangoes	0,05*
163040	Papaya	0,05*
163050	Pomegranate	0,05*
163060	Cherimoya (Custard apple, sugar apple (sweetsop) , llama and other medium sized Annonaceae)	0,05*
163070	Guava	0,05*
163080	Pineapples	0,05*
163090	Bread fruit (Jackfruit)	0,05*
163100	Durian	0,05*
163110	Soursop (guanabana)	0,05*
163990	Others	0,05*
200000	2. VEGETABLES FRESH OR FROZEN	
210000	(i) Root and tuber vegetables	
211000	(a) Potatoes	0,05*
212000	(b) Tropical root and tuber	0,05*

Code number	Groups and examples of individual products to which the MRLs apply ^(a)	1,3-dichloropropene
	vegetables	
212010	Cassava (Dasheen, eddoe (Japanese taro), tannia)	0,05*
212020	Sweet potatoes	0,05*
212030	Yams (Potato bean (yam bean), Mexican yam bean)	0,05*
212040	Arrowroot	0,05*
212990	Others	0,05*
213000	(c) Other root and tuber vegetables except sugar beet	
213010	Beetroot	0,05*
213020	Carrots	0,1
213030	Celeriac	0,05*
213040	Horseradish	0,05*
213050	Jerusalem artichokes	0,05*
213060	Parsnips	0,05*
213070	Parsley root	0,05*
213080	Radishes (Black radish, Japanese radish, small radish and similar varieties)	0,05*
213090	Salsify (Scorzoneria, Spanish salsify (Spanish oysterplant))	0,05*
213100	Swedes	0,05*
213110	Turnips	0,05*
213990	Others	0,05*
220000	(ii) Bulb vegetables	
220010	Garlic	0,1
220020	Onions (Silverskin onions)	0,1
220030	Shallots	0,05*
220040	Spring onions (Welsh onion and similar varieties)	0,05*
220990	Others	0,05*
230000	(iii) Fruiting vegetables	0,05*
231000	(a) Solanacea	0,05*
231010	Tomatoes (Cherry tomatoes,)	0,05*
231020	Peppers (Chilli peppers)	0,05*
231030	Aubergines (egg plants) (Pepino)	0,05*
231040	Okra, lady's fingers	0,05*
231990	Others	0,05*

Code number	Groups and examples of individual products to which the MRLs apply ^(a)	1,3-dichloropropene
232000	(b) Cucurbits - edible peel	0,05*
232010	Cucumbers	0,05*
232020	Gherkins	0,05*
232030	Courgettes (Summer squash, marrow (patisson))	0,05*
232990	Others	0,05*
233000	(c) Cucurbits-inedible peel	0,05*
233010	Melons (Kiwano)	0,05*
233020	Pumpkins (Winter squash)	0,05*
233030	Watermelons	0,05*
233990	Others	0,05*
234000	(d) Sweet corn	0,05*
239000	(e) Other fruiting vegetables	0,05*
240000	(iv) Brassica vegetables	0,1
241000	(a) Flowering brassica	0,1
241010	Broccoli (Calabrese, Chinese broccoli, Broccoli raab)	0,1
241020	Cauliflower	0,1
241990	Others	0,1
242000	(b) Head brassica	0,1
242010	Brussels sprouts	0,1
242020	Head cabbage (Pointed head cabbage, red cabbage, savoy cabbage, white cabbage)	0,1
242990	Others	0,1
243000	(c) Leafy brassica	0,1
243010	Chinese cabbage (Indian (Chinese) mustard, pak choy, Chinese flat cabbage (tai goo choy), peking cabbage (pe-tsai), cow cabbage)	0,1
243020	Kale (Borecole (curly kale), collards)	0,1
243990	Others	0,1
244000	(d) Kohlrabi	0,1
250000	(v) Leaf vegetables & fresh herbs	
251000	(a) Lettuce and other salad plants including Brassicaceae	
251010	Lamb's lettuce (Italian cornsalad)	0,05*
251020	Lettuce (Head lettuce, lollo rosso (cutting lettuce), iceberg lettuce,	0,1

Code number	Groups and examples of individual products to which the MRLs apply ^(a)	1,3-dichloropropene
	romaine (cos) lettuce)	
251030	Scarole (broad-leaf endive) (Wild chicory, red-leaved chicory, radicchio, curld leave endive, sugar loaf)	0,05*
251040	Cress	0,05*
251050	Land cress	0,05*
251060	Rocket, Rucola (Wild rocket)	0,05*
251070	Red mustard	0,05*
251080	Leaves and sprouts of Brassica spp (Mizuna)	0,05*
251990	Others	0,05*
252000	(b) Spinach & similar (leaves)	0,05*
252010	Spinach (New Zealand spinach, turnip greens (turnip tops))	0,05*
252020	Purslane (Winter purslane (miner's lettuce), garden purslane, common purslane, sorrel, glasswort)	0,05*
252030	Beet leaves (chard) (Leaves of beetroot)	0,05*
252990	Others	0,05*
253000	(c) Vine leaves (grape leaves)	0,05*
254000	(d) Water cress	0,05*
255000	(e) Witloof	0,05*
256000	(f) Herbs	0,05*
256010	Chervil	0,05*
256020	Chives	0,05*
256030	Celery leaves (fennel leaves, Coriander leaves, dill leaves, Caraway leaves, lovage, angelica, sweet cicely and other Apiacea)	0,05*
256040	Parsley	0,05*
256050	Sage (Winter savory, summer savory,)	0,05*
256060	Rosemary	0,05*
256070	Thyme (marjoram, oregano)	0,05*
256080	Basil (Balm leaves, mint, peppermint)	0,05*
256090	Bay leaves (laurel)	0,05*
256100	Tarragon (Hyssop)	0,05*
256990	Others	0,05*

Code number	Groups and examples of individual products to which the MRLs apply ^(a)	1,3-dichloropropene
260000	(vi) Legume vegetables (fresh)	0,05*
260010	Beans (with pods) (Green bean (french beans, snap beans), scarlet runner bean, slicing bean, yardlong beans)	0,05*
260020	Beans (without pods) (Broad beans, Flageolet, jack bean, lima bean, cowpea)	0,05*
260030	Peas (with pods) (Mangetout (sugar peas))	0,05*
260040	Peas (without pods) (Garden pea, green pea, chickpea)	0,05*
260050	Lentils	0,05*
260990	Others	0,05*
270000	(vii) Stem vegetables (fresh)	
270010	Asparagus	0,05*
270020	Cardoons	0,05*
270030	Celery	0,1
270040	Fennel	0,05*
270050	Globe artichokes	0,05*
270060	Leek	0,05*
270070	Rhubarb	0,05*
270080	Bamboo shoots	0,05*
270090	Palm hearts	0,05*
270990	Others	0,05*
280000	(viii) Fungi	0,05*
280010	Cultivated (Common mushroom, Oyster mushroom, Shi-take)	0,05*
280020	Wild (Chanterelle, Truffle, Morel)	0,05*
280990	Others	0,05*
290000	(ix) Sea weeds	0,05*
300000	3. PULSES, DRY	0,05*
300010	Beans (Broad beans, navy beans, flageolet, jack beans, lima beans, field beans, cowpeas)	0,05*
300020	Lentils	0,05*
300030	Peas (Chickpeas, field peas, chickling vetch)	0,05*
300040	Lupins	0,05*
300990	Others	0,05*
400000	4. OILSEEDS AND OILFRUITS	0,05*

Code number	Groups and examples of individual products to which the MRLs apply ^(a)	1,3-dichloropropene
401000	(i) Oilseeds	0,05*
401010	Linseed	0,05*
401020	Peanuts	0,05*
401030	Poppy seed	0,05*
401040	Sesame seed	0,05*
401050	Sunflower seed	0,05*
401060	Rape seed (Bird rapeseed, turnip rape)	0,05*
401070	Soya bean	0,05*
401080	Mustard seed	0,05*
401090	Cotton seed	0,05*
401100	Pumpkin seeds	0,05*
401110	Safflower	0,05*
401120	Borage	0,05*
401130	Gold of pleasure	0,05*
401140	Hempseed	0,05*
401150	Castor bean	0,05*
401990	Others	0,05*
402000	(ii) Oilfruits	0,05*
402010	Olives for oil production	0,05*
402020	Palm nuts (palmoil kernels)	0,05*
402030	Palmfruit	0,05*
402040	Kapok	0,05*
402990	Others	0,05*
500000	5. CEREALS	0,05*
500010	Barley	0,05*
500020	Buckwheat	0,05*
500030	Maize	0,05*
500040	Millet (Foxtail millet, teff)	0,05*
500050	Oats	0,05*
500060	Rice	0,05*
500070	Rye	0,05*
500080	Sorghum	0,05*
500090	Wheat (Spelt Triticale)	0,05*
500990	Others	0,05*
600000	6. TEA, COFFEE, HERBAL INFUSIONS AND COCOA	0,05*
610000	(i) Tea (dried leaves and stalks, fermented or otherwise of Camellia sinensis)	0,05*
620000	(ii) Coffee beans	0,05*
630000	(iii) Herbal infusions (dried)	0,05*
631000	(a) Flowers	0,05*
631010	Camomille flowers	0,05*
631020	Hybiscus flowers	0,05*
631030	Rose petals	0,05*

Code number	Groups and examples of individual products to which the MRLs apply ^(a)	1,3-dichloropropene
631040	Jasmine flowers	0,05*
631050	Lime (linden)	0,05*
631990	Others	0,05*
632000	(b) Leaves	0,05*
632010	Strawberry leaves	0,05*
632020	Rooibos leaves	0,05*
632030	Maté	0,05*
632990	Others	0,05*
633000	(c) Roots	0,05*
633010	Valerian root	0,05*
633020	Ginseng root	0,05*
633990	Others	0,05*
639000	(d) Other herbal infusions	0,05*
640000	(iv) Cocoa (fermented beans)	0,05*
650000	(v) Carob (st johns bread)	0,05*
700000	7. HOPS (dried) , including hop pellets and unconcentrated powder	0,05*
800000	8. SPICES	0,05*
810000	(i) Seeds	0,05*
810010	Anise	0,05*
810020	Black caraway	0,05*
810030	Celery seed (Lovage seed)	0,05*
810040	Coriander seed	0,05*
810050	Cumin seed	0,05*
810060	Dill seed	0,05*
810070	Fennel seed	0,05*
810080	Fenugreek	0,05*
810090	Nutmeg	0,05*
810990	Others	0,05*
820000	(ii) Fruits and berries	0,05*
820010	Allspice	0,05*
820020	Anise pepper (Japan pepper)	0,05*
820030	Caraway	0,05*
820040	Cardamom	0,05*
820050	Juniper berries	0,05*
820060	Pepper, black and white (Long pepper, pink pepper)	0,05*
820070	Vanilla pods	0,05*
820080	Tamarind	0,05*
820990	Others	0,05*
830000	(iii) Bark	0,05*

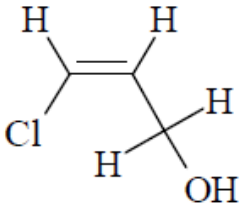
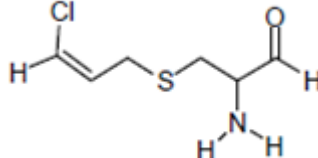
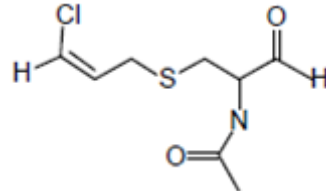
Code number	Groups and examples of individual products to which the MRLs apply ^(a)	1,3-dichloropropene
830010	Cinnamon (Cassia)	0,05*
830990	Others	0,05*
840000	(iv) Roots or rhizome	0,05*
840010	Liquorice	0,05*
840020	Ginger	0,05*
840030	Turmeric (Curcuma)	0,05*
840040	Horseradish	0,05*
840990	Others	0,05*
850000	(v) Buds	0,05*
850010	Cloves	0,05*
850020	Capers	0,05*
850990	Others	0,05*
860000	(vi) Flower stigma	0,05*
860010	Saffron	0,05*
860990	Others	0,05*
870000	(vii) Aril	0,05*
870010	Mace	0,05*
870990	Others	0,05*
900000	9. SUGAR PLANTS	0,05*
900010	Sugar beet (root)	0,05*
900020	Sugar cane	0,05*
900030	Chicory roots	0,05*
900990	Others	0,05*
1000000	10. PRODUCTS OF ANIMAL ORIGIN- TERRESTRIAL ANIMALS	0,01*
1010000	(i) Meat, preparations of meat, offals, blood, animal fats fresh chilled or frozen, salted, in brine, dried or smoked or processed as flours or meals other processed products such as sausages and food preparations based on these	0,01*
1011000	(a) Swine	0,01*
1011010	Meat	0,01*
1011020	Fat free of lean meat	0,01*
1011030	Liver	0,01*
1011040	Kidney	0,01*
1011050	Edible offal	0,01*
1011990	Others	0,01*
1012000	(b) Bovine	0,01*
1012010	Meat	0,01*

Code number	Groups and examples of individual products to which the MRLs apply ^(a)	1,3-dichloropropene
1012020	Fat	0,01*
1012030	Liver	0,01*
1012040	Kidney	0,01*
1012050	Edible offal	0,01*
1012990	Others	0,01*
1013000	(c) Sheep	0,01*
1013010	Meat	0,01*
1013020	Fat	0,01*
1013030	Liver	0,01*
1013040	Kidney	0,01*
1013050	Edible offal	0,01*
1013990	Others	0,01*
1014000	(d) Goat	0,01*
1014010	Meat	0,01*
1014020	Fat	0,01*
1014030	Liver	0,01*
1014040	Kidney	0,01*
1014050	Edible offal	0,01*
1014990	Others	0,01*
1015000	(e) Horses, asses, mules or hinnies	0,01*
1015010	Meat	0,01*
1015020	Fat	0,01*
1015030	Liver	0,01*
1015040	Kidney	0,01*
1015050	Edible offal	0,01*
1015990	Others	0,01*
1016000	(f) Poultry -chicken, geese, duck, turkey and Guinea fowl-, ostrich, pigeon	0,01*
1016010	Meat	0,01*
1016020	Fat	0,01*
1016030	Liver	0,01*
1016040	Kidney	0,01*
1016050	Edible offal	0,01*
1016990	Others	0,01*
1017000	(g) Other farm animals (Rabbit, Kangaroo)	0,01*
1017010	Meat	0,01*
1017020	Fat	0,01*
1017030	Liver	0,01*
1017040	Kidney	0,01*
1017050	Edible offal	0,01*
1017990	Others	0,01*

Code number	Groups and examples of individual products to which the MRLs apply ^(a)	1,3-dichloropropene
1020000	(ii) Milk and cream, not concentrated, nor containing added sugar or sweetening matter, butter and other fats derived from milk, cheese and curd	0,01*
1020010	Cattle	0,01*
1020020	Sheep	0,01*
1020030	Goat	0,01*
1020040	Horse	0,01*
1020990	Others	0,01*
1030000	(iii) Birds' eggs, fresh preserved or cooked Shelled eggs and egg yolks fresh, dried, cooked by steaming or boiling in water, moulded, frozen or otherwise preserved whether or not containing added sugar or sweetening matter	0,01*
1030010	Chicken	0,01*
1030020	Duck	0,01*
1030030	Goose	0,01*
1030040	Quail	0,01*
1030990	Others	0,01*
1040000	(iv) Honey (Royal jelly, pollen)	
1050000	(v) Amphibians and reptiles (Frog legs, crocodiles)	
1060000	(vi) Snails	
1070000	(vii) Other terrestrial animal products	

(*): Indicates lower limit of analytical determination
(a): Table footnote

APPENDIX C – LIST OF METABOLITES AND RELATED STRUCTURAL FORMULA

Common name	IUPAC name	Structural formula
3-chloro allyl alcohol	(2Z)-3-chloroprop-2-en-1-ol	
Cysteine conjugate of 1,3-dichloropropene	-	
Mercapturic acid of 1,3-dichloropropene	-	

ABBREVIATIONS

a.s.	active substance
ADI	acceptable daily intake
AR	applied radioactivity
ARfD	acute reference dose
bw	body weight
CXL	codex maximum residue limit
d	day
DAR	Draft Assessment Report
DAT	days after treatment
EFSA	European Food Safety Authority
eq	residue expressed as a.s. equivalent
EU	European Union
GC-ECD	gas chromatography with electron capture detector
GC-MS	gas chromatography with mass spectrometry
ha	hectare
ILV	independent laboratory validation
ISO	International Organisation for Standardization
IUPAC	International Union of Pure and Applied Chemistry
LOQ	limit of quantification
MRL	maximum residue limit
MS	Member States
PRIMo	(EFSA) Pesticide Residues Intake Model
PROFile	(EFSA) Pesticide Residues Overview File
RMS	rapporteur Member State
TRR	total radioactive residue