REASONED OPINION OF EFSA

Review of the existing MRLs for triasulfuron[1]

Prepared by the Pesticides Unit (PRAPeR)

(Question No EFSA-Q-2008-641)

Issued on 22 April 2009

SUMMARY

Article 12(2) of Regulation (EC) No 396/2005 lays down that EFSA shall provide by 01 September 2009 a reasoned opinion on the review of the existing MRLs for triasulfuron as this active substance was included in Annex I to Directive 91/414/EEC before 02 September 2008. In order to collect the pesticide residues data supporting the existing MRLs for that active substance, EFSA asked France, as the designated Rapporteur Member State, to complete the Pesticide Residue Overview File (PROFile). The completed PROFile was submitted to EFSA on 20 October 2008. Based on the information provided in the PROFile, EFSA derives the following conclusions and recommendations.

Metabolism was sufficiently investigated for foliar treatments in cereals and the relevant residue for enforcement and risk assessment in both cereal grains and cereal straw is defined as triasulfuron. A valid analytical method for the enforcement of this residue definition with an LOQ of 0.01 mg/kg is also available. As triasulfuron is only authorized for use in cereal crops, the proposed residue definition covers all crops evaluated in the framework of this review. Additionally, a sufficient number of supervised residues trials supporting the authorized GAPs for triasulfuron is available. These trials allow EFSA to estimate the expected residue concentrations in the relevant plant commodities and to derive appropriate MRLs.

As quantifiable residues of triasulfuron are not expected in cereal grains, there is no need to investigate the effect of industrial and/or household processing. Specific processing factors for enforcement of processed commodities are also not proposed.

According to the RMS, occurrence of triasulfuron residues in rotational crops was investigated but TRR levels were found to be very low, even at high application rates. Significant residues, exceeding 0.01 mg/kg, are therefore not expected.

The dietary burden resulting from the authorised uses of triasulfuron was calculated for each type of livestock. As all the calculated intakes represented less than 0.1 mg/kg DM,

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significant residues in commodities of animal origin are not expected and MRLs are not proposed.

The chronic exposure of consumers resulting from the proposed MRLs was calculated but acute intake calculations were not undertaken as an ARfD was not deemed necessary for triasulfuron. As the calculated intakes are all below the toxicological reference values, it is concluded that the proposed MRLs are not of concern for the European consumer.

An overview of the resulting MRL recommendations is included in the table below. In view of the future need to set MRLs for feed items, tentative MRLs are also derived for cereal straw which might be included in Annex I to Regulation (EC) No 396/2005. As all the proposed MRLs are fully supported by data, they are recommended for inclusion in Annex II to Regulation (EC) No 396/2005.

Specific areas of concern or data gaps were not identified in the framework of this review but it is noted that for enforcement of triasulfuron in plant commodities a more suitable analytical method might be available than the one reported in this opinion. If considered necessary, procedures and timelines for evaluation of this additional method should be agreed between the Commission, Member States and EFSA.

Overview of the recommended EC MRLs

Commodity	Existing EC MRL (mg/kg)	Proposed EC MRL (mg/kg)	Justification for the proposal
Residue definition for enforcement: triasulfuron			
Barley grain	0.05*	0.01*	The proposed MRLs are sufficiently supported by data and no risk to consumers is identified. Recommended for inclusion in Annex II.
Oats grain	0.05*	0.01*	
Rye grain	0.05*	0.01*	
Wheat grain	0.05*	0.01*	
Barley straw	-	0.05	
Oats straw	-	0.05	
Rye straw	-	0.05	
Wheat straw	-	0.05	
Other products of plant origin	see Appendix C	-	No recommendation as there are no authorized uses, import tolerances or CXLs.
Products of animal origin	-	-	No recommendation as the residues intake by livestock is insignificant.

(*): Indicates that the MRL is set at the limit of analytical quantification.

Key words: triasulfuron, MRL review, Regulation (EC) No 396/2005, consumer risk assessment, triazinylsulfonylurea herbicides

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BACKGROUND

Regulation (EC) No 396/2005 establishes the rules governing the setting as well as the review of pesticide MRLs at Community level. Article 12(2) of that regulation lays down that EFSA shall provide by 01 September 2009 a reasoned opinion on the review of the existing MRLs for all active substances included in Annex I to Directive 91/414/EEC before 02 September 2008.

According to Article 12(1) of the Regulation, 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 in the framework of Directive 91/414/EEC only a few representative uses are evaluated while MRLs set out in Regulation (EC) No 396/2005 should accommodate for all uses authorised within the EC as well as uses authorised in third countries having a significant impact on international trade. The information included in the assessment report prepared under Directive 91/414/EEC is therefore insufficient for the assessment of all existing MRLs for a given active substance.

In order to have an overview on the pesticide residues data that have been considered for the setting of the MRLs under the former MRL legislation, EFSA developed the Pesticide Residue Overview File (PROFile). The PROFile is an electronic inventory of all pesticide residues data relevant to the risk assessment as well as the 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.

As triasulfuron was included in Annex I to Directive 91/414/EEC on 01 August 2001, EFSA initiated the review of all existing MRLs for that active substance and a self-task with the reference number EFSA-Q-2008-641 was included in the EFSA Register of Question.

France, the designated Rapporteur Member State (RMS) in the framework of Directive 91/414/EEC, was asked to complete the PROFile for triasulfuron. The completed PROFile was submitted to EFSA on 20 October 2008 and subsequently checked for completeness. On 12 February 2009, after having clarified some issues with the RMS, the PROFile was considered complete for assessment.

Based on the PROFile, EFSA prepared a draft reasoned opinion which was circulated to Member States (MS) for commenting on 06 March 2009. All MS comments received by 03 April 2009 were considered by EFSA for finalization of the reasoned opinion.

TERMS OF REFERENCE

According to Article 12(1) 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.

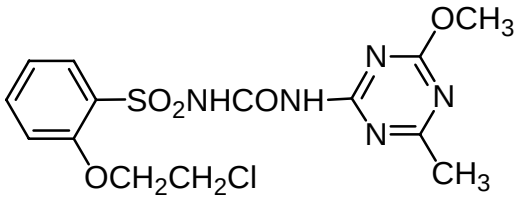
According to Article 12(2) of that Regulation, the reasoned opinion shall be provided within 12 months of the entry into force of this regulation. As the Regulation entered into force on 02 September 2008, the calculated deadline for providing the reasoned opinion is 01 September 2009.

ACKNOWLEDGEMENTS

The European Food Safety Authority wishes to thank the Rapporteur Member State France for the good collaboration as well as the completion of the PROFile.

THE ACTIVE SUBSTANCE AND ITS USE PATTERN

Triasulfuron is the ISO common name for 1-[2-(2-chloroethoxy)phenylsulfonyl]-3-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)urea (IUPAC).



Triasulfuron belongs to the class of triazinylsulfonylurea herbicides. It is a selective herbicide which is absorbed by the leaves and the roots and rapidly translocated to the meristems. It inhibits the biosynthesis of essential amino acids, hence stopping the cell division and plant growth. Its selectivity depends on the rapidity of metabolism in the crop.

Triasulfuron was evaluated in the framework of Directive 91/414/EEC in stage 1 with France being the designated Rapporteur Member State (RMS). The representative uses supported for the peer review process were post-emergence outdoor applications in cereals with application rates up to 7.5 g a.s./ha (growth stage BBCH 32 at the latest). The uses were supported for both the Northern and Southern European region. Following the peer review a decision on inclusion of the active substance in Annex I to Directive 91/414/EEC was taken and published in Directive 2000/66/EC. The Annex I inclusion entered into force on 01 August 2001. Following this Annex I inclusion, Member States were granted a period of 4 years to review their national authorizations in accordance with the uniform principles of Annex VI. Particular attention was requested for the protection of groundwater as well as the impact on aquatic organisms.

EC MRLs for triasulfuron in products of plant origin have been set for the first time in 2002 by means of Directive 2002/97/EC. These MRLs were based on the uses authorised within the EC at that time and are still valid since they were transferred to Annex II of Regulation (EC) No 396/2005 without any amendments. Additional MRLs for commodities that were not covered by the former European MRL legislation are established in Annex III B of the Regulation. These temporary MRLs were derived from the MRLs that have been set at national level before the Regulation entered into force. All existing EC MRLs for triasulfuron are summarized in Appendix C to this document. There are no CXLs for triasulfuron.

For the purpose of this MRL review the critical uses of triasulfuron currently authorized within the EC have been reported by the RMS. A detailed overview of the critical GAPs is available in Appendix A to this document. They include a post-emergence outdoor application in several cereal crops with application rates up to 7.5 g a.s./ha in Northern Europe and up to 11 g a.s./ha in Southern Europe. The application is carried out at growth stage BBCH 32 at the latest. As the deadline for review of national authorizations in the framework of Directive 91/414/EEC already expired, these GAPs are not expected in the near future to be subject to a national review.

ASSESSMENT

1. Methods of analysis

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

The RMS reported that several analytical methods are available for triasulfuron in plant commodities. The main analytical method referenced by the RMS is based on HPLC with UV detection and sufficiently validated for determination of triasulfuron in cereal grains (dry commodities) as well as cereal straw. The LOQ derived for triasulfuron in dry commodities and straw amounts to 0.01 mg/kg.

During the consultation of Member States, Germany highlighted that the analytical method reported by the RMS is too extensive and that the multiresidue method EN15637 (ChemElut) would be more appropriate for enforcement of triasulfuron in dry commodities. As the validation data for this method has never been evaluated by the RMS under the former pesticide residues legislation, it was not yet possible to conclude on the validity of this analytical method. Procedures and timelines for evaluation of this additional method should therefore be agreed between the Commission, Member States and EFSA.

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

As the dietary burden of livestock resulting from triasulfuron residues is not significant (see also section 3.2.1) an analytical method for enforcement of residues in animal commodities is normally not required.

Nevertheless, an analytical method based on HPLC with UV detection was reported by the RMS and is sufficiently validated for determination of triasulfuron in meat, fat, liver, milk and eggs. The derived LOQ amounts to 0.01 mg/kg in milk and to 0.05 mg/kg in meat, fat, liver and eggs.

2. Mammalian toxicology

The toxicological assessment of triasulfuron was peer reviewed under Directive 91/414/EEC and toxicological reference values were published by the European Commission (2000). These toxicological reference values are summarized in the table below.

Table 2-1. **Overview of the toxicological reference values**

	Source	Year	Value (mg/kg bw/d)	Study relied upon	Safety factor
Triasulfuron					
ADI	COM	2000	0.01	2 year oral mouse study	100
ARfD	COM	2000	n.n.	-	-

n.n. not necessary

3. Residues

3.1. Nature and magnitude of residues in plant

3.1.1. Primary crops

3.1.1.1. Nature of residues

According to the PROFile submitted by the RMS a representative metabolism study is available for foliar treatments in cereals. The relevant residue for enforcement and risk assessment in cereals can be defined as the parent compound only. As triasulfuron is only authorized for use in cereal crops, further plant metabolism studies are not required and there is no need to propose a general residue definition for all plant commodities.

A valid analytical method for enforcement of the proposed residue definition is also available (see section 1.1).

3.1.1.2. Magnitude of residues

Supervised residues field trials supporting the authorized GAPs for cereals were reported by the RMS. The results of the residues trials are summarized in Table 3-1. In general, it is noted that the residues trials were overdosed compared to the authorized GAPs and that a low number of residues trials are available for Southern Europe, in particular for wheat straw. However, this is considered acceptable as all residue levels were below the LOQ.

Storage stability of triasulfuron was demonstrated for a period of 24 months at -15 °C in dry commodities and in straw, hereby covering all cereal crops evaluated in the framework of this review. As all the residues trial samples were stored in accordance with these conditions, degradation of residues during storage of the trial samples is not expected.

Consequently, the available residues data are considered sufficient to derive MRL proposals as well as risk assessment values for all commodities under evaluation (see also Table 3-1). In view of the future need to set MRLs for feed items, tentative MRLs are also derived for cereal straw which might be included in Annex I to Regulation (EC) No 396/2005.

Table 3-1. **Overview of the available residues trials data**

Commodity	Region [(a)]	Outdoor /Indoor	Individual trial results (mg/kg)		STMR (mg/kg) [(b)]	HR (mg/kg) [(c)]	MRL proposal (mg/kg)	Median CF [(d)]	Comments
			Enforcement	Risk assessment					
Residue definition for enforcement and risk assessment: triasulfuron									
Barley grain Oats grain Rye grain Wheat grain	NEU	Outdoor	15 x <0.01	15 x <0.01	0.01	0.01	0.01*	1.0	- Combined dataset on barley (6), rye (2) and wheat (7) with application rates of 15 g a.s./ha. Overdosed trials are considered acceptable as residues are below the LOQ. - 7 confirmatory trials on barley (2) and wheat (5) with residues <0.02 mg/kg.
	SEU	Outdoor	3 x <0.01	3 x <0.01	0.01	0.01	0.01*	1.0	- Trials performed on wheat with application rates of 15 g a.s./ha. Overdosed trials considered acceptable as residues below LOQ. - 2 confirmatory trials on wheat with residues <0.02 mg/kg.
Barley straw Oats straw Rye straw Wheat straw	NEU	Outdoor	2 x <0.01; 4 x <0.02; 10 x <0.04	2 x <0.01; 4 x <0.02; 10 x <0.04	0.04	0.04	0.05	1.0	Combined dataset on barley (7), rye (2) and wheat (7) with application rates of 15 g a.s./ha. Overdosed trials are considered acceptable as residues are below the LOQ.

Commodity	Region (a)	Outdoor /Indoor	Individual trial results (mg/kg)		STMR (mg/kg) (b)	HR (mg/kg) (c)	MRL proposal (mg/kg)	Median CF (d)	Comments
			Enforcement	Risk assessment					
	SEU	Outdoor	2 x <0.01; 4 x <0.02; 10 x <0.04	2 x <0.01; 4 x <0.02; 10 x <0.04	0.04	0.04	0.05	1.0	- Results obtained in NEU were used for SEU as the trials were overdosed and all results were below the LOQ. - Confirmatory trials in US and Brazil with residues <0.02 mg/kg.

(*): Indicates that the MRL is set at the limit of analytical quantification.
(a): NEU, SEU, EU or Import (country code). In the case of indoor uses there is no necessity to differentiate between NEU and SEU.
(b): Median value of the individual trial results according to the enforcement residue definition.
(c): Highest value of the individual trial results according to the enforcement residue definition.
(d): The median conversion factor for enforcement to risk assessment is obtained by calculating the median of the individual conversion factors for each residues trial. The individual conversion factor for each trial is defined as the ratio of the trial result according to the risk assessment residue definition and the result according to the enforcement residue definition.

3.1.1.3. Effect of industrial processing and/or household preparation

As quantifiable residues of triasulfuron are not expected in cereal grains, there is no need to investigate the effect of industrial and/or household processing from a risk assessment point of view.

Although not required, the RMS still reported 5 processing studies for barley flour, barley bran, barley pot, wheat flour and wheat bran. The available processing studies for wheat are also applicable to rye considering the morphological similarities between both cereal species. Residue definitions in these processed commodities are considered the same as for the raw agricultural commodities because the processes do not involve heating or hydrolytic steps. The derived processing factors demonstrate that concentration of residues in the processed commodities is not expected. This is of particular importance for the livestock dietary burden calculation where a processing factor of 1 can be used for wheat bran and rye bran instead of the default factor of 8.

For enforcement purposes, however, processing factors cannot be recommended as residue levels in both raw and processed commodities were below the LOQ. Moreover, only 1 study is available for each type of processing.

Table 3-2. **Overview of the available processing studies**

Processed commodity	Number of studies	Median PF [(a)]	Median CF [(b)]	Comments
Residue definition for enforcement and risk assessment: triasulfuron				
Barley, whole-meal flour	1	1.00	1.0	Proposed processing factors cannot be recommended for enforcement purposes as only 1 study is available for each type of processing and residue levels in both raw and processed commodities were below the LOQ.
Barley, pot/pearl	1	1.00	1.0	
Barley, bran	1	1.00	1.0	
Rye, white flour	1	1.00	1.0	
Rye, bran	1	1.00	1.0	
Wheat, white flour	1	1.00	1.0	
Wheat, bran	1	1.00	1.0	

(a): The median processing factor is obtained by calculating the median of the individual processing factors of each processing study.

(b): The median conversion factor for enforcement to risk assessment is obtained by calculating the median of the individual conversion factors of each processing study. The individual conversion factor for each trial is defined as the ratio of the trial result according to the risk assessment residue definition and the result according to the enforcement residue definition.

3.1.2. Rotational crops

3.1.2.1. Preliminary considerations

The cereal crops evaluated in the framework of this review might be grown in rotation with other crops. During the peer review under Directive 91/414/EEC, it was also demonstrated in several degradation field studies that the DT90 value for triasulfuron may exceed the trigger value of 100 days (European Commission, 2000). A detailed assessment of the nature and magnitude of triasulfuron residues is therefore considered relevant.

3.1.2.2. Nature of residues

The RMS reported in the PROFile a confined rotational crop study with representative crops for the root and tuber vegetables, leafy vegetables, pulses and oilseeds as well as cereals. Based on the available study it was not possible to conclude on the comparability of the metabolic patterns in rotational and primary crops. Nevertheless, specific residue definitions for rotational crops were not considered necessary because TRR levels in all rotational crops were very low, even after high application rates.

3.1.2.3. Magnitude of residues

Considering the confined rotational crop study, the total residue of triasulfuron in rotational crops is not expected to exceed 0.01 mg/kg.

3.2. Nature and magnitude of residues in livestock

3.2.1. Dietary burden in livestock

Both cereal grains and cereal straw might be fed to livestock. The dietary burden for the different types of livestock was therefore calculated using the EFSA livestock dietary burden calculator. The input values for the calculation are summarized in Table 3-4. For cereal grain and bran the STMR was used for calculating the maximum dietary burden as these commodities are considered to be bulked.

According to the results of the calculations reported in Table 3-5, the trigger value of 0.1 mg/kg DM is not exceeded for any of the relevant livestock species. Further investigation of triasulfuron residues in commodities of animal origin is therefore not required.

Table 3-4. **Input values for the dietary burden calculation**

Commodity	Median dietary burden		Maximum dietary burden	
	Input value (mg/kg)	Comment	Input value (mg/kg)	Comment
Residue definition for risk assessment: triasulfuron				
Barley grain	0.01	STMR	0.01	STMR
Oats grain	0.01	STMR	0.01	STMR
Rye grain	0.01	STMR	0.01	STMR
Wheat grain	0.01	STMR	0.01	STMR
Rye bran	0.01	STMR*PF	0.01	STMR*PF
Wheat bran	0.01	STMR*PF	0.01	STMR*PF
Barley straw	0.04	STMR	0.04	HR
Oats straw	0.04	STMR	0.04	HR
Rye straw	0.04	STMR	0.04	HR
Wheat straw	0.04	STMR	0.04	HR

Table 3-5. **Results of the dietary burden calculation**

	Maximum dietary burden (mg/kg bw/d)	Median dietary burden (mg/kg bw/d)	Highest contributing commodity	Max dietary burden (mg/kg DM)	Trigger exceeded ?
Residue definition for risk assessment: triasulfuron					
Dairy ruminants	0.00051	0.00051	Wheat straw	0.01	No
Meat ruminants	0.00125	0.00125	Wheat straw	0.03	No
Poultry	0.00051	0.00051	Wheat grain	0.01	No
Pigs	0.00037	0.00037	Wheat grain	0.01	No

3.2.2. Nature of residues

Although not required, the RMS reported in the PROFile that livestock metabolism studies are available for ruminants and for poultry. It is also concluded by the RMS that ruminant metabolism can be extrapolated to pigs and that it would be possible to propose a general residue definition for all commodities of animal origin, provided that there is a significant intake. However, as there is no significant intake, residue definitions were not proposed by the RMS.

3.2.3. Magnitude of residues

As there is no significant intake by the different types of livestock, residues in livestock commodities are not expected and there is no need to propose MRLs for commodities of animal origin.

4. Consumer risk assessment

Chronic intake calculations considering the MRLs proposed in the framework of this review were performed using revision 2 of the EFSA PRIMo. The input values for the proposed MRLs are summarized in Table 4-1. The contributions of other commodities, for which MRLs are currently established at the LOQ, were not included in the calculation. Acute intake calculations were not conducted as an ARfD for triasulfuron was not deemed necessary.

Detailed results of the chronic intake calculations are reported in Appendix B to this document. For all European diets chronic exposure represented less than 1% of the ADI. As the calculated intakes are all below the toxicological reference values, it can be concluded that the supported uses are not of concern for the European consumer.

Table 4-1. **Input values for the consumer risk assessment**

Commodity	Chronic risk assessment		Acute risk assessment	
	Input value (mg/kg)	Comment	Input value (mg/kg)	Comment
Residue definition for risk assessment: triasulfuron				
Barley grain	0.01	STMR	n.n.	-

Commodity	Chronic risk assessment		Acute risk assessment	
	Input value (mg/kg)	Comment	Input value (mg/kg)	Comment
Oats grain	0.01	STMR	n.n.	-
Rye grain	0.01	STMR	n.n.	-
Wheat grain	0.01	STMR	n.n.	-

n.n. not necessary

CONCLUSIONS AND RECOMMENDATIONS

Article 12(2) of Regulation (EC) No 396/2005 lays down that EFSA shall provide by 01 September 2009 a reasoned opinion on the review of the existing MRLs for triasulfuron as this active substance was included in Annex I to Directive 91/414/EEC before 02 September 2008. In order to collect the pesticide residues data supporting the existing MRLs for that active substance, EFSA asked France, as the designated Rapporteur Member State, to complete the Pesticide Residue Overview File (PROFile). The completed PROFile was submitted to EFSA on 20 October 2008. Based on the information provided in the PROFile, EFSA derives the following conclusions and recommendations.

Metabolism was sufficiently investigated for foliar treatments in cereals and the relevant residue for enforcement and risk assessment in both cereal grains and cereal straw is defined as triasulfuron. A valid analytical method for the enforcement of this residue definition with an LOQ of 0.01 mg/kg is also available. As triasulfuron is only authorized for use in cereal crops, the proposed residue definition covers all crops evaluated in the framework of this review. Additionally, a sufficient number of supervised residues trials supporting the authorized GAPs for triasulfuron is available. These trials allow EFSA to estimate the expected residue concentrations in the relevant plant commodities and to derive appropriate MRLs.

As quantifiable residues of triasulfuron are not expected in cereal grains, there is no need to investigate the effect of industrial and/or household processing. Specific processing factors for enforcement of processed commodities are also not proposed.

According to the RMS, occurrence of triasulfuron residues in rotational crops was investigated but TRR levels were found to be very low, even at high application rates. Significant residues, exceeding 0.01 mg/kg, are therefore not expected.

The dietary burden resulting from the authorised uses of triasulfuron was calculated for each type of livestock. As all the calculated intakes represented less than 0.1 mg/kg DM, significant residues in commodities of animal origin are not expected and MRLs are not proposed.

The chronic exposure of consumers resulting from the proposed MRLs was calculated but acute intake calculations were not undertaken as an ARfD was not deemed necessary for triasulfuron. As the calculated intakes are all below the toxicological reference values, it is concluded that the proposed MRLs are not of concern for the European consumer.

An overview of the resulting MRL recommendations is included in the table below. In view of the future need to set MRLs for feed items, tentative MRLs are also derived for cereal straw which might be included in Annex I to Regulation (EC) No 396/2005. As all the

proposed MRLs are fully supported by data, they are recommended for inclusion in Annex II to Regulation (EC) No 396/2005.

Specific areas of concern or data gaps were not identified in the framework of this review but it is noted that for enforcement of triasulfuron in plant commodities a more suitable analytical method might be available than the one reported in this opinion. If considered necessary, procedures and timelines for evaluation of this additional method should be agreed between the Commission, Member States and EFSA.

Overview of the recommended EC MRLs

Commodity	Existing EC MRL (mg/kg)	Proposed EC MRL (mg/kg)	Justification for the proposal
Residue definition for enforcement: triasulfuron			
Barley grain	0.05*	0.01*	The proposed MRLs are sufficiently supported by data and no risk to consumers is identified. Recommended for inclusion in Annex II.
Oats grain	0.05*	0.01*	
Rye grain	0.05*	0.01*	
Wheat grain	0.05*	0.01*	
Barley straw	-	0.05	
Oats straw	-	0.05	
Rye straw	-	0.05	
Wheat straw	-	0.05	
Other products of plant origin	see Appendix C	-	No recommendation as there are no authorized uses, import tolerances or CXLs.
Products of animal origin	-	-	No recommendation as the residues intake by livestock is insignificant.

(*): Indicates that the MRL is set at the limit of analytical quantification.

DOCUMENTATION PROVIDED TO EFSA

1. Pesticide Residues Overview File (PROFile) on triasulfuron prepared by the Rapporteur Member State France. Submitted to EFSA on 20 October 2009. Updated on 12 February 2009.

REFERENCES

European Commission, 2000. Review report for the active substance triasulfuron finalized in the Standing Committee on Plant Health at its meeting on 12 July 2000 in view of the inclusion of triasulfuron in Annex I of Directive 91/414/EEC. DG SANCO 7589/VI/97-final, 30 November 2000.

APPENDIX A – GOOD AGRICULTURAL PRACTICES (GAPS)

Active substance:	triasulfuron

Critical Outdoor GAPs for Northern Europe

Crop		Region	Outdoor/ Indoor	Member state or Country	Pests controlled	Formulation			Application						Application rate			PHI or waiting period (days)	Comments (max. 250 charachters)
Common name	Scientific name					Type	Content		Method	Growth stage		Number		Interval (days)		Min. rate	Max. rate	Rate Unit	
							Conc.	Unit		From BBCH	Until BBCH	Min.	Max.	Min.	Max.				
Barley	*Hordeum spp.*	NEU	Outdoor	LT	dicotyledoneous				Foliar treatment - spraying		32		1				7.50	g a.i./ha	n.a.	
Oats	*Avena fatua*	NEU	Outdoor	LT	dicotyledoneous				Foliar treatment - spraying		32		1				7.50	g a.i./ha	n.a.	
Rye	*Secale cereale*	NEU	Outdoor	LT	dicotyledoneous				Foliar treatment - spraying		32		1				7.50	g a.i./ha	n.a.	
Wheat	*Triticum aestivum*	NEU	Outdoor	LT	dicotyledoneous				Foliar treatment - spraying		32		1				7.50	g a.i./ha	n.a.	

n.a.: not applicable

Critical Outdoor GAPs for Southern Europe

Crop		Region	Outdoor/ Indoor	Member state or Country	Pests controlled	Formulation			Application						Application rate			PHI or waiting period (days)	Comments (max. 250 charachters)
Common name	Scientific name					Type	Content		Method	Growth stage		Number		Interval (days)		Min. rate	Max. rate	Rate Unit	
							Conc.	Unit		From BBCH	Until BBCH	Min.	Max.	Min.	Max.				
Barley	*Hordeum spp.*	SEU	Outdoor	PT	dicotyledoneous				Foliar treatment - spraying		32		1				11.00	g a.i./ha	n.a.	
Oats	*Avena fatua*	SEU	Outdoor	SI	dicotyledoneous				Foliar treatment - spraying		32		1				8.00	g a.i./ha	n.a.	
Rye	*Secale cereale*	SEU	Outdoor	SI	dicotyledoneous				Foliar treatment - spraying		32		1				8.00	g a.i./ha	n.a.	
Wheat	*Triticum aestivum*	SEU	Outdoor	PT	dicotyledoneous				Foliar treatment - spraying		32		1				11.00	g a.i./ha	n.a.	

n.a.: not applicable

Critical Indoor GAPs for Northern and Southern Europe (incl. post-harvest treatments)

Crop		Region	Outdoor/ Indoor	Member state or Country	Pests controlled	Formulation			Application						Application rate			PHI or waiting period (days)	Comments (max. 250 charachters)
Common name	Scientific name					Type	Content		Method	Growth stage		Number		Interval (days)		Min. rate	Max. rate	Rate Unit	
							Conc.	Unit		From BBCH	Until BBCH	Min.	Max.	Min.	Max.				

n.a.: not applicable

Critical GAPs for Import Tolerances (non-European indoor, outdoor or post-harvest treatments)

Crop		Region	Outdoor/ Indoor	Member state or Country	Pests controlled	Formulation			Application						Application rate			PHI or waiting period (days)	Comments (max. 250 charachters)
Common name	Scientific name					Type	Content		Method	Growth stage		Number		Interval (days)		Min. rate	Max. rate	Rate Unit	
							Conc.	Unit		From BBCH	Until BBCH	Min.	Max.	Min.	Max.				

n.a.: not applicable

APPENDIX B – PESTICIDE RESIDUES INTAKE MODEL (PRIMO)

Triasulfuron			
Status of the active substance:	**Included**	Code no.	
LOQ (mg/kg bw):	0.01	proposed LOQ:	
Toxicological end points			
ADI (mg/kg bw/day):	**0.01**	ARfD (mg/kg bw):	**n.n.**
Source of ADI:	**COM**	Source of ARfD:	**COM**
Year of evaluation:	**2000**	Year of evaluation:	**2000**

Explain choice of toxicological reference values.

The risk assessment has been performed on the basis of the MRLs collected from Member States in April 2006. For each pesticide/commodity the highest national MRL was identified (proposed temporary MRL = pTMRL).
The pTMRLs have been submitted to EFSA in September 2006.

Chronic risk assessment

	TMDI (range) in % of ADI minimum - maximum
	1
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	pTMRLs at LOQ (in % of ADI)
1.0	DK child	0.6	Wheat	0.4	Rye	0.0	Oats	1.0
0.9	WHO Cluster diet B	0.9	Wheat	0.0	Barley	0.0	Rye	0.9
0.7	WHO cluster diet D	0.7	Wheat	0.0	Rye	0.0	Barley	0.7
0.7	IT kids/toddler	0.7	Wheat	0.0	Barley	0.0	Oats	0.7
0.5	WHO cluster diet E	0.4	Wheat	0.1	Barley	0.0	Rye	0.5
0.5	DE child	0.4	Wheat	0.1	Rye	0.0	Oats	0.5
0.5	WHO Cluster diet F	0.4	Wheat	0.1	Rye	0.1	Barley	0.5
0.5	NL child	0.5	Wheat	0.0	Rye	0.0	Oats	0.5
0.4	ES child	0.4	Wheat	0.0	Barley		FRUIT (FRESH OR FROZEN)	0.4
0.4	IT adult	0.4	Wheat	0.0	Barley	0.0	Oats	0.4
0.4	PT General population	0.4	Wheat	0.0	Rye	0.0	Barley	0.4
0.4	UK Toddler	0.4	Wheat	0.0	Oats	0.0	Barley	0.4
0.4	IE adult	0.2	Wheat	0.1	Barley	0.0	Oats	0.4
0.3	SE general population 90th percentile	0.3	Wheat	0.0	Rye		FRUIT (FRESH OR FROZEN)	0.3
0.3	WHO regional European diet	0.3	Wheat	0.0	Barley	0.0	Oats	0.3
0.3	FR all population	0.3	Wheat	0.0	Barley		FRUIT (FRESH OR FROZEN)	0.3
0.3	UK Infant	0.3	Wheat	0.0	Oats		FRUIT (FRESH OR FROZEN)	0.3
0.3	ES adult	0.2	Wheat	0.0	Barley		FRUIT (FRESH OR FROZEN)	0.3
0.3	DK adult	0.2	Wheat	0.1	Rye	0.0	Oats	0.3
0.3	FR toddler	0.3	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	0.3
0.3	NL general	0.2	Wheat	0.0	Barley	0.0	Rye	0.3
0.2	LT adult	0.1	Rye	0.1	Wheat	0.0	Oats	0.2
0.2	UK vegetarian	0.2	Wheat	0.0	Oats	0.0	Barley	0.2
0.2	FI adult	0.1	Wheat	0.1	Rye	0.0	Oats	0.2
0.2	UK Adult	0.2	Wheat	0.0	Barley	0.0	Oats	0.2
0.1	FR infant	0.1	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	0.1
	PL general population		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	

Conclusion:

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

Acute risk assessment /children					Acute risk assessment / adults / general population				
Acute risk assessment is not necessary.									
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.									
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.									
In the **IESTI 2** calculations, the variability factors of 10 and 7 were replaced by 5. For lettuce the calculation was performed with a variabilty factor of 3.									
Threshold MRL is the calculated residue level which would leads to an exposure equivalent to 100 % of the ARfD.									
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**	***)**	****)**	**IESTI 2**	***)**
	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
	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:**				
			*****)**						*****)**		
	Highest % of ARfD/ADI	Processed commodities	pTMRL/ threshold MRL (mg/kg)				Highest % of ARfD/ADI	Processed commodities	pTMRL/ threshold MRL (mg/kg)		
*) 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.											
**) pTMRL: provisional temporary MRL											
***) pTMRL: provisional temporary MRL for unprocessed commodity											
Conclusion:											
As no ARfD was considered necessary, it is concluded that the short-term intake of Triasulfuron residues is unlikely to present a pulbic health concern.											

APPENDIX C – EXISTING EC MRLS

Pesticides - Web Version - EU MRLs (File created on 27/03/2009 16:07)		
Code number	**Groups and examples of individual products to which the MRLs apply (a)**	**Triasulfuron**
100000	1. FRUIT FRESH OR FROZEN; NUTS	0,05*
110000	(i) Citrus fruit	0,05*
110010	Grapefruit (Shaddocks, pomelos, sweeties, tangelo, ugli 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*
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 cloudberries)	0,05*
153030	Raspberries (Wineberries)	0,05*
153990	Others	0,05*
154000	(d) Others 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 (mediterranean medlar)	0,05*
154080	Elderberries (Black chokeberry (apple berry), mountain ash, azarole, buckthorn (sea buckthorn), hawthorn, service berries, and other tree berries)	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*
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	0,05*
210000	(i) Root and tuber vegetables	0,05*
211000	(a) Potatoes	0,05*
212000	(b) Tropical root and tuber vegetables	0,05*
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	0,05*
213010	Beetroot	0,05*
213020	Carrots	0,05*
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 (Scorzonera, Spanish salsify (Spanish oyster plant))	0,05*
213100	Swedes	0,05*
213110	Turnips	0,05*
213990	Others	0,05*
220000	(ii) Bulb vegetables	0,05*
220010	Garlic	0,05*
220020	Onions (Silverskin onions)	0,05*
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*
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	0,05*
241000	(a) Flowering brassica	0,05*
241010	Broccoli (Calabrese, Chinese broccoli, Broccoli raab)	0,05*
241020	Cauliflower	0,05*
241990	Others	0,05*
242000	(b) Head brassica	0,05*
242010	Brussels sprouts	0,05*
242020	Head cabbage (Pointed head cabbage, red cabbage, savoy cabbage, white cabbage)	0,05*
242990	Others	0,05*
243000	(c) Leafy brassica	0,05*
243010	Chinese cabbage (Indian (Chinese) mustard, pak choi, Chinese flat cabbage (tai goo choi), peking cabbage (pe-tsai), cow cabbage)	0,05*
243020	Kale (Borecole (curly kale), collards)	0,05*
243990	Others	0,05*
244000	(d) Kohlrabi	0,05*
250000	(v) Leaf vegetables & fresh herbs	0,05*
251000	(a) Lettuce and other salad plants including Brassicacea	0,05*
251010	Lamb's lettuce (Italian corn salad)	0,05*
251020	Lettuce (Head lettuce, lollo rosso (cutting lettuce), iceberg lettuce, romaine (cos) lettuce)	0,05*
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 h)	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, pepper mint)	0,05*
256090	Bay leaves (laurel)	0,05*
256100	Tarragon (Hyssop)	0,05*
256990	Others	0,05*
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, Flageolets, jack bean, lima bean, cow pea)	0,05*
260030	Peas (with pods) (Mangetout (sugar peas))	0,05*
260040	Peas (without pods) (Garden pea, green pea, chick pea)	0,05*
260050	Lentils	0,05*
260990	Others	0,05*
270000	(vii) Stem vegetables (fresh)	0,05*
270010	Asparagus	0,05*
270020	Cardoons	0,05*
270030	Celery	0,05*
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) Seaweeds	0,05*
300000	3. PULSES, DRY	0,05*
300010	Beans (Broad beans, navy beans, flageolets, jack beans, lima beans, field beans, cow peas)	0,05*
300020	Lentils	0,05*
300030	Peas (Chick peas, field peas, chickling vetch)	0,05*
300040	Lupins	0,05*
300990	Others	0,05*
400000	4. OILSEEDS AND OILFRUITS	0,05*
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	Rapeseed (Birdrapeseed, 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	Hemp seed	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 (palm oil kernels)	0,05*
402030	Palm fruit	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	0,1*
610000	(i) Tea (dried leaves and stalks, fermented or otherwise of Camellia sinensis)	0,1*
620000	(ii) Coffee beans	0,1*
630000	(iii) Herbal infusions (dried)	0,1*
631000	(a) Flowers	0,1*
631010	Camomille flowers	0,1*
631020	Hybiscus flowers	0,1*
631030	Rose petals	0,1*
631040	Jasmine flowers	0,1*
631050	Lime (linden)	0,1*
631990	Others	0,1*
632000	(b) Leaves	0,1*
632010	Strawberry leaves	0,1*
632020	Rooibos leaves	0,1*
632030	Maté	0,1*
632990	Others	0,1*
633000	(c) Roots	0,1*
633010	Valerian root	0,1*
633020	Ginseng root	0,1*
633990	Others	0,1*
639000	(d) Other herbal infusions	0,1*
640000	(iv) Cocoa (fermented beans)	0,1*
650000	(v) Carob (st johns bread)	0,1*
700000	7. HOPS (dried), including hop pellets and unconcentrated powder	0,1*
800000	8. SPICES	0,1*
810000	(i) Seeds	0,1*
810010	Anise	0,1*
810020	Black caraway	0,1*
810030	Celery seed (Lovage seed)	0,1*
810040	Coriander seed	0,1*
810050	Cumin seed	0,1*
810060	Dill seed	0,1*
810070	Fennel seed	0,1*
810080	Fenugreek	0,1*
810090	Nutmeg	0,1*
810990	Others	0,1*
820000	(ii) Fruits and berries	0,1*
820010	Allspice	0,1*
820020	Anise pepper (Japan pepper)	0,1*
820030	Caraway	0,1*
820040	Cardamom	0,1*
820050	Juniper berries	0,1*
820060	Pepper, black and white (Long pepper, pink pepper)	0,1*
820070	Vanilla pods	0,1*
820080	Tamarind	0,1*
820990	Others	0,1*
830000	(iii) Bark	0,1*
830010	Cinnamon (Cassia)	0,1*
830990	Others	0,1*
840000	(iv) Roots or rhizome	0,1*
840010	Liquorice	0,1*
840020	Ginger	0,1*
840030	Turmeric (Curcuma)	0,1*
840040	Horseradish	0,1*
840990	Others	0,1*
850000	(v) Buds	0,1*
850010	Cloves	0,1*
850020	Capers	0,1*
850990	Others	0,1*
860000	(vi) Flower stigma	0,1*
860010	Saffron	0,1*
860990	Others	0,1*
870000	(vii) Aril	0,1*
870010	Mace	0,1*
870990	Others	0,1*
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	
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	
1011000	(a) Swine	
1011010	Meat	
1011020	Fat free of lean meat	
1011030	Liver	
1011040	Kidney	
1011050	Edible offal	
1011990	Others	
1012000	(b) Bovine	
1012010	Meat	
1012020	Fat	
1012030	Liver	
1012040	Kidney	
1012050	Edible offal	
1012990	Others	
1013000	(c) Sheep	
1013010	Meat	
1013020	Fat	
1013030	Liver	
1013040	Kidney	
1013050	Edible offal	

1013990	Others	
1014000	(d) Goat	
1014010	Meat	
1014020	Fat	
1014030	Liver	
1014040	Kidney	
1014050	Edible offal	
1014990	Others	
1015000	(e) Horses, asses, mules or hinnies	
1015010	Meat	
1015020	Fat	
1015030	Liver	
1015040	Kidney	
1015050	Edible offal	
1015990	Others	
1016000	(f) Poultry - chicken, geese, duck, turkey and Guinea fowl-, ostrich, pigeon	
1016010	Meat	
1016020	Fat	
1016030	Liver	
1016040	Kidney	
1016050	Edible offal	
1016990	Others	
1017000	(g) Other farm animals (Rabbit, Kangaroo)	
1017010	Meat	
1017020	Fat	
1017030	Liver	
1017040	Kidney	
1017050	Edible offal	
1017990	Others	
1020000	(ii) Milk and cream, not concentrated, nor containing added sugar or sweetening matter, butter and other fats derived from milk, cheese and curd	
1020010	Cattle	
1020020	Sheep	
1020030	Goat	
1020040	Horse	
1020990	Others	
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	
1030010	Chicken	
1030020	Duck	
1030030	Goose	
1030040	Quail	
1030990	Others	
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

GLOSSARY / ABBREVIATIONS

a.s.	active substance
ADI	acceptable daily intake
ARfD	acute reference dose
BBCH	Federal Biological Research Centre for Agriculture and Forestry (Germany)
bw	body weight
CF	conversion factor for enforcement residue definition to risk assessment residue definition
CXL	codex maximum residue limit
d	day
DM	dry matter
dPF	default processing factor - 1 for silage, 2.5 for fruit pomace, 1 for hay, 8 for bran, 2 for press cake of oilseeds with 50% oil content and 1.3 for press cake of oil seeds with 20% oil content
DT_{90}	period required for 90 percent dissipation (define method of estimation)
EC	European Community
EFSA	European Food Safety Authority
EU	European union
GAP	good agricultural practice
ha	hectare
hL	hectolitre
HPLC	high performance liquid chromatography
HR	highest residue
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry
LOQ	limit of quantification
MRL	maximum residue limit
MS	Member States
NEU	Northern European Union
PF	processing factor
PHI	pre harvest interval
PRIMo	Pesticide Residues Intake Model
RMS	Rapporteur Member State
SEU	Southern European Union
STMR	supervised trials median residue
TRR	total radioactive residue

UVD	ultra-violet detection