



EUROPEAN COMMISSION  
HEALTH & CONSUMER PROTECTION DIRECTORATE-GENERAL

Safety of the food chain  
**Chemicals, contaminants, pesticides**

**SANCO/12483/2014– rev. 2**  
**12 December 2014**

## **Template to be used for the List of Endpoints**

This document has been conceived as a guidance document of the Commission Services. It does not represent the official position of the Commission. It does not intend to produce legally binding effects. Only the European Court of Justice has jurisdiction to give preliminary rulings concerning the validity and interpretation of acts of the institutions of the EU pursuant to Article 267 of the Treaty.

### Revision history

When	What
Rev. 1 of 12.12.2014	The template for the List of Endpoints for the microorganisms has been added.

## **Contents**

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## Background

This template for the List of Endpoints reflects the new data requirements for active substances and plant protection products as set out in Commission Regulations (EU) No 283/2013 and 284/2013 of 1 March 2013, in accordance with Regulation (EC) No 1107/2009 of the European Parliament and of the Council concerning the placing of plant protection products on the market

This template should be used in conjunction with the

- TEMPLATE TO BE USED FOR ASSESSMENT REPORTS (SANCO/12592/2012)
- TEMPLATE TO BE USED FOR ASSESSMENT REPORTS REGARDING LEVEL 3 OF VOLUME 1 (SANCO/11114/2012).

It is envisaged that there will be a general review of the templates for the List of Endpoints within the next years.

## Implementation schedule

This document as regards the list of endpoints for chemical active substances has been finalised in the Standing Committee on Plants, Animals, Food and Feed on 11 July 2014. The list of endpoints for microorganisms has been finalised in the Standing Committee on Plants, Animals, Food and Feed on 12 December 2014.

This template should be used for assessment reports prepared for active substances for which an application for the approval or renewal of approval has been submitted as from 1 March 2015.

Preferably these templates should also be used for assessment reports for all active substances (chemicals as well as microorganisms):

- For which an application for approval has been submitted after 1 January 2014 (i.e. an application according to the data requirements as laid down in Regulation (EU) No 283/2013 and No 284/2013),
- covered by Commission Regulation (EU) No 844/2012 *setting out the provisions necessary for the implementation of the renewal procedure for active substances, as provided for in Regulation (EC) No 1107/2009 of the European Parliament and of the Council concerning the placing of plant protection products on the market* for which an application for the renewal of approval has been submitted before 1 March 2015.

## List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
UK	March 2019	Isoflucypram

### Section 1 Identity, Physical and Chemical Properties, Details of Uses, Further Information, Methods of Analysis

#### Identity, Physical and Chemical Properties, Details of Uses, Further Information (Regulation (EU) N° 283/2013, Annex Part A, points 1.3 and 3.2)

Active substance (ISO Common Name)	Isoflucypram (ISO provisionally approved)
Function (e.g. fungicide)	
Rapporteur Member State	United Kingdom
Co-rapporteur Member State	France

#### Identity (Regulation (EU) N° 283/2013, Annex Part A, point 1)

Chemical name (IUPAC)	N-(5-chloro-2-isopropylbenzyl)-N-cyclopropyl-3-(difluoromethyl)-5-fluoro-1-methyl-1H-pyrazole-4-carboxamide
Chemical name (CA)	N-[[5-chloro-2-(1-methylethyl)phenyl]methyl]-N-cyclopropyl-3-(difluoromethyl)-5-fluoro-1-methyl-1H-pyrazole-4-carboxamide 1H-Pyrazole-4-carboxamide, N-[[5-chloro-2-(1-methylethyl)phenyl]methyl]-N-cyclopropyl-3-(difluoromethyl)-5-fluoro-1-methyl- (CAS index name)
CIPAC No	not allocated
CAS No	1255734-28-1
EC No (EINECS or ELINCS)	not allocated
FAO Specification (including year of publication)	-
Minimum purity of the active substance as manufactured	960 g/kg

## List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
UK	March 2019	Isoflucypram

### Section 1 Identity, Physical and Chemical Properties, Details of Uses, Further Information, Methods of Analysis

Identity of relevant impurities (of toxicological, ecotoxicological and/or environmental concern) in the active substance as manufactured

#### **BCS-CN45153**

**IUPAC name:** N-cyclopropyl-3-(difluoromethyl)-5-fluoro-N-(2-isopropylbenzyl)-1-methyl-1H-pyrazole-4-carboxamide

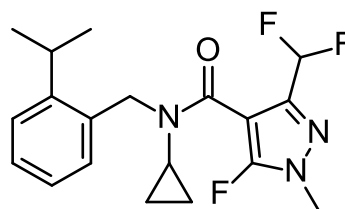
**CA name:** N-cyclopropyl-3-(difluoromethyl)-5-fluoro-1-methyl- N-[[2-(1-methylethyl)phenyl]methyl]-1H-pyrazole-4-carboxamide

**CAS index name:** 1H-Pyrazole-4-carboxamide, N-cyclopropyl-3-(difluoromethyl)-5-fluoro-1-methyl-N-[[2-(1-methylethyl)phenyl]methyl]

**CAS No.:** 1255733-83-5

**Molecular formula:** C<sub>19</sub> H<sub>22</sub> F<sub>3</sub> N<sub>3</sub> O

**Structural formula:**



**Molecular mass:** 369.39 g/mol

**Maximum content:** 1.0 g/kg

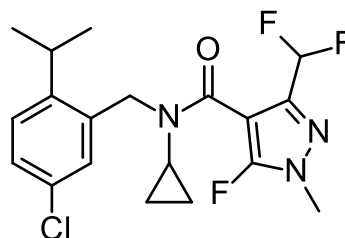
Molecular formula

C<sub>19</sub> H<sub>21</sub> Cl F<sub>3</sub> N<sub>3</sub> O

Molar mass

399.84 g/mol

Structural formula



## List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
UK	March 2019	Isoflucypram

### Section 1 Identity, Physical and Chemical Properties, Details of Uses, Further Information, Methods of Analysis

#### Physical and chemical properties (Regulation (EU) N° 283/2013, Annex Part A, point 2)

Melting point (state purity)	108.8 °C (99.1 %)																										
Boiling point (state purity)	No boiling point up to the start of decomposition at 215 °C (99.1%)																										
Temperature of decomposition (state purity)	215-395 °C (99.1 %)																										
Appearance (state purity)	Physical state: powder (99.1 %) Colour: white (99.1 %) Odour: odourless (99.1 %)																										
Vapour pressure (state temperature, state purity)	1.2 x 10 <sup>-7</sup> Pa at 20°C (99.1 %)																										
Henry’s law constant (state temperature)	2.7 x 10 <sup>-5</sup> Pa m <sup>3</sup> mol <sup>-1</sup> (20 °C)																										
Solubility in water (state temperature, state purity and pH)	1.8 mg/L at 20°C (pH 5.8) (99.1 %)																										
Solubility in organic solvents (state temperature, state purity)	<table><tr><th>Solvent</th><th colspan="2">Solubility at 20°C (99.1 %)</th></tr><tr><td>Heptane</td><td colspan="2">1.2 g/L</td></tr><tr><td>Toluene</td><td colspan="2">&gt;260 g/L</td></tr><tr><td>Dichloromethane</td><td colspan="2">&gt;260 g/L</td></tr><tr><td>Methanol</td><td colspan="2">97 g/L</td></tr><tr><td>Acetone</td><td colspan="2">&gt;260 g/L</td></tr><tr><td>Ethyl acetate</td><td colspan="2">&gt;260 g/L</td></tr><tr><td>Dimethylsulfoxide</td><td colspan="2">&gt;260 g/L</td></tr></table>			Solvent	Solubility at 20°C (99.1 %)		Heptane	1.2 g/L		Toluene	>260 g/L		Dichloromethane	>260 g/L		Methanol	97 g/L		Acetone	>260 g/L		Ethyl acetate	>260 g/L		Dimethylsulfoxide	>260 g/L	
Solvent	Solubility at 20°C (99.1 %)																										
Heptane	1.2 g/L																										
Toluene	>260 g/L																										
Dichloromethane	>260 g/L																										
Methanol	97 g/L																										
Acetone	>260 g/L																										
Ethyl acetate	>260 g/L																										
Dimethylsulfoxide	>260 g/L																										
Surface tension (state concentration and temperature, state purity)	68.2 mN/m at 20°C (83 % saturated solution)(99.1 %)																										
Partition coefficient (state temperature, pH and purity)	log P <sub>OW</sub> = 4.0 at 25°C (pH 4 ) (99.1 %) log P <sub>OW</sub> = 4.0 at 25°C (pH 7 ) (99.1 %) log P <sub>OW</sub> = 4.0 at 25°C (pH 9 ) (99.1 %)																										
Dissociation constant (state purity)	No dissociation constant (pKa) observed in the range 1<pH<12																										
UV/VIS absorption (max.) incl. ε (state purity, pH)	<table><tr><th>Solvent</th><th>λ (nm)</th><th>ε (L mol<sup>-1</sup> cm<sup>-1</sup>)</th></tr><tr><td rowspan="2">Methanol</td><td>201</td><td>34779</td></tr><tr><td>217</td><td>22116</td></tr><tr><td rowspan="2">Methanol/buffer pH2</td><td>201</td><td>37165</td></tr><tr><td>217</td><td>22539</td></tr><tr><td>Methanol/buffer pH10</td><td>222</td><td>21432</td></tr></table>			Solvent	λ (nm)	ε (L mol <sup>-1</sup> cm <sup>-1</sup> )	Methanol	201	34779	217	22116	Methanol/buffer pH2	201	37165	217	22539	Methanol/buffer pH10	222	21432								
Solvent	λ (nm)	ε (L mol <sup>-1</sup> cm <sup>-1</sup> )																									
Methanol	201	34779																									
	217	22116																									
Methanol/buffer pH2	201	37165																									
	217	22539																									
Methanol/buffer pH10	222	21432																									
	No absorbance >290 nm																										
Flammability (state purity)	Not flammable (98.6 %)																										
Explosive properties (state purity)	Not Explosive (98.6 %)																										
Oxidising properties (state purity)	Not Oxidising (98.6 %)																										

## List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
UK	March 2019	Isoflucypram

### Section 1 Identity, Physical and Chemical Properties, Details of Uses, Further Information, Methods of Analysis

**Summary of representative uses evaluated, for which all risk assessments needed to be completed (name of active substance or the respective variant)**  
**(Regulation (EU) N° 284/2013, Annex Part A, points 3, 4)**

Crop and/or situation (a)	Member State	Product Name	F G I (b)	Pests or group of pests controlled (c)	Formulation		Application				Application rate per treatment			PHI (days) (l)	Remarks (m)
					Type (d-f)	Conc of a.i. g/kg (i)	Method kind (f-h)	Growth stage and season (j)	Number min max (k)	Interval between applications (min)	Kg a.i./hl min max (g/hl)	Water l/ha min max	Kg a.i./ha min max (*) (g/ha)		
wheat	EU	Isoflucypram EC50	F	<i>Mycosphaerella graminicola</i> , <i>Puccinia recondita</i> , <i>Puccinia striiformis</i> , <i>Pyrenophora tritici-repentis</i>	EC50	50g/L	Foliar spray	BBCH 30-69	1	-	-	100-400	0.075	*	
rye	EU	Isoflucypram EC50	F	<i>Puccinia recondita</i> , <i>Rhynchosporium secalis</i>	EC50	50g/L	Foliar spray	BBCH 30-69	1	-	-	100-400	0.075	*	
triticale	EU	Isoflucypram EC50	F	<i>Mycosphaerella graminicola</i> , <i>Puccinia recondita</i> , <i>Puccinia striiformis</i> , <i>Pyrenophora tritici-repentis</i>	EC50	50g/L	Foliar spray	BBCH 30-69	1	-	-	100-400	0.075	*	
barley	EU	Isoflucypram EC50	F	<i>Rhynchosporium secalis</i> , <i>Pyrenophora teres</i> , <i>Puccinia hordei</i> , <i>Ramularia collo-cygni</i>	EC50	50g/L	Foliar spray	BBCH 30-61	1	-	-	100-400	0.075	*	
oats	EU	Isoflucypram EC50	F	<i>Puccinia coronata</i> , <i>Pyrenophora avenae</i>	EC50	50g/L	Foliar spray	BBCH 30-61	1	-	-	100-400	0.075	*	

## List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
UK	March 2019	Isoflucypram

### Section 1 Identity, Physical and Chemical Properties, Details of Uses, Further Information, Methods of Analysis

- \* For uses where the column „Remarks“ in marked in grey further consideration is necessary. Uses should be crossed out when the notifier no longer supports this use(s).
- (a) For crops, the EU and Codex classification (both) should be taken into account ; where relevant, the use situation should be described (e.g. fumigation of a structure)
  - (b) Outdoor or field use (F), greenhouse application (G) or indoor application (I)
  - (c) e.g. biting and suckling insects, soil born insects, foliar fungi, weeds
  - (d) e.g. wettable powder (WP), emulsifiable concentrate (EC), granule (GR)
  - (e) GCPF Codes – GIFAP Technical Monograph N° 2, 1989
  - (f) All abbreviations used must be explained
  - (g) Method, e.g. high volume spraying, low volume spraying, spreading, dusting, drench
  - (h) Kind, e.g. overall, broadcast, aerial spraying, row, individual plant, between the plant – type of equipment used must be indicated

- (i) g/kg or g/L. Normally the rate should be given for the active substance (according to ISO) and not for the variant in order to compare the rate for same active substances used in different variants (e.g. fluoroxypyr). **In certain cases, where only one variant synthesised, it is more appropriate to give the rate for the variant (e.g. benthiavalicarb-isopropyl).**
- (j) Growth stage at last treatment (BBCH Monograph, Growth Stages of Plants, 1997, Blackwell, ISBN 3-8263-3152-4), including where relevant, information on season at time of application
- (k) Indicate the minimum and maximum number of application possible under practical conditions of use
- (l) The values should be given in g or kg whatever gives the more manageable number (e.g. 200 kg/ha instead of 200 000 g/ha or 12.5 g/ha instead of 0.0125 kg/ha)
- (m) PHI - minimum pre-harvest interval

## List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
UK	March 2019	Isoflucypram

### Section 1 Identity, Physical and Chemical Properties, Details of Uses, Further Information, Methods of Analysis

**Summary of additional intended uses for which MRL applications have been made, that in addition to the uses above, have also been considered in the consumer risk assessment (name of active substance or the respective variant)**

**Regulation (EC) N° 1107/2009 Article 8.1(g)**

**Important note: efficacy, environmental risk and risk to humans by exposure other than via their diet have not been assessed for these uses**

Crop and/or situation (a)	Member State or Country For Import Tolerance	Product name	NEU SEU or G (b)	Pests or Group of pests controlled (c)	Formulation		Application				Application rate per treatment			PHI (days) (m)	Remarks
					Type (d-f)	Conc. a.s.(g/L) (i)	Method/ Kind (g-h)	Timing/ Range of Crop Growth Stages & Season (j)	Number min-max (k)	Minimum Interval between applications (days) (l)	g a.s./hL min-max (l)	Water L/ha min-max	g a.s./ha min-max (l)		
wheat (including Durum wheat and spelt)	n.a.	Isoflucypram (ISY**) EC 50	NEU SEU	<i>Mycosphaerella graminicola</i> , <i>Puccinia recondita</i> , <i>Puccinia striiformis</i> , <i>Pyrenophora tritici-repentis</i>	EC	50	Foliar spray	BBCH 30-69	1	-	18.75 - 75	100-400	75	*	* A Pre-HarvestInterval for use in wheat (including durum wheat and spelt) is not applicable; the timing is defined by the growth stage at application.
rye	n.a.	Isoflucypram (ISY**) EC 50	NEU SEU	<i>Puccinia recondita</i> , <i>Rhynchosporium secalis</i>	EC	50	Foliar spray	BBCH 30-69	1	-	18.75 - 75	100-400	75	*	* A Pre-Harvest-Interval for use in rye is not applicable; the timing is defined by the growth stage at application.
triticale	n.a.	Isoflucypram (ISY**) EC 50	NEU SEU	<i>Mycosphaerella graminicola</i> , <i>Puccinia recondita</i> , <i>Puccinia striiformis</i> , <i>Pyrenophora tritici-repentis</i>	EC	50	Foliar spray	BBCH 30-69	1	-	18.75 - 75	100-400	75	*	* A Pre-HarvestInterval for use in triticale is not applicable; the timing is defined by the growth stage at application.

## List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
UK	March 2019	Isoflucypram

### Section 1 Identity, Physical and Chemical Properties, Details of Uses, Further Information, Methods of Analysis

barley	n.a.	Isoflucypram (ISY**) EC 50	NEU SEU	<i>Rhynchosporium secalis</i> , <i>Pyrenophora teres</i> , <i>Puccinia hordei</i> , <i>Ramularia colloctygni</i>	EC	50	Foliar spray	BBCH 30-61	1	-	18.75 - 75	100-400	75	*	* A Pre-HarvestInterval for use in barley is not applicable; the timing is defined by the growth stage at application.
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Crop and/or situation (a)	Member State or Country For Import Tolerance	Product name	NEU SEU or G (b)	Pests or Group of pests controlled (c)	Formulation		Application				Application rate per treatment			PHI (days) (m)	Remarks
					Type (d-f)	Conc. a.s.(g/L) (i)	Method/ Kind (g-h)	Timing/ Range of Crop Growth Stages & Season (j)	Number min-max (k)	Minimum Interval between applications (days)	g a.s./hL min-max (l)	Water L/ha min-max	g a.s./ha min-max (l)		
oats	n.a.	Isoflucypram (ISY**) EC 50	NEU SEU	<i>Puccinia coronata</i> , <i>Pyrenophora avenae</i>	EC	50	Foliar spray	BBCH 30-61	1	-	18.75 - 75	100-400	75	*	* A Pre-Harvest- Interval for use in oats is not applicable; the timing is defined by the growth stage at application.
wheat (including Durum wheat and spelt)	n.a.	ISY + PTZ** EC 150	NEU SEU	<i>Mycosphaerella graminicola</i> , <i>Puccinia striiformis</i> , <i>Puccinia recondita</i> , <i>Pyrenophora tritici-repentis</i> , <i>Erysiphe graminis</i> , <i>Monographella nivalis</i>	EC	ISY: 50 PTZ:100	Foliar spray	BBCH 30-69	1	-	ISY: 18.75 – 75 PTZ: 37.5-150	100-400	ISY: 75 PTZ: 150	*	* A Pre- HarvestInterval for use in wheat (including durum wheat and spelt) is not applicable; the timing is defined by the growth stage at application.

# List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
UK	March 2019	Isoflucypram

## Section 1 Identity, Physical and Chemical Properties, Details of Uses, Further Information, Methods of Analysis

rye	n.a.	ISY + PTZ** EC 150	NEU SEU	<i>Mycosphaerella graminicola</i> , <i>Puccinia recondita</i> , <i>Pyrenophora tritici-repentis</i> , <i>Rhynchosporium secalis</i> , <i>Erysiphe graminis</i>	EC	ISY: 50 PTZ:100	Foliar spray	BBCH 30-69	1	-	ISY: 18.75 – 75 PTZ: 37.5-150	100-400	ISY: 75 PTZ: 150	*	* A Pre-Harvest-Interval for use in rye is not applicable; the timing is defined by the growth stage at application.
triticale	n.a.	ISY + PTZ** EC 150	NEU SEU	<i>Mycosphaerella graminicola</i> , <i>Puccinia recondita</i> , <i>Pyrenophora tritici-repentis</i> , <i>Rhynchosporium secalis</i> , <i>Erysiphe graminis</i>	EC	ISY: 50 PTZ:100	Foliar spray	BBCH 30-69	1	-	ISY: 18.75 – 75 PTZ: 37.5-150	100-400	ISY: 75 PTZ: 150	*	* A Pre-HarvestInterval for use in triticale is not applicable; the timing is defined by the growth stage at application.

Crop and/or situation (a)	Member State or Country For Import Tolerance	Product name	NEU SEU or G (b)	Pests or Group of pests controlled (c)	Formulation		Application				Application rate per treatment			PHI (days) (m)	Remarks
					Type (d-f)	Conc. a.s.(g/L) (i)	Method/ Kind (g-h)	Timing/ Range of Crop Growth Stages & Season (j)	Number min-max (k)	Minimum Interval between applications (days) (l)	g a.s./hL min-max (l)	Water L/ha min-max (l)	g a.s./ha min-max (l)		
barley	n.a.	ISY + PTZ** EC 150	NEU SEU	<i>Rhynchosporium secalis</i> , <i>Pyrenophora teres</i> , <i>Puccinia hordei</i> , <i>Ramularia collopygni</i> , <i>Erysiphe graminis</i>	EC	ISY: 50 PTZ:100	Foliar spray	BBCH 30-61	1	-	ISY: 18.75 – 75 PTZ: 37.5-150	100-400	ISY: 75 PTZ: 150	*	* A Pre-HarvestInterval for use in barley is not applicable; the timing is defined by the growth stage at application.

## List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
UK	March 2019	Isoflucypram

### Section 1 Identity, Physical and Chemical Properties, Details of Uses, Further Information, Methods of Analysis

oats	n.a.	ISY + PTZ** EC 150	NEU SEU	<i>Puccinia coronata</i> , <i>Pyrenophora avenae</i> , <i>Erysiphe graminis</i>	EC	ISY: 50 PTZ:100	Foliar spray	BBCH 30-61	1	-	ISY: 18.75 – 75 PTZ: 37.5-150	100-400	ISY: 75 PTZ: 150	*	* A Pre-Harvest-Interval for use in oats is not applicable; the timing is defined by the growth stage at application.
wheat, (including Durum wheat and spelt)	n.a.	ISY + PTZ+ TBZ** EC 250	NEU SEU	<i>Pseudocercospora herpotrichoides</i> , <i>Mycosphaerella graminicola</i> , <i>Erysiphe graminis</i> , <i>Puccinia striiformis</i> , <i>Puccinia recondita</i> , <i>Pyrenophora tritici-repentis</i> , <i>Parastagonospora nodorum</i> , <i>Monographella nivalis</i>	EC	ISY: 50 PTZ:100 TBZ:100	Foliar spray	BBCH 30-69	1	-	ISY: 15.63-62.5 PTZ: 31.25-125 TBZ: 31.25-125	100-400	ISY: 62.5 PTZ: 125 TBZ: 125	*	* A Pre-HarvestInterval for use in wheat (including durum wheat and spelt) is not applicable; the timing is defined by the growth stage at application.

Crop and/or situation (a)	Member State or Country For Import Tolerance	Product name	NEU SEU or G (b)	Pests or Group of pests controlled (c)	Formulation		Application				Application rate per treatment			PHI (days) (m)	Remarks
					Type (d-f)	Conc. a.s.(g/L) (i)	Method/ Kind (g-h)	Timing/ Range of Crop Growth Stages & Season (j)	Number min-max (k)	Minimum Interval between applications (days) (l)	g a.s./hL min-max (l)	Water L/ha min-max	g a.s./ha min-max (l)		

# List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
UK	March 2019	Isoflucypram

## Section 1 Identity, Physical and Chemical Properties, Details of Uses, Further Information, Methods of Analysis

rye	n.a.	ISY + PTZ+ TBZ** EC 250	NEU SEU	<i>Pseudocercospora herpotrichoides</i> , <i>Mycosphaerella graminicola</i> , <i>Erysiphe graminis</i> , <i>Puccinia recondita</i> , <i>Pyrenophora tritici-repentis</i> , <i>Monographella nivalis</i> , <i>Parastagonospora nodorum</i> , <i>Rhynchosporium secalis</i>	EC	ISY: 50 PTZ:100 TBZ:100	Foliar spray	BBCH 30-69	1	-	ISY: 15.63-62.5 PTZ: 31.25-125 TBZ: 31.25-125	100-400	ISY: 62.5 PTZ: 125 TBZ: 125	*	* A Pre-Harvest-Interval for use in rye is not applicable; the timing is defined by the growth stage at application.
triticale	n.a.	ISY + PTZ+ TBZ** EC 250	NEU SEU	<i>Pseudocercospora herpotrichoides</i> , <i>Mycosphaerella graminicola</i> , <i>Erysiphe graminis</i> , <i>Puccinia striiformis</i> , <i>Puccinia recondita</i> , <i>Pyrenophora tritici-rep.</i> , <i>Parastagonospora nodorum</i> , <i>Monographella nivalis</i>	EC	ISY: 50 PTZ:100 TBZ:100	Foliar spray	BBCH 30-69	1	-	ISY: 15.63-62.5 PTZ: 31.25-125 TBZ: 31.25-125	100-400	ISY: 62.5 PTZ: 125 TBZ: 125	*	* A Pre-HarvestInterval for use in triticale is not applicable; the timing is defined by the growth stage at application.
Crop and/or situation (a)	Member State or Country For Import Tolerance	Product name	NEU SEU or G (b)	Pests or Group of pests controlled (c)	Formulation		Application				Application rate per treatment			PHI (days) (m)	Remarks
					Type (d-f)	Conc. a.s.(g/L) (i)	Method/ Kind (g-h)	Timing/ Range of Crop Growth Stages & Season	Number min-max (k)	Minimum Interval between applications (days)	g a.s./hL min-max (l)	Water L/ha min-max	g a.s./ha min-max (l)		

## List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
UK	March 2019	Isoflucypram

### Section 1 Identity, Physical and Chemical Properties, Details of Uses, Further Information, Methods of Analysis

							(j)								
barley	n.a.	ISY + PTZ+ TBZ** EC 250	NEU SEU	<i>Rhynchosporium secalis</i> , <i>Pyrenophora teres</i> , <i>Ramularia colloctygni</i> , <i>Erysiphe graminis</i> , <i>Puccinia hordei</i> , <i>Pseudocercospora herpotrichoides</i>	EC	ISY: 50 PTZ:100 TBZ:100	Foliar spray	BBCH 30-61	1	-	ISY: 15.63-62.5 PTZ: 31.25-125 TBZ: 31.25-125	100-400	ISY: 62.5 PTZ: 125 TBZ: 125	*	* A Pre-Harvest Interval for use in barley is not applicable; the timing is defined by the growth stage at application.
oats	n.a.	ISY + PTZ+ TBZ** EC 250	NEU SEU	<i>Pyrenophora avenae</i> , <i>Erysiphe graminis</i> , <i>Puccinia coronata</i>	EC	ISY: 50 PTZ:100 TBZ:100	Foliar spray	BBCH 30-61	1	-	ISY: 15.63-62.5 PTZ: 31.25-125 TBZ: 31.25-125	100-400	ISY: 62.5 PTZ: 125 TBZ: 125	*	* A Pre-Harvest Interval for use in oats is not applicable; the timing is defined by the growth stage at application.

n.a. = not applicable

\*\* ISY = Isoflucypram, PTZ = Prothioconazol, TBZ = Tebuconazol

<p>(a) For crops, the EU and Codex classifications (both) should be taken into account; where relevant, the use situation should be described (e.g. fumigation of a structure)</p> <p>(b) Outdoor or field use (F), greenhouse application (G) or indoor application (I)</p> <p>(c) e.g. biting and sucking insects, soil born insects, foliar fungi, weeds</p> <p>(d) e.g. wettable powder (WP), emulsifiable concentrate (EC), granule (GR)</p> <p>(e) CropLife International Technical Monograph no 2, 6th Edition. Revised May 2008. Catalogue of pesticide</p> <p>(f) All abbreviations used must be explained</p> <p>(g) Method, e.g. high volume spraying, low volume spraying, spreading, dusting, drench</p> <p>(h) Kind, e.g. overall, broadcast, aerial spraying, row, individual plant, between the plant- type of equipment used must be indicated</p>	<p>(i) g/kg or g/L. Normally the rate should be given for the active substance (according to ISO) and not for the variant in order to compare the rate for same active substances used in different variants (e.g. fluoroxypyr). <b>In certain cases, where only one variant is synthesised, it is more appropriate to give the rate for the variant (e.g. benthialvalicarb-isopropyl).</b></p> <p>(j) Growth stage range from first to last treatment (BBCH Monograph, Growth Stages of Plants, 1997, Blackwell, ISBN 3-8263-3152-4), including where relevant, information on season at time of application</p> <p>(k) Indicate the minimum and maximum number of applications possible under practical conditions of use</p> <p>(l) The values should be given in g or kg whatever gives the more manageable number (e.g. 200 kg/ha instead of 200 000 g/ha or 12.5 g/ha instead of 0.0125 kg/ha)</p> <p>(m) PHI - minimum pre-harvest interval</p>
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**List of end points**

<b>Rapporteur Member State</b>	<b>Month and year</b>	<b>Active Substance (Name)</b>
UK	March 2019	Isoflucypram

**Section 1 Identity, Physical and Chemical Properties, Details of Uses, Further Information, Methods of Analysis**

## List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
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## Section 1 Identity, Physical/ Chemical Properties, Details of Uses, Further Information, Methods of Analysis

### Further information, Efficacy

#### Effectiveness (Regulation (EU) N° 284/2013, Annex Part A, point 6.2)

*Brief statement on whether representative uses GAPs are supported*

#### Adverse effects on field crops (Regulation (EU) N° 284/2013, Annex Part A, point 6.4)

*Brief statement on whether representative uses GAPs are supported*

#### Observations on other undesirable or unintended side-effects (Regulation (EU) N° 284/2013, Annex Part A, point 6.5)

*Brief statement on whether representative uses GAPs are supported*

#### Groundwater metabolites: Screening for biological activity (SANCO/221/2000-rev.10-final Step 3 a Stage 1)

Activity against target organism

<i>Met1</i>	<i>Met2</i>	<i>Met3</i>	<i>Met4</i>	<i>Met5</i>	<i>Met6</i>
<i>yes/no</i>	<i>yes/no</i>	<i>yes/no</i>	<i>yes/no</i>	<i>yes/no</i>	<i>yes/no</i>

## List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
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## Section 1 Identity, Physical/ Chemical Properties, Details of Uses, Further Information, Methods of Analysis

### Methods of Analysis

#### Analytical methods for the active substance (Regulation (EU) N° 283/2013, Annex Part A, point 4.1 and Regulation (EU) N° 284/2013, Annex Part A, point 5.2)

Technical a.s. (analytical technique)	HPLC-UV
Impurities in technical a.s. (analytical technique)	HPLC-UV
Plant protection product (analytical technique)	HPLC-UV

#### Analytical methods for residues (Regulation (EU) N° 283/2013, Annex Part A, point 4.2 & point 7.4.2)

##### Residue definitions for monitoring purposes

Food of plant origin	Isoflucypram
Food of animal origin	Isoflucypram
Soil	Isoflucypram
Sediment	Isoflucypram
Water surface	Isoflucypram
drinking/ground	Isoflucypram
Air	Isoflucypram
Body fluids and tissues	Isoflucypram and BCS-CX99799 (M11) in plasma Isoflucypram in liver

##### Monitoring/Enforcement methods

Food/feed of plant origin (analytical technique and LOQ for methods for monitoring purposes)	HPLC-MS/MS LOQ: 0.01 mg/kg for all crop groups
Food/feed of animal origin (analytical technique and LOQ for methods for monitoring purposes)	HPLC-MS/MS LOQ: 0.01 mg/kg (eggs, muscle, fat, liver, kidney); 0.005 mg/kg (milk)**
Soil (analytical technique and LOQ)	HPLC-MS/MS LOQ: 0.001 mg/kg
Water (analytical technique and LOQ)	HPLC-MS/MS LOQ: 0.0625 µg/L (drinking and surface water)
Air (analytical technique and LOQ)	HPLC-MS/MS LOQ: 4.2 µg/m³
Body fluids and tissues (analytical technique and LOQ)	HPLC-MS/MS LOQ: 0.01 mg/kg (liver); 0.05 mg/L (plasma)

\*\* not confirmed due to issues with method.

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### Section 1 Identity, Physical/ Chemical Properties, Details of Uses, Further Information, Methods of Analysis

#### Classification and labelling with regard to physical and chemical data (Regulation (EU) N° 283/2013, Annex Part A, point 10)

Substance	Isoflucypram
Harmonised classification according to Regulation (EC) No 1272/2008 and its Adaptations to Technical Process [Table 3.1 of Annex VI of Regulation (EC) No 1272/2008 as amended] <sup>1</sup> :	Not applicable – new substance
Peer review proposal <sup>2</sup> for harmonised classification according to Regulation (EC) No 1272/2008:	Not classified

<sup>1</sup> Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. OJ L 353, 31.12.2008, 1-1355.

<sup>2</sup> It should be noted that harmonised classification and labelling is formally proposed and decided in accordance with Regulation (EC) No 1272/2008. Proposals for classification made in the context of the evaluation procedure under Regulation (EC) No 1107/2009 are not formal proposals.

## List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
UK	March 2019	Isoflucypram

## Section 2 Mammalian Toxicology

### Impact on Human and Animal Health

#### Absorption, distribution, metabolism and excretion (toxicokinetics) (Regulation (EU) N° 283/2013, Annex Part A, point 5.1)

Rate and extent of oral absorption/systemic bioavailability	84-88 % (based on urinary (12-14%) and biliary (78-85%) excretion within 48 h) (based on available data, single dose administration in bile-cannulated rats at 2 mg/kg bw) (100% oral absorption considered appropriate for the AOEL and/or AAOEL; 15% post-hepatic systemic availability)
Toxicokinetics	At 2 mg/kg bw: C <sub>max</sub> = 0.5 µg/mL, T <sub>max</sub> = 1 h, Plasma T <sub>1/2</sub> = 0.2-0.3
Distribution	Widely distributed (highest levels in liver )
Potential for bioaccumulation	No evidence for accumulation
Rate and extent of excretion	Rapid and extensive (app. 90 % within 48 h), mainly via bile (up to 85 % within 48 h, 16-21 % via faeces, 12-14 % via urine)
Metabolism in animals	Extensively metabolised (> 95 %); main metabolite M11 (isoflucypram desmethyl carboxylic acid); N-demethylation of the pyrazole methyl and/or oxidation of the isopropyl group to desmethyl carboxylates or lactate followed by glucuronidation
<i>In vitro</i> metabolism	Pooled human microsomes metabolised isoflucypram less rapidly than other species (rats, mice, rabbits and dog); however, they did not produce any metabolites that were not observed in the rat
Toxicologically relevant compounds (animals and plants)	Isoflucypram
Toxicologically relevant compounds (environment)	Isoflucypram

#### Acute toxicity (Regulation (EU) N° 283/2013, Annex Part A, point 5.2)

Rat LD <sub>50</sub> oral	> 2000 mg/kg bw	
Rat LD <sub>50</sub> dermal	> 2000 mg/kg bw	
Rat LC <sub>50</sub> inhalation	2.5 mg/L air /4h (aerosol; nose only)	<b>Acute Tox 4; H332</b>
Skin irritation	Non-irritant	
Eye irritation	Non-irritant	

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## Section 2 Mammalian Toxicology

Skin sensitisation	Sensitising (LLNA)	<b>Skin Sens 1B; H317</b>
Phototoxicity	Not phototoxic in vitro, although study not strictly required	

## Short-term toxicity (Regulation (EU) N° 283/2013, Annex Part A, point 5.3)

Target organ / critical effect	Rat: ↓ bwg, liver (hypertrophy), thyroid (follicular hypertrophy and colloid alterations), clinical-chemistry parameters Dog: liver (hypertrophy), ↑ ALP Mouse: liver (necrosis & vacuolation), clinical-chemistry parameters	
Relevant oral NOAEL	12-month, dog: 4.2 mg/kg bw per day 90-day, rat: 18.4 mg/kg bw per day 90-day, mouse: 51 mg/kg bw per day	
Relevant dermal NOAEL	No data – not required	
Relevant inhalation NOAEL	No data - not required	

## Genotoxicity (Regulation (EU) N° 283/2013, Annex Part A, point 5.4)

<i>In vitro</i> studies	Standard package: Ames: negative MCGM: negative IVC: positive ± S9	
<i>In vivo</i> studies	Mouse bone marrow MN: negative	
Photomutagenicity	Not required	
Potential for genotoxicity	<i>Isoflucypram</i> is unlikely to be genotoxic	

## Long-term toxicity and carcinogenicity (Regulation (EU) N°283/2013, Annex Part A, point 5.5)

Long-term effects (target organ/critical effect)	Rat: ↓ bwg, ↑liver wt, thyroid (colloid alterations and pigmentation of follicular cells) Mouse: ↓ bw and bwg, ↑mortality (F), ↑liver wt (necrosis and bili-duct hyperplasia), ↑kidney wt (hyaline casts, tubule dilation, tubule basophilia)	
Relevant long-term NOAEL	2-year, rat: 6.27 mg/kg bw per day 18-month, mouse: 29 mg/kg bw per day	

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## Section 2 Mammalian Toxicology

Carcinogenicity (target organ, tumour type)	Rat: no tumours Mouse: no tumours <i>Isoflucypram</i> is unlikely to pose a hazard to humans	
Relevant NOAEL for carcinogenicity	2-year, rat: 18.6 mg/kg bw per day; 18-month, mouse: 147 mg/kg bw per day	

## Reproductive toxicity (Regulation (EU) N° 283/2013, Annex Part A, point 5.6)

### Reproduction toxicity

Reproduction target / critical effect	Parental toxicity: ↑liver and thyroid wt, clinical-chemistry parameters Reproductive toxicity: no adverse effect observed in rat 2-generation study Offspring's toxicity: ↑liver and thyroid wt	
Relevant parental NOAEL	11-14 mg/kg bw per day	
Relevant reproductive NOAEL	93-140 mg/kg bw per day	
Relevant offspring NOAEL	11-14 mg/kg bw per day	

### Developmental toxicity

Developmental target / critical effect	Rat: Maternal toxicity: ↓bwg, ↓fc, ↑liver wt (hypertrophy) Developmental toxicity: ↓fetal wt, ↑common skeletal and visceral variations Rabbit: Maternal toxicity: 2 abortions, initial bw loss, ↓ overall bwg, ↓initial fc, ↑liver wt Developmental toxicity: no effects up to top dose	
Relevant maternal NOAEL	Rat: 125 mg/kg bw per day Rabbit: 70 mg/kg bw per day	
Relevant developmental NOAEL	Rat: 125 mg/kg bw per day Rabbit: 500 mg/kg bw per day	

## Neurotoxicity (Regulation (EU) N° 283/2013, Annex Part A, point 5.7)

Acute neurotoxicity	No neurotoxic up to 2000 mg/kg bw/d	
Repeated neurotoxicity	No data – not required	
Additional studies (e.g. delayed neurotoxicity, developmental neurotoxicity)	No data – not required	

## List of end points

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## Section 2 Mammalian Toxicology

### Other toxicological studies (Regulation (EU) N° 283/2013, Annex Part A, point 5.8)

Supplementary studies on the active substance

Mechanistic studies in rats and mice to investigate effects on liver and thyroid. These show the effects in liver and thyroid are a result of liver enzyme induction, arising from the activation of CAR and/or PXR.

Endocrine disrupting properties

Negative Hershberger and Uterotrophic assays. No adverse effects on reproduction, development and reproductive organs were seen in modern in vivo apical studies. Therefore, isoflucypram is not an ED for EAS modalities.

Endocrine-mediated thyroid toxicity was seen in the rat. Based upon the large quantitative differences between rats and humans in the regulation of thyroid homeostasis, these effects are considered to be not relevant to humans. Therefore, isoflucypram is not a thyroid ED in humans.

Studies performed on metabolites or impurities

Relevant impurity BCS-CN45143-  
 28-day, mouse: liver effects  
 28-day, rat: liver effects, histopath in uterus  
 Uterotrophic assay: acceleration of vaginal opening  
Metabolites occurring at significant levels in plant and livestock metabolism studies (M01, M02, M06, M07, M11, M12)  
 No specific toxicity studies are available.

For **M01, M02, M06, M11** and **M12**, there are close structural similarities to the parent compound and negative genotoxicity QSAR predictions. In addition, plasma levels of these metabolites in the 2-year study in rats were similar or higher than those of the parent. Therefore the toxicity of these metabolites is covered by the toxicity data of the parent and if a risk assessment were to be required, the reference values of isoflucypram could be used.

For **M07**, there is close structural similarity to the parent compound and negative genotoxicity QSAR predictions, but no information on relative levels in rat plasma compared to the parent. Therefore, the toxicity of M07 is not sufficiently covered by the toxicity data of the parent and if a risk assessment were to be required, the Cramer class III TTC value could be used.

### Medical data (Regulation (EU) N° 283/2013, Annex Part A, point 5.9)

Limited; new active substance, no detrimental effects on health in manufacturing personnel

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## Section 2 Mammalian Toxicology

### Summary<sup>3</sup> (Regulation (EU) N°1107/2009, Annex II, point 3.1 and 3.6)

	Value (mg/kg bw (per day))	Study	Uncertainty factor
Acceptable Daily Intake (ADI)	0.04	Dog, 12-month	100
Acute Reference Dose (ARfD)	0.7	rabbit, developmental	100
Acceptable Operator Exposure Level (AOEL)	0.04	Dog, 12-month	100*
Acute Acceptable Operator Exposure Level (AAOEL)	No appropriate data available	-	-

\* correction for oral absorption not require (100 %).

### Dermal absorption (Regulation (EU) N° 284/2013, Annex Part A, point 7.3)

Representative formulation (*indicate name, type e.g. EC and concentration of active substance*)

ISY EC 50 (EC formulation containing 5% isoflucypram)  
Concentrate: **2 %**  
Spray dilution (0.01875% isoflucypram): **5 %**  
Based on in vitro human skin study with the representative product (Blanck, 2017)

### Exposure scenarios (Regulation (EU) N° 284/2013, Annex Part A, point 7.2)

Operators

Use: cereals, tractor mounted equipment, application rate 0.075 kg a.s./ha  
Exposure estimates (EFSA\*): % of AOEL  
Without PPE\*\*: 12.94%  
  
\* version 30 March 2015  
\*\* assuming arms, legs and body covered

Workers

Use: cereals, crop inspection/ irrigation, application rate 1 x 0.075 kg a.s./ha  
Exposure estimates (EFSA\*): % of AOEL  
Without PPE\*\*: 1.31%  
  
\* version 30 March 2015  
\*\* assuming arms, legs and body covered

<sup>3</sup> If available include also reference values for metabolites

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## Section 2 Mammalian Toxicology

Bystanders and residents

Use: cereals, water rate 100 L/ha, application rate\_1 x 0.075 kg a.s./ha

Child exposure estimates (EFSA\*)

Exposure pathway	% AOEL
Drift (75 <sup>th</sup> perc.)	2.56%
Vapour (75 <sup>th</sup> perc.)	2.68%
Deposits (75 <sup>th</sup> perc.)	0.29%
Re-entry (75 <sup>th</sup> perc.)	1.58%
Sum (mean)	5.56%

Adult exposure estimates (EFSA\*)

Exposure pathway	% AOEL
Drift (75 <sup>th</sup> perc.)	0.61%
Vapour (75 <sup>th</sup> perc.)	0.58%
Deposits (75 <sup>th</sup> perc.)	0.06%
Re-entry (75 <sup>th</sup> perc.)	0.88%
Sum (mean)	1.61%

\* version 30 March 2015

## Classification with regard to toxicological data (Regulation (EU) N° 283/2013, Annex Part A, Section 10)

Substance :

Harmonised classification according to Regulation (EC) No 1272/2008 and its Adaptations to Technical Process [Table 3.1 of Annex VI of Regulation (EC) No 1272/2008 as amended]<sup>4</sup> :

Peer review proposal <sup>5</sup> for harmonised classification according to Regulation (EC) No 1272/2008:

Isoflucypram
Not available – new substance
RMS proposal in DAR and CLH dossier: <b>Acute Tox 4; H332</b> “Harmful if inhaled” <b>Skin Sens.1B; H317</b> “May cause an allergic skin reaction”

<sup>4</sup> Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. OJ L 353, 31.12.2008, 1-1355.

<sup>5</sup> It should be noted that harmonised classification and labelling is formally proposed and decided in accordance with Regulation (EC) No 1272/2008. Proposals for classification made in the context of the evaluation procedure under Regulation (EC) No 1107/2009 are not formal proposals.

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### Section 3 Residues

#### Residues in or on treated products food and feed

#### Metabolism in plants (Regulation (EU) N° 283/2013, Annex Part A, points 6.2.1, 6.5.1, 6.6.1 and 6.7.1)

<b>Primary crops</b> (Plant groups covered) <b>OECD Guideline 501</b>	<b>Crop groups</b>	<b>Crop(s)</b>	<b>Application(s)</b>	<b>DALT (days)</b>
	Fruit crops	Tomato	Foliar; 2 x 75 g a.s./ha at BBCH 14-15 and 85-87	14
	Root crops	Potato	Seed treatment; 1 x25 g a.s./ha at BBCH 03	119
	Leafy crops	-	-	-
	Cereals/grass crops	Wheat	Foliar; 2 x 65 g a.s./ha at BBCH 30 and 69	17-18
	Pulses/Oilseeds	Oilseed rape	Foliar; 2 x 60 g a.s./ha at BBCH 14 and 77	21
		Soybean	Foliar; 3 x 60 g a.s./ha at BBCH 14, 51 and 84-85	21
	Miscellaneous	-	-	-
	Pyrazole- and phenyl-labelled isoflucypram investigated for each crop in separate studies.			
<b>Rotational crops</b> (metabolic pattern) <b>OECD Guideline 502</b>	<b>Crop groups</b>	<b>Crop(s)</b>	<b>PBI (days)</b>	<b>Comments</b>
	Root/tuber crops	Turnip	30, 140, 287	Pyrazole- and phenyl-labelled isoflucypram investigated in separate studies.
	Leafy crops	Swiss chard	30, 140, 287	
	Cereal (small grain)	Wheat	30, 140, 287	
	Other	-	-	
	Rotational crop and primary crop metabolism similar?	Yes		
<b>Processed commodities</b> (standard hydrolysis study) <b>OECD Guideline 507</b>	<b>Conditions</b>	<b>[pyrazole-4-<sup>14</sup>C] isoflucypram (%TRR)</b>	<b>[phenyl-UL-<sup>14</sup>C] isoflucypram (%TRR)</b>	
	20 min, 90°C, pH 4	99.1	98.7	
	60 min, 100°C, pH 5	98.7	98.0	
	20 min, 120°C, pH 6	99.1	98.7	
	Residue pattern in processed commodities similar to residue pattern in raw commodities?	Yes		
Plant residue definition for monitoring (RD-Mo) <b>OECD Guidance, series on pesticides No 31</b>		Isoflucypram		

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### Section 3 Residues

Plant residue definition for risk assessment (RD-RA)

**Provisionally:** Isoflucypram.

Please note that the RMS (UK) is aware of ongoing studies on wheat and barley in which positive residues of **M01** + conjugates and **M06** + conjugates have been found  $\geq 0.01$  mg/kg in some matrices (barley grain, barley straw, wheat straw). At the time of writing (December 2018), this data is not available for evaluation and so, at the present time, it is not possible to take account of this new information in the DAR. On the basis of the above, once the ongoing studies have been finalized, the RMS (UK) considers it likely that the residue definition for Risk Assessment in cereals may well need to be updated to: Sum of isoflucypram and its metabolites M01 and M06 and their conjugates, expressed as isoflucypram.

Conversion factor (monitoring to risk assessment)

-

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### Section 3 Residues

#### Metabolism in livestock (Regulation (EU) N° 283/2013, Annex Part A, points 6.2.2, 6.2.3, 6.2.4, 6.2.5 6.7.1)

OECD Guideline 503 and SANCO/11187/2013 rev. 3 (fish)	Animal	Dose (mg/kg bw/d)	Duration (days)	N rate/comment
Animals covered	Laying hen	1.0 mg/kg bw/day	14	34 N (Poultry: Layer)
	Goat	1.0 mg/kg bw/day	5	11 N (Sheep: Lamb)
	Pig	-	-	-
	Fish	-	-	-
	Both pyrazole- and phenyl-labelled isoflucypram investigated for laying hen and goat.			
Time needed to reach a plateau concentration in milk and eggs (days)	Milk: 3-4 Eggs: 4-6			
Animal residue definition for monitoring (RD-Mo) OECD Guidance, series on pesticides No 31	Isoflucypram			
Animal residue definition for risk assessment (RD-RA)	Isoflucypram			
Conversion factor (monitoring to risk assessment)	1			
Metabolism in rat and ruminant similar (Yes/No)	Yes			
Fat soluble residues (Yes/No) (FAO, 2009)				

#### Residues in succeeding crops (Regulation (EU) N° 283/2013, Annex Part A, point 6.6.2)

Confined rotational crop study (Quantitative aspect) OECD Guideline 502	The metabolism of isoflucypram in confined rotational crops is adequately understood. No residues >0.01 mg/kg are expected in edible parts of crops grown in rotation with cereals treated with isoflucypram as proposed.
Field rotational crop study OECD Guideline 504	No residues >0.01 mg/kg are expected in edible parts of crops grown in rotation with cereals treated with isoflucypram as proposed.

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## Section 3 Residues

### Stability of residues (Regulation (EU) N° 283/2013, Annex Part A, point 6.1)

#### OECD Guideline 506

Plant products (Category)	Commodity	T (°C)	Stability (Month/Year)			
			Isoflucypram	M49		
High water content	Tomato	-18	25 months	25 months		
High oil content	Rape seed	-18	25 months	25 months		
High protein content	Bean (dry seed)	-18	25 months	25 months		
High starch content	Wheat grain	-18	25 months	25 months		
High acid content	Orange	-18	25 months	25 months		
<p>Frozen storage stability has been demonstrated for at least 25 months in one commodity from each of the five crop categories referred to in OECD Guideline 506, hence it can be assumed that residues of isoflucypram and M49 are stable for at least 25 months at <math>\leq -18^{\circ}\text{C}</math> in all raw agricultural and processed commodities.</p> <p>An additional period of 6 days at <math>-1 \pm 2^{\circ}\text{C}</math> also did not result in significant degradation of residues of either compound.</p>						
Animal	Animal commodity	T (°C)	Stability (Month/Year)			
-	Muscle					
-	Liver					
-	Kidney					
-	Milk					
-	Egg					
<p>All of the livestock feeding studies presented in support of isoflucypram involved analysis of samples within 30 days of collection. Consequently, the storage stability in animal matrices does not need to be investigated.</p>						

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## Section 3 Residues

Summary of residues data from the supervised residue trials (Regulation (EU) N° 283/2013, Annex Part A, point 6.3) [OECD Guideline 509](#), [OECD Guidance, series on pesticides No 66](#) and [OECD MRL calculator](#)

Crop	Region/ Indoor (a)	Residue levels (mg/kg) observed in the supervised residue trials relevant to the supported GAPs RD-Mo = RD-RA (b)	Recommendations/com ments (OECD calculations)	MRL proposals (mg/kg)	HR (mg/kg) (c)	STMR (mg/kg) (d)
<b>Representative uses</b>						
Wheat grain Rye grain (extrapolation)	NEU	12 × <0.01	12 GAP compliant trials	0.05	<0.01	<0.01
	SEU	11 × <0.01; 0.042	12 GAP compliant trials	0.05	0.042	<0.01
	EU (NEU + SEU)	23 × <0.01; 0.042	24 GAP compliant trials	<b>0.05</b>	0.042	<b>&lt;0.01</b>
Wheat straw Barley straw (extrapolation)	NEU	0.054; 0.071; 0.12; 0.19; 0.38; 0.40; 0.82; 0.94; 1.5; 1.7; 3.3; 3.6	12 GAP compliant trials	N/A	3.6	0.61
	SEU	0.22; 0.33; 0.41; 0.87; 1.3; 1.4; 1.6; 1.8; 1.9; 1.9; 2.3; 2.4	12 GAP compliant trials	N/A	2.4	1.5
	EU (NEU + SEU)	0.054; 0.071; 0.12; 0.19; 0.22; 0.33; 0.38; 0.40; 0.41; 0.82; 0.87; 0.94; 1.3; 1.4; 1.5; 1.6; 1.7; 1.8; 1.9; 1.9; 2.3; 2.4; 3.3; 3.6	24 GAP compliant trials	N/A	<b>3.6</b>	<b>1.12</b>
Barley grain Oat grain (extrapolation)	NEU	10 × <0.01; 0.013; 0.020; 0.041	13 GAP compliant trials	0.05	0.041	<0.01
	SEU	9 × <0.01; 0.022; 0.027; 0.037	12 GAP compliant trials	0.05	0.037	<0.01
	EU (NEU + SEU)	19 × <0.01; 0.013; 0.020; 0.022; 0.027; 0.037; 0.041	25 GAP compliant trials	<b>0.05</b>	0.041	<b>&lt;0.01</b>
Barley straw Oat straw (extrapolation)	NEU	0.049; 0.11; 0.13; 0.16; 0.20; 0.24; 0.32; 0.40; 0.44; 0.51; 0.94; 0.96; 1.2	13 GAP compliant trials	N/A	1.2	0.32
	SEU	0.021; 0.13; 0.16; 0.18; 0.24; 0.29; 0.29; 0.31; 0.85; 0.96; 1.0; 3.1	12 GAP compliant trials	N/A	3.1	0.29
	EU (NEU + SEU)	0.021; 0.049; 0.11; 2 × 0.13; 2 × 0.16; 0.18; 0.20; 2 × 0.24; 2 × 0.29; 0.31; 0.32; 0.40; 0.44; 0.51; 0.85; 0.94; 2 × 0.96; 1.0; 1.2; 3.1	25 GAP compliant trials	N/A	<b>3.1</b>	<b>0.29</b>
<b>Summary of data on residues in pollen and bee products</b> (Regulation (EU) No 283/2013, Annex Part A, point 6.10.1)						
Product(s)	Region	Residue data (mg/kg)	Recommendations/com ments			

(a): NEU or SEU for northern or southern **outdoor** trials in EU member states (N+SEU if both zones), **Indoor** for glasshouse/protected crops, **Country** if non-EU location.

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## Section 3 Residues

- (b): Residue levels in trials conducted according to GAP reported in ascending order (*e.g.* 3x <0.01, 0.01, 6x 0.02, 0.04, 0.08, 3x 0.10, 2x 0.15, 0.17). When residue definition for monitoring and risk assessment differs, use **Mo/RA** to differentiate data expressed according to the residue definition for **Monitoring** and **Risk Assessment**.
- (c): **HR**: Highest residue. When residue definition for monitoring and risk assessment differs, HR according to residue definition for monitoring reported in brackets (HR<sub>Mo</sub>).
- (d): **STMR**: Supervised Trials Median Residue. When residue definition for monitoring and risk assessment differs, STMR according to definition for monitoring reported in brackets (STMR<sub>Mo</sub>).

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## Section 3 Residues

### Inputs for animal burden calculations

Feed commodity	Median dietary burden		Maximum dietary burden	
	(mg/kg)	Comment	(mg/kg)	Comment
<b>Representative uses</b>				
Barley straw	0.29	STMR (NEU+SEU)	3.1	HR (NEU+SEU)
Oat straw				
Wheat straw	1.12	STMR (NEU+SEU)	3.6	HR (NEU+SEU)
Rye straw				
Triticale straw				
Barley grain	0.01	STMR (NEU+SEU)	0.01	STMR (NEU+SEU)
Oat grain				
Wheat grain	0.01	STMR (NEU+SEU)	0.01	STMR (NEU+SEU)
Rye grain				
Triticale grain				
Barley brewer's grain	0.007	STMR-P (0.01 x 0.67 <sup>a</sup> )	0.007	STMR-P (0.01 x 0.67 <sup>a</sup> )
Wheat distiller's grain	0.033	STMR-P (0.01 x 3.3 <sup>b</sup> )	0.033	STMR-P (0.01 x 3.3 <sup>b</sup> )
Wheat gluten meal	0.011	STMR-P (0.01 x 1.1 <sup>c</sup> )	0.011	STMR-P (0.01 x 1.1 <sup>c</sup> )
Wheat milled by-products	0.014	STMR-P (0.01 x 1.4 <sup>d</sup> )	0.014	STMR-P (0.01 x 1.4 <sup>d</sup> )
a: processing factor 0.67 determined for barley grain → brewer's grain b: default EFSA processing factor c: processing factor 1.1 determined for wheat grain → wheat gluten meal d: highest processing factor from those determined for wheat grain → wheat middlings (<0.73), bran (1.4), and shorts (0.98)				

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## Section 3 Residues

### Residues from livestock feeding studies (Regulation (EU) N° 283/2013, Annex Part A, points 6.4.1, 6.4.2, 6.4.3 and 6.4.4)

OECD Guideline 505 and OECD Guidance, series on pesticides No 73

MRL calculations	Ruminant				Pig/Swine		Poultry		Fish	
<b>Highest expected intake</b> (mg/kg bw/d)	Beef cattle	0.025	Ram/Ewe	0.070	Breeding	0.000	Broiler	0.001	Carp	-
(mg/kg DM for fish)	Dairy cattle	0.041	Lamb	0.089	Finishing	0.000	Layer	0.029	Trout	-
							Turkey	0.001	Fish intake >0.1 mg/kg DM	
Intake >0.004 mg/kg bw	Yes		Yes		No		Yes		-	
Feeding study submitted	Yes		No (extrapolation from cattle)		No		Yes		No	
<b>Representative feeding level</b> (mg/kg bw/d, mg/kg DM for fish) and <b>N rates</b>	Level 0.050	Beef: 2.0 N Dairy: 1.2 N	Level 0.050	Lamb: 0.6 N Ewe: 1.7 N	Level -	N rate Breed/Finish	Level	B or T: N Layer: N	Level -	N rate Carp/Trout
	Estimated HR <sup>(a)</sup> at 1N	MRL proposals	Estimated HR <sup>(a)</sup> at 1N	MRL proposals	Estimated HR <sup>(a)</sup> at 1N	MRL proposals	Estimated HR <sup>(a)</sup> at 1N	MRL proposals	Estimated HR <sup>(a)</sup> at 1N	MRL proposals
Muscle	0.01	0.01	0.01	0.01	-	-	0.01	0.01	-	-
Fat	0.01	0.01	0.01	0.01	-	-	0.01	0.01	-	-
Meat <sup>(b)</sup>	0.01		0.01		-		0.01			
Liver	0.01	0.01	0.01	0.01	-	-	0.01	0.01		
Kidney	0.01	0.01	0.01	0.01	-	-	0.01	0.01		
Milk <sup>(a)</sup>	0.005	0.005	0.005	0.005						
Eggs							0.01	0.01		
Method of calculation <sup>(c)</sup>	Tf	Tf	Tf	Tf	-	-	Tf	Tf	-	-

<sup>(a)</sup>: Estimated HR calculated at 1N level (**estimated mean level for milk**).

<sup>(b)</sup>: HR in meat calculated for mammals on the basis of 20% fat + 80% muscle and 10% fat + 90% muscle for poultry

<sup>(c)</sup>: The OECD guidance document on residues in livestock (series on pesticides 73) recommends three different approaches to derive MRLs for animal products; by applying a transfer factor (Tf), by interpolation (It) or by linear regression (Ln). Fill in method(s) considered to derive the MRL proposals.

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## Section 3 Residues

STMR calculations	Ruminant				Pig/Swine		Poultry		Fish	
Median expected intake (mg/kg bw/d) (mg/kg DM for fish)	Beef cattle	0.006	Ram/Ewe	0.017	Breeding	0.000	Broiler	0.001	Carp	-
	Dairy cattle	0.010	Lamb	0.022	Finishing	0.000	Layer	0.010	Trout	-
							Turkey	0.001		
Representative feeding level (mg/kg bw/d, mg/kg DM for fish) and N rates	Level	Beef: N Dairy: N	Level	Lamb : N Ewe: N	Level	N rate Breed/Finish	Level	B or T: N Layer: N	Level -	N rate Carp/Trout
	Mean level in feeding level	Estimated STMR <sup>(b)</sup> at 1N	Mean level in feeding level	Estimated STMR <sup>(b)</sup> at 1N	Mean level in feeding level	Estimated STMR <sup>(b)</sup> at 1N	Mean level in feeding level	Estimated STMR <sup>(b)</sup> at 1N	Mean level in feeding level	Estimated STMR <sup>(b)</sup> at 1N
Muscle	0.01	0.01	0.01		-	-	0.01	0.01	-	-
Fat	0.01	0.01	0.01		-	-	0.01	0.01	-	-
Meat <sup>(a)</sup>	0.01	0.01	0.01		-		0.01	0.01		
Liver	0.01	0.01	0.01		-	-	0.01	0.01		
Kidney	0.01	0.01	0.01		-	-	0.01	0.01		
Milk	0.005	0.005	0.005							
Eggs							0.01	0.01		
Method of calculation <sup>(c)</sup>	Tf	Tf	Tf	Tf	-	-	Tf	Tf	-	-

<sup>(a)</sup>: STMR in meat calculated for mammalian on the basis of 20% fat + 80% muscle and 10% fat + 90% muscle for poultry

<sup>(b)</sup>: When the mean level is set at the LOQ, the STMR is set at the LOQ.

<sup>(c)</sup>: The OECD guidance document on residues in livestock (series on pesticide 73) recommends three different approaches to derive MRLs for animal products; by applying a transfer factor (Tf), by interpolation (It) or by linear regression (Ln). Fill in method(s) considered to derive the MRL proposals.

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## Section 3 Residues

### Conversion Factors (CF) for monitoring to risk assessment

#### Animal products

Table to be deleted if not relevant (RD-Mo = RD-RA)

Conversion factors derived from the livestock feeding studies at the different feeding levels								
Study	Ruminant/Pig				Poultry			
Feeding levels	Level 1	Level 2	Level 3	Level 4	Level 1	Level 2	Level 3	Level 4
Muscle	-	-	-	-	-	-	-	-
Fat	-	-	-	-	-	-	-	-
Liver	-	-	-	-	-	-	-	-
Kidney	-	-	-	-	-	-	-	-
Milk	-	-	-	-				
Egg					-	-	-	-
Comments (up to 250 characters)								

#### Plant products

Table to be deleted if not relevant (RD-Mo = RD-RA)

Mean Conversion Factors (CF) calculated at the different PHIs in the supervised residues trials <sup>(a)</sup> OECD Guidance, series on Pesticides No 66								
PHI <sup>(b)</sup> (days)	-	-	-	-	-	-	-	Comments
Representative uses (row to be deleted if not relevant)								
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
At the time of preparing the initial DAR (December 2018), the proposed RD-Mo = proposed RD-RA. However, the table has not been deleted since the RD-RA is expected to change on the basis of additional data not yet finalised/submitted and hence the table may need to be populated in future.								

<sup>(a)</sup>: CF calculated at the supported PHI are underlined.

<sup>(b)</sup>: 0-/0+ for samples collected just before/after the last application

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## Section 3 Residues

### Processing factors (Regulation (EU) N° 283/2013, Annex Part A, points 6.5.2 and 6.5.3)

#### OECD Guideline 508 and OECD Guidance, series on testing and assessment No 96

Crop (RAC)/Edible part or Crop (RAC)/Processed product	Number of studies <sup>(a)</sup>	Processing Factor (PF)		Conversion Factor (CF <sub>p</sub> ) for RA <sup>(b)</sup>
		Individual values	Median PF	
Representative uses				
Barley, malt sprouts	2	< 0.67; n.c.	< 0.67	-
Barley, brewer's malt	2	< 0.67; n.c.	< 0.67	-
Barley, brewer's grain	2	< 0.67; n.c.	< 0.67	-
Barley, hops draff	2	< 0.67; n.c.	< 0.67	-
Barley, brewer's yeast	2	< 0.67; n.c.	< 0.67	-
Barley, beer	2	< 0.67; n.c.	< 0.67	-
Barley, pearl barley rub off	2	2.1; > 1.7	2.1	-
Barley, pearl barley	2	< 0.67; n.c.	< 0.67	-
Wheat, Aspirated Grain Fraction	2	172; > 92	172	-
Wheat, Middlings	2	< 0.73; n.c.	< 0.73	-
Wheat, Germ	2	1.3; n.c.	1.32	-
Wheat, White Flour	2	< 0.73; n.c.	< 0.73	-
Wheat, Shorts	2	0.98; n.c.	0.98	-
Wheat, Bran	2	1.4; n.c.	1.4	-
Wheat, White Bread	2	< 0.73; n.c.	< 0.73	-
Wheat, Whole Meal Flour	2	0.78; n.c.	0.78	-
Wheat, Whole Meal Bread	2	< 0.73; n.c.	< 0.73	-
Wheat, Gluten	2	1.1; n.c	1.1	-
Wheat, Starch	2	< 0.73; n.c.	< 0.73	-
Wheat, Pasta (fresh)	2	< 0.73; n.c.	< 0.73	-
Wheat, Pasta (fresh & cooked)	2	< 0.73; n.c.	< 0.73	-
Wheat, Cooking Water	2	< 0.73; n.c.	< 0.73	-
Wheat, Pasta (dry)	2	< 0.73; n.c.	< 0.73	-
Wheat, Pasta (dried and cooked)	2	< 0.73; n.c.	< 0.73	-

<sup>(a)</sup>: Studies with residues in the RAC at or close to the LOQ should be disregarded (unless concentration)

<sup>(b)</sup>: When the residue definition for risk assessment differs from the residue definition for monitoring

### Consumer risk assessment (Regulation (EU) N° 283/2013, Annex Part A, point 6.9)

**Including all uses** (representative uses and uses related to an MRL application).

#### ADI

TMDI according to EFSA PRIMo

NTMDI, according to (to be specified)

IEDI (% ADI), according to EFSA PRIMo

NEDI (% ADI), according to (to be specified)

Factors included in the calculations

0.04 mg/kg bw per day
Highest TMDI: 2 % ADI (DK, child)
N/A – see TMDI
N/A – see TMDI
N/A – see TMDI
-

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## Section 3 Residues

### ARfD

IESTI (% ARfD), according to EFSA PRIMo

NESTI (% ARfD), according to (to be specified)

Factors included in IESTI and NESTI

0.7 mg/kg bw

Highest IESTI: 0.1 % ARfD (Wheat)

N/A – see IESTI

-

## Proposed MRLs (Regulation (EU) No 283/2013, Annex Part A, points 6.7.2 and 6.7.3)

Code <sup>(a)</sup>	Commodity/Group	MRL/Import tolerance <sup>(b)</sup> ( mg/kg) and Comments	
Plant commodities			
Representative uses (row to be deleted if not relevant)			
0500010	Barley grain	0.05	
0500050	Oat grain	0.05	
0500070	Rye grain	0.05	
0500090	Wheat grain	0.05	
Animal commodities			
1010000	Tissues from swine, bovine, sheep, goat, equine, poultry and other farmed terrestrial animals	0.01*	
1020000	Milk	0.005*	
1030000	Birds' eggs	0.01*	

(a): Commodity code number, as listed in Annex I of Regulation (EC) No 396/2005

(b): MRLs proposed at the LOQ, should be annotated by an asterisk (\*) after the figure.

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## Section 4 Environmental fate and behaviour

### Environmental fate and behaviour

#### Route of degradation (aerobic) in soil (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.1.1)

Mineralisation after 100 days	1.8-3.2 % at study end after 120/123 d, [ <sup>14</sup> C-Pyrazole]-label (n <sup>6</sup> = 6) 5.2 % at study end after 125 d, [ <sup>14</sup> C-Pheny;]-label (n= 1)
Non-extractable residues after 100 days	3.4-10.7 % at study end after 123d, [ <sup>14</sup> C-Pyrazole]-label (n= 6) 6.4 % at study end after 125 d, [ <sup>14</sup> C-Phenyl]-label (n= 1)
Metabolites requiring further consideration - name and/or code, % of applied (range and maximum)	M12 1.3-9.6 % at study end 123 d (n= 7) [ <sup>14</sup> C-pyrazole] & [ <sup>14</sup> C-phenyl] labels

#### Route of degradation (anaerobic) in soil (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.1.2)

Mineralisation after 100 days	0.2 % at study end after 120 d, anaerobic phase [ <sup>14</sup> C-Pyrazole]-label (n= 1)
Non-extractable residues after 100 days	4.2 % at study end after 120 d, anaerobic phase [ <sup>14</sup> C-Pyrazole]-label (n= 1)
Metabolites that may require further consideration for risk assessment - name and/or code, % of applied (range and maximum)	None

#### Route of degradation (photolysis) on soil (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.1.3)

Metabolites that may require further consideration for risk assessment - name and/or code, % of applied (range and maximum)	None
Mineralisation at study end	0.2 % after 10 d, [ <sup>14</sup> C-Pyrazole]-label (n= 1)
Non-extractable residues at study end	1.2 % after 10 d, [ <sup>14</sup> C-Pyrazole]-label (n= 1)

<sup>6</sup> n corresponds to the number of soils.

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## Section 4 Environmental fate and behaviour

### Rate of degradation in soil (aerobic) laboratory studies active substance (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.2.1.1 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.1.1)

Isoflucypram	Dark aerobic conditions						
Soil type	X <sup>7</sup>	pH <sup>a)</sup>	t. °C / % MWHC	DT <sub>50</sub> /DT <sub>90</sub> (d)	DT <sub>50</sub> (d) 20 °C pF2/10kPa <sup>b)</sup>	St. (χ <sup>2</sup> )	Method of calculation
Loam		5.7	20/ 53.1	438/1450	438/1450	0.699	SFO
Loamy sand		6.3	20/ 53.1	238/789	238/789	0.509	SFO
Silty loam		6.6	20/ 53.1	347/1150	347/1150	0.851	SFO
Loam		7.4	20/ 53.1	255/848	255/848	1.73	SFO
Sandy Loam		6.3	20.4/ 64.9	709/2350	665.4/2205.8	1.11	SFO
Silty Clay Loam		6.3	20.4/ 70.0	222/738	206.0/685.1	2.31	SFO
Loamy sand		5.8	20/ 55	263/873	263/873	2.74	SFO
Geometric mean (if not pH dependent)					318.5 <sup>c)</sup>		
pH dependence, No							

<sup>a)</sup> Measured in chloride solution

<sup>b)</sup> Normalised using a Q10 of 2.58 and Walker equation coefficient of 0.7

<sup>c)</sup> Value not used in the assessment since the EFSA DegT50 criteria for a combined laboratory and field data is not required since DT50 max >240 days. PEC modelling performed using field data only.

### Rate of degradation in soil (aerobic) laboratory studies transformation products (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.2.1.2 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.1.1)

M12	Dark aerobic conditions f.f. was derived was from parent							
Soil type	X <sup>7</sup>	pH <sup>a)</sup>	t. °C / % MWHC	DT <sub>50</sub> / DT <sub>90</sub> (d)	f. f. k <sub>f</sub> /k <sub>dp</sub>	DT <sub>50</sub> (d) 20 °C pF2/10kPa <sup>b)</sup>	St. (χ <sup>2</sup> )	Method of calculation
Loam		5.7	20/ 53.1	48.1/160	0.32	48.1/160	9.0	SFO-SFO
Loamy sand		6.3	20/ 53.1	107/356	0.26	107/356	8.06	SFO-SFO
Silty loam		6.6	20/ 53.1	15.5/51.3	0.42	15.5/51.3	9.55	SFO-SFO
Loam		7.4	20/ 53.1	48.5/161	0.31	48.5/161	32.5	SFO-SFO
Loamy sand		5.8	20/ 55	1000/3290	0.23	1000/3290	17.1	SFO-SFO
Geometric mean (if not pH dependent)						82.7		
Arithmetic mean					0.308			
pH dependence, No								

<sup>a)</sup> Measured in [calcium chloride solution

<sup>7</sup> X This column is reserved for any other property that is considered to have a particular impact on the degradation rate. Column and this footnote may be removed if not used.

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## Section 4 Environmental fate and behaviour

<sup>b)</sup> Normalised using a Q10 of 2.58 and Walker equation coefficient of 0.7

### Rate of degradation field soil dissipation studies (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.2.2.1 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.1.2.1)

Parent				Aerobic conditions							
Soil type (indicate if bare or cropped soil was used).	Location (country or USA state).	pH <sup>a)</sup>	Depth (cm)	DT <sub>50</sub> (d) actual	DT <sub>90</sub> (d) actual	St. ( $\chi^2$ )	$g^8$	DT <sub>50</sub> (d) Norm <sup>b)</sup> .	DT <sub>50</sub> (d) Norm fast phase <sup>c)</sup> .	DT <sub>50</sub> (d) Norm slow phase <sup>d)</sup> .	Method of calculation
Silt Loam	Germany	5.3	100	143 K=0.0126	2250 K=0.0006	2.53	0.557	92.8	15.03	289	DFOP
Clay loam	United Kingdom	7.0	100	177 K=0.0078	1810 K=0.0007	10.7	0.610	85	42.81	418	DFOP
Loam	France (northern)	5.9	100	147 K=0.0246	2530 k = 0.0007	2.24	0.462	94.7	18.76	486	DFOP
Clay Loam	France (southern)	7.5	100	16.5 K=0.0464	69.6 K=0.0003	4.54	0.934	13.3	12.28	129	DFOP/ HS (norm)
Clay	Italy	7.0	100	72.4 K=0.0210	3090 K=0.0004	6.06	0.627	90.7	3.022	589	DFOP
Loam	Spain	5.8	100	25.9 K= 0.0718	762 K= 0.019	10.3	0.568	9.84	3.849	261	DFOP
Geometric mean (if not pH dependent)								45.5	11.1	324	
pH dependence, <i>Yes or No</i>											

<sup>a)</sup> Measured in calcium chloride solution

<sup>b)</sup> Normalised using a Q10 of 2.58 and Walker equation coefficient of 0.7, values are DegT50matrix

<sup>c)</sup> Logn(2)/Kfast

<sup>d)</sup> For use in PECgw and PECsw calculation

M12	Aerobic conditions The f.f. was derived was from <i>parent</i>									
Soil type	Location	$X^8$	pH <sup>a)</sup>	Depth (cm)	DT <sub>50</sub> (d) actual	DT <sub>90</sub> (d) actual	St. ( $\chi^2$ )	DT <sub>50</sub> (d) Norm <sup>b)</sup> .	f. f. k <sub>f</sub> / k <sub>dp</sub>	Method of calculation
Silt Loam	Germany		5.3	100	397	1320	13.1	178	0.039	DFOP-SFO
Clay loam	United Kingdom		7.0	100	120	397	13.7	74	0.071	DFOP-SFO
Loam	France (northern)		5.9	100	714	2370	11.2	396	0.0361	DFOP-SFO

<sup>8</sup> X This column is reserved for any other property that is considered to have a particular impact on the degradation rate. Column and this footnote may be removed if not used.

## List of end points

**Rapporteur Member State**      **Month and year**      Active substance and Plant Protection Product (**Name**)

UK	March 2019	Isoflucypram
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### Section 4 Environmental fate and behaviour

M12	Aerobic conditions The f.f. was derived was from <i>parent</i>									
Soil type	Location	X <sup>8</sup>	pH <sup>a)</sup>	Depth (cm)	DT <sub>50</sub> (d) actual	DT <sub>90</sub> (d) actual	St. (χ <sup>2</sup> )	DT <sub>50</sub> (d) Norm <sup>b)</sup>	f. f. k <sub>f</sub> / k <sub>dp</sub>	Method of calculation
Clay Loam	France (southern)		7.5	100	71.4	237	9	80.5	0.068	DFOP-SFO
Clay	Italy		7.0	100	333	1110	22.3	-	0.043	DFOP-SFO
Loam	Spain		5.8	100	142	473	27.6	-	0.020	DFOP-SFO
Geometric mean (if not pH dependent)								143.1		
Arithmetic mean									0.045	
pH dependence, Yes or No										

<sup>a)</sup> Measured in calcium chloride solution

<sup>b)</sup> Normalised using a Q10 of 2.58 and Walker equation coefficient of 0.7 values are DegT50matrix

### Combined laboratory and field kinetic endpoints for modelling (when not from different populations)\*

Rate of degradation in soil active substance, normalised geometric mean (if not pH dependent)

324 (d)

Rate of degradation in soil transformation products, normalised geometric mean (if not pH dependent)

M12  
105.5 (d)

Kinetic formation fraction (f. f. k<sub>f</sub> / k<sub>dp</sub>) of transformation products, arithmetic mean

Met M12 from *isoflucypram* 0.192

\* Only relevant after implementation of the published EFSA guidance describing how to amalgamate laboratory and field endpoints.

### Soil accumulation (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.2.2.2 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.1.2.2)

Soil accumulation and plateau concentration

Plateau concentration of 0.0616 mg/kg reached after 21 years (based on calculation)

### Rate of degradation in soil (anaerobic) laboratory studies active substance (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.2.1.3 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.1.1)

Parent	Dark anaerobic conditions						
Soil type	X <sup>9</sup>	pH <sup>a)</sup>	t. °C / % MWHC	DT <sub>50</sub> / DT <sub>90</sub> (d)	DT <sub>50</sub> (d) 20 °C <sup>b)</sup>	St. (χ <sup>2</sup> )	Method of calculation
Loamy Sand		6.7	20/ 55	1000/1000	1000/1000	1.84	SFO
Geometric mean (if not pH dependent)					1000		

<sup>9</sup> X This column is reserved for any other property that is considered to have a particular impact on the degradation rate. Column and this footnote may be removed if not used.

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product ( <b>Name</b> )
UK	March 2019	Isoflucypram

## Section 4 Environmental fate and behaviour

a) Measured in calcium chloride solution

b) Normalised using a Q10 of 2.58

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 4 Environmental fate and behaviour

### Rate of degradation on soil (photolysis) laboratory active substance (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.1.3)

Parent	Soil photolysis					
Soil type	X <sup>10</sup>	pH <sup>a)</sup>	t. °C / % MWHC	DT <sub>50</sub> / DT <sub>90</sub> (d)	St. (χ <sup>2</sup> )	Method of calculation
Sandy Loam		6.3	20/55	114/377	1.61	SFO

<sup>a)</sup> Measured in [medium to be stated, usually calcium chloride solution or water]

### Soil adsorption active substance (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.3.1.1 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.2.1)

Isoflucypram							
Soil Type	OC %	Soil pH <sup>a)</sup>	K <sub>d</sub> (mL/g)	K <sub>doc</sub> (mL/g)	K <sub>F</sub> (mL/g)	K <sub>Foc</sub> (mL/g)	1/n
Loamy sand	2.1	6.0	-	-	29.184	1389.7	0.8904
Silt loam	1.9	6.3	-	-	29.812	1569.1	0.8788
Loam	2.3	5.4	-	-	32.430	1410.0	0.8972
Loam	5.1	7.2	-	-	58.711	1151.2	0.8690
Sandy Loam	0.9	6.2	-	-	11.257	1250.8	0.9985
Geometric mean (if not pH dependent)*					28.45	1346.6	
Arithmetic mean (if not pH dependent)							0.907
pH dependence, <i>No</i>							

<sup>a)</sup> Measured in calcium chloride solution

\* Only relevant after implementation of the published EFSA guidance.

### Soil adsorption transformation products (Regulation (EU) N° 283/2013, Annex Part A, point 7.1.3.1.2 and Regulation (EU) N° 284/2013, Annex Part A, point 9.1.2.1)

M12								
Soil Type	OC %	Soil pH <sup>a)</sup>	K <sub>d</sub> (mL/g)	K <sub>d</sub> <sub>oc</sub> (mL/g)	K <sub>F</sub> (mL/g)	K <sub>F</sub> <sub>oc</sub> (mL/g)	1/n	
Sandy Loam	1.9	5.3	-	-	2.0	105.8	0.9297	
Silt Loam	2.0	6.3	-	-	0.8	37.9	0.8952	
Loam	4.5	7.3	-	-	1.3	28.1	0.9243	
Sandy Loam	0.7	6.7	-	-	0.3	38.4	0.9311	
Silt Loam	1.7	6.6	-	-	1.2	70.7	0.9185	
Loamy Sand	0.94	4.9	-	-	2.724	289.8	0.9497	

<sup>10</sup> X This column is reserved for any other property that is considered to have a particular impact on the degradation rate. Column and this footnote may be removed if not used.

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 4 Environmental fate and behaviour

Clay Loam	2.4	7.7	-	-	1.178	49.1	0.9604
Sandy Loam	0.3	5.6	-	-	0.544	187.5	0.8966
Silty Clay Loam	1.8	5.8	-	-	1.727	95.9	0.8914
Geometric mean (if not pH dependent)* Weak acid (around pH5.4)					1.506	153.2	
Geometric mean (if not pH dependent)* Natural (around pH 7.5)					1.220	37.1	
Arithmetic mean (if not pH dependent) Weak acid (around pH5.4)							0.917
Arithmetic mean (if not pH dependent) Natural (around pH 7.5)							0.942
pH dependence, Yes	Worst case Neutral (around pH 7.5) values used in risk assessment						

<sup>a)</sup> Measured in calcium chloride solution

\* Only relevant after implementation of the published EFSA guidance.

## Hydrolytic degradation (Regulation (EU) N° 283/2013, Annex Part A, point 7.2.1.1)

Hydrolytic degradation of the active substance and metabolites > 10 %

pH 5: *Stable* at 20 °C

pH 7: *Stable* at 20 °C

pH 9: *Stable* at 20 °C

## Aqueous photochemical degradation (Regulation (EU) N° 283/2013, Annex Part A, points 7.2.1.2 / 7.2.1.3)

Photolytic degradation of active substance and metabolites above 10 %

Natural light, 37.9 °N; DT<sub>50</sub> 750 days

Quantum yield of direct phototransformation in water at  $\Sigma > 290$  nm

0.00077 mol · Einstein<sup>-1</sup>

## 'Ready biodegradability' (Regulation (EU) N° 283/2013, Annex Part A, point 7.2.2.1)

Readily biodegradable  
(yes/no)

*No data submitted, substance considered not readily biodegradable*

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

### Section 4 Environmental fate and behaviour

#### Aerobic mineralisation in surface water (Regulation (EU) N° 283/2013, Annex Part A, point 7.2.2.2 and Regulation (EU) N° 284/2013, Annex Part A, point 9.2.1)

Parent										
System identifier (indicate fresh, estuarine or marine)	pH water phase	pH sed <sup>a)</sup>	t. °C <sup>b)</sup>	DT <sub>50</sub> /DT <sub>90</sub> whole sys.		St. ( $\chi^2$ )	DT <sub>50</sub> /DT <sub>90</sub> Water (pelagic test)		St. ( $\chi^2$ )	Method of calculation
				At study temp	Normalise d to 12 °C <sup>c)</sup>		At study temp	Norma lised to 12 °C <sup>c)</sup>		
Fresh water low	7.95	-	20	-	-	-	1000/1 000	1000/1 000	4.5	SFO
Fresh water high	7.95	-	20	-	-	-	1000/1 000	1000/1 000	1.3	SFO

<sup>a)</sup> Measured in calcium chloride solution

<sup>b)</sup> Temperature of incubation=temperature that the environmental media was collected or std temperature of 20°C

<sup>c)</sup> Normalised using a Q10 of 2.58 to the temperature of the environmental media at the point of sampling. (note temp of x should be stated).

Mineralisation and non extractable residues (for parent dosed experiments)					
System identifier (indicate fresh, estuarine or marine)	pH water phase	pH sed	Mineralisation % after 100 d. (end of the study).	Non-extractable residues. max % after d (suspended sediment test)	Non-extractable residues. max % after d (end of the study) (suspended sediment test)
Fresh water low	7.95	-	0.9	-	-
Fresh water high	7.95	-	0.1	-	-

#### Water / sediment study (Regulation (EU) N° 283/2013, Annex Part A, point 7.2.2.3 and Regulation (EU) N° 284/2013, Annex Part A, point 9.2.2)

Isoflucypram	<i>max in water 8.2% after 100 d. Max. sed 80.1 % after 100 d</i>									
Water / sediment system	pH water phase	pH sed <sup>a)</sup>	t. °C	DT <sub>50</sub> /DT <sub>90</sub> whole sys.	St. (χ <sup>2</sup> )	DT <sub>50</sub> /DT <sub>90</sub> Water.	St. (χ <sup>2</sup> )	DT <sub>50</sub> /DT <sub>90</sub> sed	St. (χ <sup>2</sup> )	Method of calculation
Fresh Sand	7.1	6.6	20	222/736	2.23	1000/1000	-	222/736	2.23	(SFO)
Fresh Loam	7.3	5.1	20	681/1000	1.43	1000/1000	-	681/1000	1.43	(SFO)
Geometric mean at 20°C <sup>b)</sup>				388/858		1000/1000		388/858		

<sup>a)</sup> Measured in calcium chloride solution

<sup>b)</sup> Normalised using a Q10 of 2.58

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 4 Environmental fate and behaviour

Metabolite <i>M12</i>	Distribution. <i>max in water 5.4 after 100 d. Max. sed 1.3% after 100 d.</i> Max in total system 6.6 % after 100 days, kinetic formation fraction ( $k_f/k_{dp}$ ): 0.240									
Water / sediment system	pH water phase	pH sed <sup>a)</sup>	t. °C	DT <sub>50</sub> /DT <sub>90</sub> whole sys.	St. ( $\chi^2$ )	DT <sub>50</sub> /DT <sub>90</sub> water	St. ( $\chi^2$ )	DT <sub>50</sub> /DT <sub>90</sub> sed	St. ( $\chi^2$ )	Method of calculation
Fresh Sand	7.1	6.6	20	1000/1000	-	1000/1000	-	1000/1000	-	-
Fresh Loam	7.3	5.1	20	1000/1000	-	1000/1000	-	1000/1000	-	-
Geometric mean at 20°C <sup>b)</sup>				1000/1000		1000/1000		1000/1000		-

<sup>a)</sup> Measured in [medium to be stated, usually calcium chloride solution or water]

<sup>b)</sup> Normalised using a Q10 of 2.58

Mineralisation and non extractable residues (from parent dosed experiments)					
Water / sediment system	pH water phase	pH sed	Mineralisation % after 100 d. (end of the study).	Non-extractable residues in sed. max % after 100 d	Non-extractable residues in sed. max % after 100 d (end of the study)
Fresh Sand	7.1	6.6	0.1	6.4	6.4
Fresh Loam	7.3	5.1	0.1	6.2	6.2

## Fate and behaviour in air (Regulation (EU) N° 283/2013, Annex Part A, point 7.3.1)

Direct photolysis in air	<i>Not studied - no data requested</i>
Photochemical oxidative degradation in air	DT <sub>50</sub> of 0.344 days derived by the Atkinson model (version 1.92a). OH (24 h) concentration assumed = $0.5 \times 10^6$
Volatilisation	-
	-
Metabolites	-

## Residues requiring further assessment (Regulation (EU) N° 283/2013, Annex Part A, point 7.4.1)

Environmental occurring residues requiring further assessment by other disciplines (toxicology and ecotoxicology) and or requiring consideration for groundwater exposure	Soil: Isoflucypram and BCS-CN88460-carboxylic acid ( <i>M12</i> ) Surface water: Isoflucypram and BCS-CN88460-carboxylic acid ( <i>M12</i> ) Sediment: Isoflucypram and BCS-CN88460-carboxylic acid ( <i>M12</i> ) Ground water: Isoflucypram and BCS-CN88460-carboxylic acid ( <i>M12</i> ) Air: Isoflucypram
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## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 4 Environmental fate and behaviour

### Definition of the residue for monitoring (Regulation (EU) N° 283/2013, Annex Part A, point 7.4.2)

See section 5, Ecotoxicology

### Monitoring data, if available (Regulation (EU) N° 283/2013, Annex Part A, point 7.5)

Soil (indicate location and type of study)	-
Surface water (indicate location and type of study)	-
Ground water (indicate location and type of study)	-
Air (indicate location and type of study)	-

### PEC soil (Regulation (EU) N° 284/2013, Annex Part A, points 9.1.3 / 9.3.1)

Parent	<p>DT<sub>50</sub> (d): <i>Escape V2.0 used. For concentration in soil DT50 fast 88.9, DT50 slow 1020, g 0.610. For accumulation in soil DT50 fast 33.1, DT50 slow 1810, g = 0.627 days</i></p> <p>Kinetics: <i>DFOP</i></p> <p>Field or Lab: <i>Field</i></p>
Method of calculation	
Application data	<p>Crop: <i>Cereals</i></p> <p>Depth of soil layer: <i>5cm</i></p> <p>Soil bulk density: <i>1.5g/cm<sup>3</sup></i></p> <p>% plant interception: <i>80</i></p> <p>Number of applications: <i>1</i></p> <p>Interval (d): <i>0</i></p> <p>Application rate(s): <i>75 g a.s./ha</i></p>

PEC <sub>(s)</sub> (mg/kg)	Single application Actual	Single application Time weighted average
Initial	0.0200	
Short term 24h	0.0199	0.200
2d	0.0199	0.0199
4d	0.0198	0.0199
Long term 7d	0.0196	0.0198
28d	0.0186	0.0193
50d	0.0177	0.0188

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product ( <b>Name</b> )
UK	March 2019	Isoflucypram

### Section 4 Environmental fate and behaviour

PEC <sub>(s)</sub> (mg/kg)	Single application Actual	Single application Time weighted average
100d	0.0158	0.0177
Plateau concentration	0.0616 mg/kg after 21 yr	

Metabolite M12

Method of calculation

Molecular weight relative to the parent:  
DT<sub>50</sub> (d): 714 days  
Kinetics: *SFO*  
Field or Lab: *Lab and field following EFSA DEGT50*

Application data

Application rate assumed: *formation fraction 0.071*

PEC <sub>(s)</sub> (mg/kg)	Single application Actual	Single application Time weighted average
Initial	0.0012	
Short term 24h	0.0012	0.0012
2d	0.0012	0.0012
4d	0.0012	0.0012
Long term 7d	0.0012	0.0012
28d	0.0012	0.0012
50d	0.0011	0.0012
100d	0.0011	0.0012
Plateau concentration	0.0055 mg/kg after 14 yr	

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

### Section 4 Environmental fate and behaviour

#### PEC ground water (Regulation (EU) N° 284/2013, Annex Part A, point 9.2.4.1)

Method of calculation and type of study  
(e.g. modelling, field leaching, lysimeter)

For FOCUS gw modelling, values used –  
Modelling using FOCUS model(s), with appropriate FOCUSgw scenarios, according to FOCUS guidance.  
Model(s) used: *PEARL, PELMO, MACRO*  
Crop: Cereals, Spring and Winter sown  
Crop uptake factor: 0 / 0.1  
Water solubility (mg/L): 1.8 at pH 7 and 20°C  
Vapour pressure: 1.2 E-7 Pa at 20°C  
Geometric mean parent  $DT_{50\ field}$  11.1 d (normalisation to 10kPa or pF2, 20 °C with Q10 of 2.58 and Walker equation coefficient 0.7) fast phase degradation. 324.3 days (normalisation to 10kPa or pF2, 20 °C with Q10 of 2.58 and Walker equation coefficient 0.7) slow phase degradation  
 $K_{OC}$ : parent, geometric\* mean 1346.6 mL/g, arithmetic mean  $1/n = 0.907$ .

Metabolites: M12  
Crop uptake factor: 0  
Water solubility (mg/L): 10100 at pH 7 and 20°C  
Vapour pressure: 2.610 E-13 Pa at 20°C  
Geometric mean parent  $DT_{50\ lab+field}$  105 d (normalisation to 10kPa or pF2, 20 °C with Q10 of 2.58 and Walker equation coefficient 0.7).  
 $K_{OC}$ : parent, geometric mean 37.1 mL/g, arithmetic mean  $1/n = 0.942$ . (worst case neutral soils)

Application rate

Gross application rate: 75 g/ha.  
Crop growth stage: BBCH 30-39 or BBCH 40-69  
Canopy interception 80% or 90%:  
Application rate net of interception: 15 g/ha +7.5 g/ha.  
No. of applications: 1  
Time of application (absolute or relative application dates):

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
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## Section 4 Environmental fate and behaviour

Chateaudun	21 Apr (111)	14 Jun (165)	10 Apr (100)	22 Jun (173)
Hamburg	19 Apr (109)	22 Jun (173)	28 Apr (118)	28 Jun (179)
Jokioinen	25 May (145)	10 Jul (191)	05 Jun (156)	17 Jul (198)
Kremsmuenster	19 Apr (109)	22 Jun (173)	28 Apr (118)	28 Jun (179)
Okehampton	15 Apr (105)	07 Jun (158)	22 Apr (112)	18 Jun (169)
Piacenza	10 Apr (100)	25 May (145)	-	-
Porto	30 Mar (89)	24 May (144)	16 Apr (106)	22 Jun (173)
Sevilla	06 Jan (6)	28 Mar (87)	-	-
Thiva	02 Mar (61)	27 Apr (117)	-	-

\* Only relevant after implementation of the published EFSA guidance.

## PEC(gw) - FOCUS modelling results (80<sup>th</sup> percentile annual average concentration at 1m)

Crop Winter cereals, Early applications, fast phase DT50.	Scenario	Isoflucypram (µg/L)			M12 (µg/L)		
		PEARL	PELMO	MACRO	PEARL	PELMO	MACRO
	Chateaudun	<0.001	<0.001	<0.001	0.212	0.096	0.0839
	Hamburg	<0.001	<0.001	-	0.352	0.179	-
	Jokioinen	<0.001	<0.001	-	0.336	0.160	-
	Kremsmunster	<0.001	<0.001	-	0.247	0.133	-
	Okehampton	<0.001	<0.001	-	0.239	0.123	-
	Piacenza	<0.001	<0.001	-	0.178	0.102	-
	Porto	<0.001	<0.001	-	0.157	0.082	-
	Sevilla	<0.001	<0.001	-	0.026	0.030	-
	Thiva	<0.001	<0.001	-	0.194	0.055	-

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 4 Environmental fate and behaviour

Crop Winter cereals, Early applications, slow phase DT50.	Scenario	Isoflucypram (µg/L)			M12 (µg/L)		
		<b>PEARL</b>	<b>PELMO</b>	<b>MACRO</b>	<b>PEARL</b>	<b>PELMO</b>	<b>MACRO</b>
	Chateaudun	<0.001	<0.001	<0.001	0.247	0.135	0.107
	Hamburg	<0.001	<0.001	-	0.392	0.237	-
	Jokioinen	<0.001	<0.001	-	0.311	0.185	-
	Kremsmunster	<0.001	<0.001	-	0.271	0.180	-
	Okehampton	<0.001	<0.001	-	0.270	0.171	-
	Piacenza	<0.001	<0.001	-	0.219	0.167	-
	Porto	<0.001	<0.001	-	0.191	0.125	-
	Sevilla	<0.001	<0.001	-	0.037	0.052	-
	Thiva	<0.001	<0.001	-	0.282	0.108	-

Crop Winter cereals, Late applications, fast phase DT50.	Scenario	Isoflucypram (µg/L)			M12 (µg/L)		
		<b>PEARL</b>	<b>PELMO</b>	<b>MACRO</b>	<b>PEARL</b>	<b>PELMO</b>	<b>MACRO</b>
	Chateaudun	<0.001	<0.001	<0.001	0.103	0.049	0.044
	Hamburg	<0.001	<0.001	-	0.184	0.093	-
	Jokioinen	<0.001	<0.001	-	0.163	0.080	-
	Kremsmunster	<0.001	<0.001	-	0.118	0.066	-
	Okehampton	<0.001	<0.001	-	0.120	0.061	-
	Piacenza	<0.001	<0.001	-	0.085	0.053	-
	Porto	<0.001	<0.001	-	0.083	0.044	-
	Sevilla	<0.001	<0.001	-	0.011	0.014	-
	Thiva	<0.001	<0.001	-	0.103	0.028	-

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

### Section 4 Environmental fate and behaviour

Crop Winter cereals, Late applications, slow phase DT50.	Scenario	Isoflucypram (µg/L)			M12 (µg/L)		
		<b>PEARL</b>	<b>PELMO</b>	<b>MACRO</b>	<b>PEARL</b>	<b>PELMO</b>	<b>MACRO</b>
	Chateaudun	<0.001	<0.001	<0.001	0.118	0.065	0.0507
	Hamburg	<0.001	<0.001	-	0.189	0.115	-
	Jokioinen	<0.001	<0.001	-	0.148	0.088	-
	Kremsmunster	<0.001	<0.001	-	0.131	0.087	-
	Okehampton	<0.001	<0.001	-	0.132	0.083	-
	Piacenza	<0.001	<0.001	-	0.106	0.080	-
	Porto	<0.001	<0.001	-	0.093	0.061	-
	Sevilla	<0.001	<0.001	-	0.016	0.024	-
	Thiva	<0.001	<0.001	-	0.137	0.052	-

Crop Spring cereals, Early applications, fast phase DT50.	Scenario	Isoflucypram (µg/L)			M12 (µg/L)		
		<b>PEARL</b>	<b>PELMO</b>	<b>MACRO</b>	<b>PEARL</b>	<b>PELMO</b>	<b>MACRO</b>
	Chateaudun	<0.001	<0.001	<0.001	0.190	0.078	0.0075
	Hamburg	<0.001	<0.001	-	0.444	0.169	-
	Jokioinen	<0.001	<0.001	-	0.288	0.136	-
	Kremsmunster	<0.001	<0.001	-	0.273	0.130	-
	Okehampton	<0.001	<0.001	-	0.254	0.117	-
	Porto	<0.001	<0.001	-	0.168	0.075	-

Crop Spring cereals, Early applications, slow phase DT50.	Scenario	Isoflucypram (µg/L)			M12 (µg/L)		
		<b>PEARL</b>	<b>PELMO</b>	<b>MACRO</b>	<b>PEARL</b>	<b>PELMO</b>	<b>MACRO</b>
	Chateaudun	<0.001	<0.001	<0.001	0.222	0.111	0.0927
	Hamburg	<0.001	<0.001	-	0.462	0.224	-
	Jokioinen	<0.001	<0.001	-	0.273	0.149	-
	Kremsmunster	<0.001	<0.001	-	0.289	0.167	-
	Okehampton	<0.001	<0.001	-	0.185	0.155	-
	Porto	<0.001	<0.001	-	0.107	0.113	-

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 4 Environmental fate and behaviour

Crop Spring cereals, Late applications, fast phase DT50.	Scenario	Isoflucypram (µg/L)			M12 (µg/L)		
		<b>PEARL</b>	<b>PELMO</b>	<b>MACRO</b>	<b>PEARL</b>	<b>PELMO</b>	<b>MACRO</b>
	Chateaudun	<0.001	<0.001	<0.001	0.097	0.041	0.0404
	Hamburg	<0.001	<0.001	-	0.231	0.087	-
	Jokioinen	<0.001	<0.001	-	0.146	0.069	-
	Kremsmunster	<0.001	<0.001	-	0.134	0.063	-
	Okehampton	<0.001	<0.001	-	0.124	0.059	-
	Porto	<0.001	<0.001	-	0.081	0.043	-

Crop Spring cereals, Late applications, slow phase DT50.	Scenario	Isoflucypram (µg/L)			M12 (µg/L)		
		<b>PEARL</b>	<b>PELMO</b>	<b>MACRO</b>	<b>PEARL</b>	<b>PELMO</b>	<b>MACRO</b>
	Chateaudun	<0.001	<0.001	<0.001	0.107	0.053	0.0447
	Hamburg	<0.001	<0.001	-	0.222	0.109	-
	Jokioinen	<0.001	<0.001	-	0.131	0.072	-
	Kremsmunster	<0.001	<0.001	-	0.139	0.081	-
	Okehampton	<0.001	<0.001	-	0.137	0.075	-
	Porto	<0.001	<0.001	-	0.090	0.056	-

## PEC surface water and PEC sediment (Regulation (EU) N° 284/2013, Annex Part A, points 9.2.5 / 9.3.1)

Parent

Parameters used in FOCUSsw step 1 and 2

Version control no. of FOCUS calculator:  
Molecular weight (g/mol): 399.85  
K<sub>OC</sub>/K<sub>OM</sub> (mL/g):  
DT<sub>50</sub> soil (d): 324.3 days (*Lab. In accordance with FOCUS SFO*)  
DT<sub>50</sub> water/sediment system (d): 388 d (*geomean from sediment water studies if not pH dependent*)  
DT<sub>50</sub> water (d): 388/1000  
DT<sub>50</sub> sediment (d): 1000/388  
Crop interception (%): *Average and full canopy*

Parameters used in FOCUSsw step 3 (if performed)

Version control no.'s of FOCUS software:  
Water solubility (mg/L): 1.8  
Vapour pressure: 1.2E-7 Pa at 20°C  
K<sub>om</sub>/K<sub>oc</sub> (mL/g): 781.1 /1346.6

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product ( <b>Name</b> )
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## Section 4 Environmental fate and behaviour

Application rate

1/n: (Freundlich exponent general or for soil, susp. solids or sediment respectively)  
 Q10=2.58, Walker equation coefficient 0.7  
 Crop uptake factor:

Crop and growth stage: Cereals BBCH 30-39 or BBCH 40-69, spring and winter sown  
 Number of applications: *1*  
 Interval (d): -  
 Application rate(s): 75 g a.s./ha  
 Application window:  
*early and late N.E.U. and S.E.U.*

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

### Section 4 Environmental fate and behaviour

Metabolite *M12*

Parameters used in FOCUSsw step 1 and 2

Molecular weight: 429.8  
 Soil or water metabolite: Soil and Water  
 Koc/Kom (mL/g): 37.1 (worst case)  
 DT<sub>50</sub> soil (d): 105.5days (*If necessary, Lab and field. In accordance with FOCUS SFO*)  
 DT<sub>50</sub> water/sediment system (d): 1000 d (*representative worst case from sediment water studies*)  
 DT<sub>50</sub> water (d): 1000  
 DT<sub>50</sub> sediment (d): 1000  
 Crop interception (%): (*average and full canopy*)  
 Maximum occurrence observed (% molar basis with respect to the parent)  
 Total Water and Sediment: 6.6  
 Soil: 9.6

Parameters used in FOCUSsw step 3 (if performed)

Water solubility (mg/L):10100  
 Vapour pressure: 2.610-13 Pa at 20°C  
 Kom/Koc (mL/g): 37.1 (worst case)  
 1/n: (Freundlich exponent general or for soil, susp. solids or sediment respectively)  
 Q10=2.58, Walker equation coefficient 0.7  
 Crop uptake factor:0  
 Metabolite kinetically generated in simulation (yes):  
 Formation fraction in soil ( $k_f/k_{dp}$ ):0.192).  
 Formation fraction in sediment water ( $k_f/k_{dp}$ ): 0.240

Main routes of entry

Runoff and Drainage

## List of end points

**Rapporteur Member State**      **Month and year**      Active substance and Plant Protection Product (**Name**)

UK	March 2019	Isoflucypram
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## Section 4 Environmental fate and behaviour

Step 1 and 2 Isoflucypram*					Mar-May		Jun-Sep	
			Step 1 (µg/L)		Step 2 (µg/L)		Step 2 (µg/L)	
			PEC <sub>sw</sub>	PEC <sub>sed</sub>	PEC <sub>sw</sub>	PEC <sub>sed</sub>	PEC <sub>sw</sub>	PEC <sub>sed</sub>
Spring cereals	Average crop cover	N Europe	9.63	123.53	1.73	22.36	1.73	22.36
		S Europe	9.63	123.53	3.15	41.43	2.44	31.90
	Full crop cover	N Europe	9.63	123.53	0.84	10.44	0.84	10.44
		S Europe	9.63	123.53	1.38	17.60	1.11	14.02
Winter cereals	Average crop cover	N Europe	9.63	123.53	1.73	22.36	1.73	22.36
		S Europe	9.63	123.53	3.15	41.43	2.44	31.90
	Full crop cover	N Europe	9.63	123.53	0.84	10.44	0.84	10.44
		S Europe	9.63	123.53	1.38	17.60	1.11	14.02

\* TWA not required by eco-toxicology

Step 1 and 2 metabolite M12*					Mar-May		Jun-Sep	
			Step 1 (µg/L)		Step 2 (µg/L)		Step 2 (µg/L)	
			PEC <sub>sw</sub>	PEC <sub>sed</sub>	PEC <sub>sw</sub>	PEC <sub>sed</sub>	PEC <sub>sw</sub>	PEC <sub>sed</sub>
Spring cereals	Average crop cover	N Europe	4.20	1.56	0.70	0.26	0.70	0.26
		S Europe	4.20	1.56	1.35	0.50	1.02	0.38
	Full crop cover	N Europe	4.20	1.56	0.29	0.11	0.29	0.11
		S Europe	4.20	1.56	0.54	0.20	0.41	0.15
Winter cereals	Average crop cover	N Europe	4.20	1.56	0.70	0.26	0.70	0.26
		S Europe	4.20	1.56	1.35	0.50	1.02	0.38
	Full crop cover	N Europe	4.20	1.56	0.29	0.11	0.29	0.11
		S Europe	4.20	1.56	0.54	0.20	0.41	0.15

\* TWA not required by eco-toxicology

## List of end points

**Rapporteur Member State**      **Month and year**      Active substance and Plant Protection Product (**Name**)

UK	March 2019	Isoflucypram
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## Section 4 Environmental fate and behaviour

Step 3 values for isoflucypram

Scenario <b>FOCUS</b>	Waterbody	Max PEC <sub>sw</sub> (µg/L)	Max PEC <sub>sed</sub> (µg/kg)	Dominant entry route
Step 3	Winter cereals early applications DT <sub>50</sub> water 1000 days, DT <sub>50</sub> sediment 388 days			
D1	Ditch	1.387	16.87	Drainage
D1	Stream	0.869	9.470	Drainage
D2	Ditch	1.369	11.95	Drainage
D2	Stream	0.8551	7.001	Drainage
D3	Ditch	0.4745	0.3012	Drift
D4	Pond	0.1005	0.9378	Drainage
D4	Stream	0.3652	0.3308	Drift
D5	Pond	0.1182	1.287	Drainage
D5	Stream	0.3798	0.2973	Drift
D6	Ditch	0.7443	0.8782	Drainage
R1	Pond	0.0425	0.5353	Runoff
R1	Stream	0.3124	0.3745	Drift
R3	Stream	0.4415	0.6982	Drift
R4	Stream	0.4364	0.6228	Runoff

Scenario <b>FOCUS</b>	Waterbody	Max PEC <sub>sw</sub> (µg/L)	Max PEC <sub>sed</sub> (µg/kg)	Dominant entry route
Step 3	Winter cereals late applications DT <sub>50</sub> water 1000 days, DT <sub>50</sub> sediment 388 days			
D1	Ditch	0.6537	8.425	Drift
D1	Stream	0.4216	4.461	Drift
D2	Ditch	0.8686	0.8595	Drainage
D2	Stream	0.5859	5.165	Drift
D3	Ditch	0.4755	0.3667	Drift
D4	Pond	0.0529	0.5021	Drainage
D4	Stream	0.4103	0.1803	Drift
D5	Pond	0.0600	0.6930	Drainage
D5	Stream	0.4426	0.1541	Drift
D6	Ditch	0.4768	0.6666	Drift
R1	Pond	0.0531	0.6437	Runoff
R1	Stream	0.3133	0.8635	Drift
R3	Stream	0.4415	0.2616	Drift
R4	Stream	0.3921	0.8709	Runoff

Scenario <b>FOCUS</b>	Waterbody	Max PEC <sub>sw</sub> (µg/L)	Max PEC <sub>sed</sub> (µg/kg)	Dominant entry route
Step 3	Spring cereals early applications DT <sub>50</sub> water 1000 days, DT <sub>50</sub> sediment 388 days			
D1	Ditch	1.181	16.72	Drainage
D1	Stream	0.7401	9.378	Drainage
D3	Ditch	0.4746	0.3053	Drift
D4	Pond	0.1224	1.240	Drainage
D4	Stream	0.3880	0.4085	Drift
D5	Pond	0.1113	1.234	Drainage
D5	Stream	0.3992	0.2732	Drift
R4	Stream	0.4179	0.9130	Runoff

## List of end points

**Rapporteur Member State**      **Month and year**      Active substance and Plant Protection Product (**Name**)

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## Section 4 Environmental fate and behaviour

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)	Max PEC <sub>sed</sub> (µg/kg)	Dominant entry route
Step 3	Spring cereals Late applications DT <sub>50</sub> water 1000 days, DT <sub>50</sub> sediment 388 days			
D1	Ditch	0.6891	9.099	Drift
D1	Stream	0.4226	4.971	Drift
D3	Ditch	0.4750	0.3310	Drift
D4	Pond	0.0699	0.7047	Drainage
D4	Stream	0.4090	0.2344	Drift
D5	Pond	0.0635	0.7358	Drainage
D5	Stream	0.4142	0.1547	Drift
R4	Stream	0.4361	0.9502	Runoff

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)	Max PEC <sub>sed</sub> (µg/kg)	Dominant entry route
Step 3	Winter cereals early applications DT <sub>50</sub> water 388 days, DT <sub>50</sub> sediment 1000 days			
D1	Ditch	1.388	17.87	Drainage
D1	Stream	0.8694	9.957	Drainage
D2	Ditch	1.369	12.79	Drainage
D2	Stream	0.8551	7.493	Drainage
D3	Ditch	0.4745	0.3013	Drift
D4	Pond	0.1002	0.9519	Drainage
D4	Stream	0.3652	0.3313	Drift
D5	Pond	0.1178	1.347	Drainage
D5	Stream	0.3798	0.3043	Drift
D6	Ditch	0.7444	0.9187	Drainage
R1	Pond	0.0421	0.5490	Runoff
R1	Stream	0.3124	0.3801	Drift
R3	Stream	0.4415	0.6985	Drift
R4	Stream	0.4367	0.6238	Runoff

Scenario FOCUS	Waterbody	Max PEC <sub>sw</sub> (µg/L)	Max PEC <sub>sed</sub> (µg/kg)	Dominant entry route
Step 3	Winter cereals late applications DT <sub>50</sub> water 388 days, DT <sub>50</sub> sediment 1000 days			
D1	Ditch	0.6541	8.855	Drift
D1	Stream	0.4216	4.653	Drift
D2	Ditch	0.8686	9.077	Drainage
D2	Stream	0.5859	5.463	Drift
D3	Ditch	0.4745	0.3013	Drift
D4	Pond	0.0563	0.5044	Drainage
D4	Stream	0.4103	0.1810	Drift
D5	Pond	0.0600	0.6930	Drainage
D5	Stream	0.4426	0.1541	Drift
D6	Ditch	0.4768	0.6698	Drift
R1	Pond	0.0521	0.6473	Runoff
R1	Stream	0.3133	0.8641	Drift
R3	Stream	0.4415	0.2574	Drift
R4	Stream	0.3921	0.8717	Runoff

## List of end points

**Rapporteur Member State**      **Month and year**      Active substance and Plant Protection Product (**Name**)

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## Section 4 Environmental fate and behaviour

Scenario <b>FOCUS</b>	Waterbody	Max PEC <sub>sw</sub> (µg/L)	Max PEC <sub>sed</sub> (µg/kg)	Dominant entry route
Step 3	Spring cereals early applications DT <sub>50</sub> water 388 days, DT <sub>50</sub> sediment 1000 days			
D1	Ditch	1.181	17.50	Drainage
D1	Stream	0.7401	9.775	Drainage
D3	Ditch	0.4746	0.3054	Drift
D4	Pond	0.1220	1.246	Drainage
D4	Stream	0.3880	0.4095	Drift
D5	Pond	0.1107	1.266	Drainage
D5	Stream	0.3992	0.2779	Drift
R4	Stream	0.4178	0.9139	Runoff

Scenario <b>FOCUS</b>	Waterbody	Max PEC <sub>sw</sub> (µg/L)	Max PEC <sub>sed</sub> (µg/kg)	Dominant entry route
Step 3	Spring cereals late applications DT <sub>50</sub> water 388 days, DT <sub>50</sub> sediment 1000 days			
D1	Ditch	0.6894	9.547	Drift
D1	Stream	0.4226	5.183	Drift
D3	Ditch	0.4750	0.3311	Drift
D4	Pond	0.0696	0.7082	Drainage
D4	Stream	0.4090	0.2351	Drift
D5	Pond	0.0631	0.7551	Drainage
D5	Stream	0.4142	0.1575	Drift
R4	Stream	0.4361	0.9511	Runoff

## PEC<sub>sw</sub> values for the metabolite M12.

Scenario <b>FOCUS</b>	Waterbody	Max PEC <sub>sw</sub> (µg/L)	Max PEC <sub>sed</sub> (µg/kg)
Step 3	Winter cereals early applications DT <sub>50</sub> water 1000 days, DT <sub>50</sub> sediment 388 days		
D1	Ditch	0.4044	0.604
D1	Stream	0.2584	0.3468
D2	Ditch	0.487	0.5154
D2	Stream	0.3164	0.3123
D3	Ditch	0.1650	0.4357
D4	Pond	0.4367	0.8620
D4	Stream	0.2194	0.3042
D5	Pond	0.3007	0.6434
D5	Stream	0.1334	0.1626
D6	Ditch	0.1417	0.1479
R1	Pond	0.0187	0.0062
R1	Stream	0.0081	0.0042
R3	Stream	0.0318	0.0109
R4	Stream	0.0159	0.0042

## List of end points

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## Section 4 Environmental fate and behaviour

Scenario <b>FOCUS</b>	Waterbody	Max PEC <sub>sw</sub> (µg/L)	Max PEC <sub>sed</sub> (µg/kg)
Step 3	Winter cereals late applications DT <sub>50</sub> water 1000 days, DT <sub>50</sub> sediment 388 days		
D1	Ditch	0.2046	0.3261
D1	Stream	0.1305	0.1856
D2	Ditch	0.3189	0.3432
D2	Stream	0.2068	0.2097
D3	Ditch	0.1650	0.4356
D4	Pond	0.2114	0.4245
D4	Stream	0.1078	0.1485
D5	Pond	0.1602	0.3458
D5	Stream	0.0733	0.0865
D6	Ditch	0.0653	0.0678
R1	Pond	0.0021	0.0057
R1	Stream	0.1594	0.0080
R3	Stream	0.0387	0.0067
R4	Stream	0.0069	0.0061

Scenario <b>FOCUS</b>	Waterbody	Max PEC <sub>sw</sub> (µg/L)	Max PEC <sub>sed</sub> (µg/kg)
Step 3	Spring cereals early applications DT <sub>50</sub> water 1000 days, DT <sub>50</sub> sediment 388 days		
D1	Ditch	0.3904	0.564
D1	Stream	0.2486	0.3247
D3	Ditch	0.2270	0.5943
D4	Pond	0.4145	1.240
D4	Stream	0.1973	0.3136
D5	Pond	0.2859	0.6062
D5	Stream	0.1329	0.1474
R4	Stream	0.0072	0.0066

Scenario <b>FOCUS</b>	Waterbody	Max PEC <sub>sw</sub> (µg/L)	Max PEC <sub>sed</sub> (µg/kg)
Step 3	Spring cereals Late applications DT <sub>50</sub> water 1000 days, DT <sub>50</sub> sediment 388 days		
D1	Ditch	0.2514	0.3539
D1	Stream	0.1603	0.2032
D3	Ditch	0.1769	0.4679
D4	Pond	0.2320	0.4705
D4	Stream	0.1151	0.1736
D5	Pond	0.1698	0.3636
D5	Stream	0.0811	0.0874
R4	Stream	0.0074	0.0068

## List of end points

**Rapporteur Member State**      **Month and year**      Active substance and Plant Protection Product (**Name**)

UK	March 2019	Isoflucypram
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## Section 4 Environmental fate and behaviour

Scenario <b>FOCUS</b>	Waterbody	Max PEC <sub>sw</sub> (µg/L)	Max PEC <sub>sed</sub> (µg/kg)
Step 3	Winter cereals early applications DT <sub>50</sub> water 388 days, DT <sub>50</sub> sediment 1000 days		
D1	Ditch	0.4043	0.5605
D1	Stream	0.2599	0.3278
D2	Ditch	0.4823	0.4804
D2	Stream	0.3219	0.2983
D3	Ditch	0.2330	0.6077
D4	Pond	0.4369	0.8611
D4	Stream	0.2195	0.3041
D5	Pond	0.3008	0.6403
D5	Stream	0.1336	0.1623
D6	Ditch	0.1417	0.1461
R1	Pond	0.0021	0.0052
R1	Stream	0.0082	0.0025
R3	Stream	0.0320	0.0069
R4	Stream	0.0162	0.0025

Scenario <b>FOCUS</b>	Waterbody	Max PEC <sub>sw</sub> (µg/L)	Max PEC <sub>sed</sub> (µg/kg)
Step 3	Winter cereals late applications DT <sub>50</sub> water 388 days, DT <sub>50</sub> sediment 1000 days		
D1	Ditch	0.2046	0.3077
D1	Stream	0.1311	0.1785
D2	Ditch	0.3189	0.3225
D2	Stream	0.2104	0.2009
D3	Ditch	0.1650	0.4355
D4	Pond	0.2115	0.4242
D4	Stream	0.1078	0.1485
D5	Pond	0.1602	0.3458
D5	Stream	0.0733	0.0865
D6	Ditch	0.0653	0.0690
R1	Pond	0.0232	0.0053
R1	Stream	0.0160	0.0049
R3	Stream	0.0389	0.0060
R4	Stream	0.0070	0.0036

Scenario <b>FOCUS</b>	Waterbody	Max PEC <sub>sw</sub> (µg/L)	Max PEC <sub>sed</sub> (µg/kg)
Step 3	Spring cereals early applications DT <sub>50</sub> water 388 days, DT <sub>50</sub> sediment 1000 days		
D1	Ditch	0.3904	0.5298
D1	Stream	0.2495	0.3096
D3	Ditch	0.2770	0.5942
D4	Pond	0.4147	0.8383
D4	Stream	0.1974	0.3135
D5	Pond	0.2860	0.6043
D5	Stream	0.1330	0.1472
R4	Stream	0.0073	0.0037

## List of end points

**Rapporteur Member State**      **Month and year**      Active substance and Plant Protection Product (**Name**)

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## Section 4 Environmental fate and behaviour

Scenario <b>FOCUS</b>	Waterbody	Max PEC <sub>sw</sub> (µg/L)	Max PEC <sub>sed</sub> (µg/kg)
Step 3	Spring cereals late applications DT <sub>50</sub> water 388 days, DT <sub>50</sub> sediment 1000 days		
D1	Ditch	0.2514	0.3344
D1	Stream	0.1608	0.1949
D3	Ditch	0.1769	0.4678
D4	Pond	0.2322	0.4701
D4	Stream	0.1152	0.1735
D5	Pond	0.1699	0.3625
D5	Stream	0.0811	0.0873
R4	Stream	0.0076	0.0039

Step 4 values for all scenarios for a 20m spray drift buffer zone, Isoflucypram.

Scenario <b>FOCUS</b>	Application scenario	Waterbody	Max PEC <sub>sw</sub> (µg/L)	Max PEC <sub>sed</sub> (µg/kg)
Step 3		Winter cereals early applications DT <sub>50</sub> water 1000 days, DT <sub>50</sub> sediment 388 days		
D1	Winter cereals early	Ditch	1.388	17.70
D2	Winter cereals early	Ditch	1.369	12.66
D1	Spring cereals early	Ditch	1.181	17.05

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

### Ecotoxicology

#### Effects on birds and other terrestrial vertebrates (Regulation (EU) N° 283/2013, Annex Part A, point 8.1 and Regulation (EU) N° 284/2013, Annex Part A, point 10.1)

Species	Test substance	Time scale	End point	Toxicity (mg/kg bw per day)
Birds				
<i>Colinus virginianus</i>	a.s.	Acute	LD <sub>50</sub>	3776 <sup>a</sup>
<i>Serinus canaria</i>	a.s.	Acute	LD <sub>50</sub>	3776 <sup>a</sup>
<i>Anas platyrhynchos</i>	a.s.	Long-term	NOEL	60
<i>Colinus virginianus</i>	a.s.	Long-term	NOEL	174
Mammals				
<i>Indicate species</i>	a.s.	Acute	LD <sub>50</sub>	>2000
	a.s.	Long-term (based on decreased weight gain in female rats)	NOAEL	9.68
Endocrine disrupting properties (Annex Part A, points 8.1.5)				
On the basis of available information it is not possible to conclude on whether the substance has endocrine disrupting properties according to the scientific criteria of Commission Regulation (EU) No. 2018/605.				
Additional higher tier studies (Annex Part A, points 10.1.1.2): <i>Not provided.</i>				
Terrestrial vertebrate wildlife (birds, mammals, reptile and amphibians) (Annex Part A, points 8.1.4, 10.1.3): <i>Not provided.</i>				

<sup>a)</sup> Value extrapolated from >2000 mg a.s./kg bw as there were no mortalities at the limit dose and 10 birds per treatment level.

#### Toxicity/exposure ratios for terrestrial vertebrates (Regulation (EU) N° 284/2013, Part A, Annex point 10.1), 'Isoflucypram EC 50' at 75.0 g a.s./ha x 1 applications

Growth stage	Indicator or focal species	Time scale	DDD (mg/kg bw per day)	TER	Trigger
Screening Step (Birds)					
All	Small omnivorous bird	Acute	11.91	317	10
All	Small omnivorous bird	Long-term	2.58	23.3	5
Tier 1 (Birds): Not required					
Higher tier (birds): Not required					
Screening Step (Mammals)					
All	Small herbivorous mammal	Acute	8.88	225	10

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product ( <b>Name</b> )
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

Growth stage	Indicator or focal species	Time scale	DDD (mg/kg bw per day)	TER	Trigger
All	Small herbivorous mammal	Long-term	1.92	5.0	5
Higher tier (Mammals): not required					
<b>Risk from bioaccumulation and food chain behaviour</b>					
Indicator or focal species		Time scale	DDD (mg/kg bw per day)	TER	Trigger
Earthworm-eating birds		Long-term	0.288	208	5
Earthworm-eating mammals		Long-term	0.352	27.5	5
Fish-eating birds		Long-term	0.570	105	5
Fish-eating mammals		Long-term	0.506	19.1	5
Higher tier: not required.					
<b>Risk from consumption of contaminated water</b> <u>Puddle scenario, Screening step</u> Application rate (75.0 g a.s./ha)/relevant endpoint (Birds acute: 3776, reproduction: 60 and mammals acute: >2000, reproduction: 9.68 are all <3000 (koc≥500 L/kg), therefore TER calculation not needed.					

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

Growth stage	Indicator or focal species	Time scale	DDD (mg/kg bw per day)	TER	Trigger	
<b>Risk from metabolites of isoflucypram</b>						
<p>The metabolite BCS-CN88460-propanol-Glyc-MA (M21) was identified as occurring as &gt;10% TRR following spray application of a foliar spray application of isoflucypram on hay. Therefore, an acute and long-term risk assessment was performed considering the risk from M21 and a combined risk assessment for the risk to M21 in the presence of the active substance. (the RMS notes that this is not a standard recommendation in EFSA 2009 but has provided the combined risk assessment for information purposes as there is potential for exposure to both the active substance and M21 cocurrently). Note that due to evidence suggesting that metabolite M21 cleaves to M01 in the stomach of mammals and that M01 is covered by the risk from the parent isoflucypram (due to structural similarities, see B.6_CA), the metabolite risk assessment has been removed from the mammal section of this assessment. However, due to uncertainties about extrapolation of this theory to birds, the M21 risk assessment has been retained for birds, with the conservative assumption of 10x toxicity of the parent isoflucypram.</p>						
<u>Table 1:Risk assessment for birds from M21 and a combination of M21 and the active substance, isoflucypram</u>						
Time frame	Risk assessment	Generic focal species	DDD (mg/kg bw/d)	Endpoint (mg/kg bw)	TER	Trigger value
Acute	M21	Small omnivorous bird “lark”	0.0924	378	4091	10
	M21 + isoflucypram		0.542	2016	3720	
Long-term	M21		0.0416	6	144	5
	M21 + isoflucypram		0.1489	24	161	

The TERs are above the trigger values for M21 separately and combined with isoflucypram, for both acute and long-term risk assessments. Therefore an acceptable risk to birds and mammals from the metabolites of isoflucypram can be concluded based on the proposed use pattern of isoflucypram and no further consideration is required.

## Toxicity data for all aquatic tested species (Regulation (EU) N° 283/2013, Annex Part A, points 8.2 and Regulation (EU) N° 284/2013 Annex Part A, point 10.2)\*

\* This section does not yet reflect the new EFSA Guidance Document on aquatic organisms which has been noted in the meeting of the Standing Committee on Plants, Animals, Food and Feed on 11 July 2014.

Group	Test substance	Time-scale (Test type)	End point	Toxicity <sup>1</sup>
Laboratory tests				
Fish				
<i>Pimephales promelas</i>	a.s.	Acute 96 hr (static)	Mortality, LC <sub>50</sub>	0.0861 mg a.s./L <sub>(nom)</sub>
<i>Oncorhynchus mykiss</i>	a.s.	Acute 96 hr (static)	Mortality, LC <sub>50</sub>	0.098 mg a.s./L <sub>(gmm)</sub>
<i>Cyprinodon variegatus</i>	a.s.	Acute 96 hr (static)	Mortality, LC <sub>50</sub>	0.544 mg a.s./L <sub>(mm)</sub>

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

Group	Test substance	Time-scale (Test type)	End point	Toxicity <sup>1</sup>
<i>Oncorhynchus mykiss</i>	Isoflucypram EC50	Acute 96 hr (static)	Mortality, LC <sub>50</sub>	1.29 mg prep./L <sub>(nom)</sub> <b>(0.068 mg a.s./L<sub>(nom)</sub>)</b>
Geometric mean endpoint	a.s.	Acute 96 hr (static)	Mortality, LC <sub>50</sub>	<b>0.156 mg a.s./L (based on acute studies above)*</b>
<i>Pimephales promelas</i>	a.s.	Chronic (flow- through)	Larval survival NOEC	<b>0.01328 mg a.s./L<sub>(gmm)</sub></b>
<i>Cyprinodon variegatus</i>	a.s.	Chronic (flow- through)	Fry survival NOEC	0.025 mg a.s./L (mm)
<i>Oncorhynchus mykiss</i>	BCS-CN88460- carboxylic acid (M12)	96 hr (static)	Mortality, LC <sub>50</sub>	<b>&gt; 33.5 mg p.m./L<sub>(gmm)</sub></b>
Aquatic invertebrates				
<i>Daphnia magna</i>	a.s.	Acute 48 h (static)	Mortality, EC <sub>50</sub>	0.201 mg a.s./L <sub>(gmm)</sub>
<i>Americamysis bahia</i>	a.s.	Acute 96 h (static)	Mortality, EC <sub>50</sub>	0.27 mg a.s./L <sub>(mm)</sub>
<i>Crassostrea virginica</i>	a.s.	Acute 96 h (flow- through)	Shell deposition, EC <sub>50</sub>	0.170 mg a.s./L <sub>(mm)</sub>
<i>Daphnia magna</i>	Isoflucypram EC50	Acute 48 h (static)	Mortality, EC <sub>50</sub>	2.22 mg prep./L <b>(0.117 mg a.s./L<sub>(nom)</sub>)</b>
Geometric mean endpoint	a.s.	Acute	Mortality, EC <sub>50</sub>	<b>0.203 mg a.s./L (based on acute studies above)</b>
<i>Daphnia magna</i>	a.s.	21 d (static)	Dry body weight, NOEC  EC <sub>10</sub>	0.072 mg a.s./L <sub>(mm)</sub>  0.0584 mg a.s./L <sub>(mm)</sub>
<i>Americamysis bahia</i>	a.s.	28 d (flow- through)	14 – 28 day adult mortality, NOEC	<b>0.020 mg a.s./L<sub>(mm)</sub></b>
<i>Daphnia magna</i>	BCS-CN88460- carboxylic acid (M12)	48 h (static)	Mortality, EC <sub>50</sub>	<b>&gt;24 mg p.m./L<sub>(nom)</sub></b>

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

### Section 5 Ecotoxicology

Group	Test substance	Time-scale (Test type)	End point	Toxicity <sup>1</sup>
Sediment-dwelling organisms				
<i>Chironomus dilutus</i>	a.s.	61 d (static-renewal)	NOEC	<b>100 mg a.s./kg dry sediment<sub>(nom)</sub></b>
Algae				
<i>Navicula pelliculosa</i>	a.s.	72 h (static)	Growth rate: E <sub>r</sub> C <sub>50</sub> (NOEC)  Biomass: E <sub>b</sub> C <sub>50</sub> (NOEC)  Yield: E <sub>y</sub> C <sub>50</sub> (NOEC)]	>2.0 mg a.s./L (gmm) >0.67 mg a.s./L (gmm) >2.0 mg a.s./L (gmm) (0.67 mg a.s./L (gmm)) >2.0 mg a.s./L (gmm) (0.67 mg a.s./L (gmm))
<i>Pseudokirchneriella subcapitata</i>	a.s.	72 h (static)	Growth rate: E <sub>r</sub> C <sub>50</sub> (NOEC)  Yield: E <sub>y</sub> C <sub>50</sub> (NOEC)]	>2.02 mg a.s./L (gmm) (0.196 mg a.s./L (gmm)) >2.02 mg a.s./L (gmm) (0.196 mg a.s./L (gmm))
<i>Anabaena flos-aquae</i>	a.s.	96 h (static)	Growth rate: E <sub>r</sub> C <sub>50</sub> (NOEC)  Biomass: E <sub>b</sub> C <sub>50</sub> (NOEC)  Yield: E <sub>y</sub> C <sub>50</sub> (NOEC)]	3.7 mg a.s./L <sub>(gmm)</sub> (2.1 mg a.s./L <sub>(gmm)</sub> ) 3.0 mg a.s./L <sub>(gmm)</sub> (2.1 mg a.s./L <sub>(gmm)</sub> ) 2.9 mg a.s./L <sub>(gmm)</sub> (2.1 mg a.s./L <sub>(gmm)</sub> )

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

Group	Test substance	Time-scale (Test type)	End point	Toxicity <sup>1</sup>
<i>Skeletonema costatum</i>	a.s.	96 h (static)	Growth rate: E <sub>r</sub> C <sub>50</sub> (NOEC)  Biomass: E <sub>b</sub> C <sub>50</sub> (NOEC)  Yield: E <sub>y</sub> C <sub>50</sub> (NOEC)]	>2.538 mg a.s./L <sub>(gmm)</sub> (1.478 mg a.s./L <sub>(gmm)</sub> )  2.538 mg a.s./L <sub>(gmm)</sub> (0.589 mg a.s./L <sub>(gmm)</sub> )  1.5 mg a.s./L <sub>(gmm)</sub> (0.186 mg a.s./L <sub>(gmm)</sub> )
<i>Pseudokirchneriella subcapitata</i>	Isoflucypram EC50	72 h (static)	Growth rate: E <sub>r</sub> C <sub>50</sub> (NOEC)  Biomass: E <sub>b</sub> C <sub>50</sub> (NOEC)  Yield: E <sub>y</sub> C <sub>50</sub> (NOEC)]	3.39 mg prep./L <b>(0.179 mg a.s./L)<sub>(nom)</sub></b> (0.977 mg prep/L)  1.70 mg prep./L (0.305 mg prep./L)  1.68 mg prep./L (0.0905 mg prep./L)
<i>Pseudokirchneriella subcapitata</i>	BCS-CN88460- carboxylic-acid (M12)	72 h (static)	Growth rate: E <sub>r</sub> C <sub>50</sub> (NOEC)	>35.1 mg p.m./L (25.0 mg p.m./L) (gmm)
Higher plant				
<i>Lemna gibba</i>	a.s.	(semi-static)	<u>Fron</u> d area/fresh weight/dry weight, E <sub>r</sub> C <sub>50</sub> (NOEC)	<b>&gt;2.48 mg a.s./L</b> (gmm)
Further testing on aquatic organisms N/A				
Potential endocrine disrupting properties (Annex Part A, point 8.2.3)				

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product ( <b>Name</b> )
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

Group	Test substance	Time-scale (Test type)	End point	Toxicity <sup>1</sup>
On the basis of available information it is not possible to conclude on whether the substance has endocrine disrupting properties according to the scientific criteria of Commission Regulation (EU) No. 2018/605.				

<sup>1</sup> (nom) nominal concentration; (mm) mean measured concentration; (gmm) geometric mean measured concentration; prep.: preparation; a.s.: active substance; p.m.: pure metabolite

\*\*Please note that the approach of considering the formulation data expressed as active substance content may be suitable only for this formulation and may not be usable as Tier 2 refinement options for other formulations in national/zonal registrations.

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product ( <b>Name</b> )
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

### Bioconcentration in fish (Annex Part A, point 8.2.2.3)

	Active substance	Metabolite1	Metabolite2	Metabolite3
logP <sub>O/W</sub>	4.0	-	-	-
Steady-state bioconcentration factor (BCF) (total wet weight/normalised to 5% lipid content)	370*	-	-	-
Uptake/depuration kinetics BCF (total wet weight/normalised to 5% lipid content)	-	-	-	-
Annex VI Trigger for the bioconcentration factor	-	-	-	-
Clearance time (days) (CT <sub>50</sub> )	-	-	-	-
(CT <sub>90</sub> )	-	-	-	-
Level and nature of residues (%) in organisms after the 14 day depuration phase	-	-	-	-
Higher tier study				
Not required				

\* based on total <sup>14</sup>C or on specific compounds

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

### PEC/RAC ratios for the most sensitive aquatic organisms (Regulation (EU) N° 284/2013, Annex Part A, point 10.2)

#### FOCUS<sub>sw</sub> step 1-3 – Tier 1 PEC/RAC ratios for Isoflucypram in winter cereals (early application; March – May) at 1 x 75 g a.s./ha

Scenario	PEC <sub>sw</sub> global max (µg L)	Fish acute	Fish chronic	Aquatic invertebrates	Aquatic invertebrates chronic	Algae	Higher plant	PEC <sub>sed</sub> global max (µg/kg)	Sed. dweller prolonged
		<i>Oncorhynchus mykiss</i>	<i>Pimephales promelas</i>	<i>Daphnia magna</i>	<i>Americamysis bahia</i>	<i>Pseudokirchneriella subcapitata</i>	<i>Lemna gibba</i>		
		RAC (LC <sub>50</sub> )	RAC (NOEC)	RAC (EC <sub>50</sub> )	RAC (NOEC)	RAC (ErC <sub>50</sub> )	RAC (ErC <sub>50</sub> )		
		0.68	1.328	1.17	2.0	17.9	248.0		10000 µg a.s./kg sediment)
FOCUS Step 1		PEC/RAC ratio					FOCUS Step 1		PEC/RAC ratio
	9.63	<b>14.16</b>	<b>7.25</b>	<b>8.23</b>	<b>4.82</b>	0.54	0.04	123.53	0.01
FOCUS Step 2		PEC/RAC ratio					PEC/RAC ratio		PEC/RAC ratio
North Europe	1.73	<b>2.54</b>	<b>1.30</b>	<b>1.48</b>	0.87	0.10	0.01	North Europe 22.36	<0.01
South Europe	3.15	<b>4.63</b>	<b>2.37</b>	<b>2.69</b>	<b>1.58</b>	0.18	0.01	South Europe 41.43	<0.01
FOCUS Step 3		PEC/RAC ratio					PEC/RAC ratio		PEC/RAC ratio

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

Scenario	PEC <sub>sw</sub> global max (µg/L)	Fish acute	Fish chronic	Aquatic invertebrates	Aquatic invertebrates chronic	Algae	Higher plant	PEC <sub>sed</sub> global max (µg/kg)	Sed. dweller prolonged
		<i>Oncorhynchus mykiss</i>	<i>Pimephales promelas</i>	<i>Daphnia magna</i>	<i>Americamysis bahia</i>	<i>Pseudokirchneriella subcapitata</i>	<i>Lemna gibba</i>		<i>Chironomus riparius</i>
		RAC (LC <sub>50</sub> )	RAC (NOEC)	RAC (EC <sub>50</sub> )	RAC (NOEC)	RAC (ErC <sub>50</sub> )	RAC (ErC <sub>50</sub> )		RAC (NOEC)
		0.68	1.328	1.17	2.0	17.9	248.0		10000 µg a.s./kg sediment)
D1 ditch	1.387	<b>2.04</b>	<b>1.04</b>	<b>1.19</b>	0.69	-	-		-
D1 stream	0.869	<b>1.28</b>	0.65	0.74	0.43	-	-		-
D2 ditch	1.369	<b>2.01</b>	<b>1.03</b>	<b>1.17</b>	0.68	-	-		-
D2 stream	0.8551	<b>1.26</b>	0.64	0.73	0.43	-	-		-
D3 ditch	0.4745	0.70	0.36	0.41	0.24	-	-		-
D4 pond	0.1005	0.15	0.08	0.09	0.05	-	-		-
D4 stream	0.3652	0.54	0.28	0.31	0.18	-	-		-
D5 pond	0.1182	0.17	0.09	0.10	0.06	-	-		-
D5 stream	0.3798	0.56	0.29	0.32	0.19	-	-		-
D6 ditch	0.7443	1.09	0.56	0.64	0.37	-	-		-
R1 pond	0.0425	0.06	0.03	0.04	0.02	-	-		-
R1 stream	0.3124	0.46	0.24	0.27	0.16	-	-		-
R3 stream	0.4415	0.65	0.33	0.38	0.22	-	-		-
R4 stream	0.4364	0.64	0.33	0.37	0.32	-	-		-

Values in **bold** are > 1 and therefore high risk

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

### FOCUS<sub>sw</sub> step 1-3 – Tier 2 PEC/RAC ratios for Isoflucypram in winter cereals (early application; March – May) at 1 x 75 g a.s./ha

Scenario	PEC <sub>sw</sub> global max (µg L)	Fish acute	Fish chronic	Aquatic invertebrates
		<i>Oncorhynchus mykiss</i>	<i>Pimephales promelas</i>	<i>Daphnia magna</i>
		RAC (LC <sub>50</sub> )	RAC (NOEC)	RAC (EC <sub>50</sub> )
		1.56	1.328	2.03
FOCUS Step 1			PEC/RAC ratio	
	9.63	<b>6.17</b>	<b>7.26</b>	<b>4.74</b>
FOCUS Step 2			PEC/RAC ratio	
North Europe	1.73	<b>1.11</b>	<b>1.30</b>	0.85
South Europe	3.15	<b>2.02</b>	<b>2.37</b>	<b>1.55</b>
FOCUS Step 3			PEC/RAC ratio	
D1 ditch	1.387	0.89	<b>1.04</b>	0.68
D1 stream	0.869	0.56	0.65	0.43
D2 ditch	1.369	0.88	<b>1.03</b>	0.67
D2 stream	0.8551	0.55	0.64	0.42
D3 ditch	0.4745	0.30	0.36	0.23
D4 pond	0.1005	0.06	0.08	0.05
D4 stream	0.3652	0.23	0.28	0.18
D5 pond	0.1182	0.08	0.09	0.06
D5 stream	0.3798	0.24	0.29	0.19
D6 ditch	0.7443	0.48	0.56	0.37
R1 pond	0.0425	0.03	0.03	0.02
R1 stream	0.3124	0.20	0.24	0.15
R3 stream	0.4415	0.28	0.33	0.22
R4 stream	0.4364	0.28	0.33	0.21

Values in **bold** are > 1 and therefore high risk

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

### FOCUS<sub>sw</sub> step 1-3 – Tier 1 PEC/RAC ratios for Isoflucypram in winter cereals (late application; June – September) at 1 x 75 g a.s./ha

Scenario	PEC <sub>sw</sub> global max (µg L)	Fish acute	Fish chronic	Aquatic invertebrates	Aquatic invertebrates chronic	Algae	Higher plant	PEC <sub>sed</sub> global max (µg/kg)	Sed. dweller prolonged
		<i>Oncorhynchus mykiss</i>	<i>Pimephales promelas</i>	<i>Daphnia magna</i>	<i>Americamysis bahia</i>	<i>Pseudokirchneriella subcapitata</i>	<i>Lemna gibba</i>		<i>Chironomus riparius</i>
		RAC (LC <sub>50</sub> )	RAC (NOEC)	RAC (EC <sub>50</sub> )	RAC (NOEC)	RAC (ErC <sub>50</sub> )	RAC (ErC <sub>50</sub> )		RAC (NOEC)
		0.68	1.328	1.17	2.0	17.9	248.0		10000 µg a.s./kg sediment)
FOCUS Step 1		PEC/RAC ratio					PEC/RAC ratio		PEC/RAC ratio
	9.63	<b>14.16</b>	<b>7.25</b>	<b>8.23</b>	<b>4.82</b>	0.54	0.04	123.53	0.01
FOCUS Step 2		PEC/RAC ratio					PEC/RAC ratio		PEC/RAC ratio
North Europe	1.73	<b>2.54</b>	<b>1.30</b>	<b>1.48</b>	0.87	0.10	0.01	North Europe 22.36	<0.01
South Europe	2.44	<b>3.59</b>	<b>1.84</b>	<b>2.09</b>	<b>1.22</b>	0.14	0.01	South Europe 31.90	<0.01
FOCUS Step 3		PEC/RAC ratio					PEC/RAC ratio		PEC/RAC ratio

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

Scenario	PEC <sub>sw</sub> global max (µg L)	Fish acute	Fish chronic	Aquatic invertebrates	Aquatic invertebrates chronic	Algae	Higher plant	PEC <sub>sed</sub> global max (µg/kg)	Sed. dweller prolonged
		<i>Oncorhynchus mykiss</i>	<i>Pimephales promelas</i>	<i>Daphnia magna</i>	<i>Americamysis bahia</i>	<i>Pseudokirchneriella subcapitata</i>	<i>Lemna gibba</i>		<i>Chironomus riparius</i>
		RAC (LC <sub>50</sub> )	RAC (NOEC)	RAC (EC <sub>50</sub> )	RAC (NOEC)	RAC (ErC <sub>50</sub> )	RAC (ErC <sub>50</sub> )		RAC (NOEC)
		0.68	1.328	1.17	2.0	17.9	248.0		10000 µg a.s./kg sediment)
D1 ditch	0.6537	0.96	0.49	0.56	0.33	-	-		-
D1 stream	0.4216	0.62	0.32	0.36	0.21	-	-		-
D2 ditch	0.8686	<b>1.28</b>	0.65	0.74	0.43	-	-		-
D2 stream	0.5859	0.86	0.44	0.50	0.29	-	-		-
D3 ditch	0.4755	0.70	0.36	0.41	0.24	-	-		-
D4 pond	0.0529	0.08	0.04	0.05	0.03	-	-		-
D4 stream	0.4103	0.60	0.31	0.35	0.21	-	-		-
D5 pond	0.0600	0.09	0.05	0.05	0.03	-	-		-
D5 stream	0.4426	0.65	0.33	0.38	0.22	-	-		-
D6 ditch	0.4768	0.70	0.36	0.41	0.24	-	-		-
R1 pond	0.0531	0.08	0.04	0.05	0.03	-	-		-
R1 stream	0.3133	0.46	0.24	0.27	0.16	-	-		-
R3 stream	0.4415	0.65	0.33	0.38	0.22	-	-		-
R4 stream	0.3921	0.58	0.30	0.34	0.29	-	-		-

Values in **bold** are > 1 and therefore high risk

## FOCUS<sub>sw</sub> step 1-3 – Tier 2 PEC/RAC ratios for Isoflucypram in winter cereals (late application; June – September) at 1 x 75 g a.s./ha

Scenario	PEC <sub>sw</sub> global max (µg L)	Fish acute
		<i>Oncorhynchus mykiss</i>
		RAC (LC <sub>50</sub> )
		1.56
FOCUS Step 1		PEC/RAC ratio
	9.63	<b>6.17</b>

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

Scenario	PEC <sub>sw</sub> global max (µg L)	Fish acute
		<i>Oncorhynchus mykiss</i>
		RAC (LC <sub>50</sub> )
		1.56
FOCUS Step 2		PEC/RAC ratio
North Europe	1.73	<b>1.11</b>
South Europe	2.44	<b>1.56</b>
FOCUS Step 3		PEC/RAC ratio
D1 ditch	0.6537	0.42
D1 stream	0.4216	0.27
D2 ditch	0.8686	0.56
D2 stream	0.5859	0.38
D3 ditch	0.4755	0.30
D4 pond	0.0529	0.03
D4 stream	0.4103	0.26
D5 pond	0.06	0.04
D5 stream	0.4426	0.28
D6 ditch	0.4768	0.31
R1 pond	0.0531	0.03
R1 stream	0.3133	0.20
R3 stream	0.4415	0.28
R4 stream	0.3921	0.25

Values in **bold** are > 1 and therefore high risk

**FOCUS<sub>sw</sub> step 1-3 – Tier 1 PEC/RAC ratios for Isoflucypram in spring cereals (early application; March - May) at 1 x 75 g a.s./ha**

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

Scenario	PEC <sub>sw</sub> global max (µg L)	Fish acute	Fish chronic	Aquatic invertebrates	Aquatic invertebrates chronic	Algae	Higher plant	PEC <sub>sed</sub> global max (µg/kg)	Sed. dweller prolonged
		<i>Oncorhynchus mykiss</i>	<i>Pimephales promelas</i>	<i>Daphnia magna</i>	<i>Americamysis bahia</i>	<i>Pseudokirchneriella subcapitata</i>	<i>Lemna gibba</i>		<i>Chironomus riparius</i>
		RAC (LC <sub>50</sub> )	RAC (NOEC)	RAC (EC <sub>50</sub> )	RAC (NOEC)	RAC (ErC <sub>50</sub> )	RAC (ErC <sub>50</sub> )		RAC (NOEC)
		0.68	1.328	1.17	2.0	17.9	248.0		10000 µg a.s./kg sediment)
FOCUS Step 1		PEC/RAC ratio					PEC/RAC ratio		PEC/RAC ratio
	9.63	<b>14.16</b>	<b>7.25</b>	<b>8.23</b>	<b>4.82</b>	0.54	0.04	123.53	0.01
FOCUS Step 2		PEC/RAC ratio					PEC/RAC ratio		PEC/RAC ratio
North Europe	1.73	<b>2.54</b>	<b>1.30</b>	<b>1.48</b>	0.87	0.10	0.01	North Europe 22.36	<0.01
South Europe	3.15	<b>4.63</b>	<b>2.37</b>	<b>2.69</b>	<b>1.58</b>	0.18	0.01	South Europe 41.43	<0.01
FOCUS Step 3		PEC/RAC ratio					PEC/RAC ratio		PEC/RAC ratio
D1 ditch	1.181	<b>1.74</b>	0.89	<b>1.01</b>	0.59	-	-		-
D1 stream	0.7401	<b>1.09</b>	0.56	0.63	0.37	-	-		-
D3 ditch	0.4746	0.70	0.36	0.41	0.24	-	-		-
D4 pond	0.1224	0.18	0.09	0.10	0.06	-	-		-
D4 stream	0.3880	0.57	0.29	0.33	0.19	-	-		-
D5 pond	0.1113	0.16	0.08	0.10	0.06	-	-		-
D5 stream	0.3992	0.59	0.30	0.34	0.20	-	-		-
R4 stream	0.4179	0.61	0.31	0.36	0.21	-	-		-

Values in **bold** are > 1 and therefore high risk

**FOCUS<sub>sw</sub> step 1-3 – Tier 2 PEC/RAC ratios for Isoflucypram in spring cereals (early application; March - May) at 1 x 75 g a.s./ha**

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

Scenario	PEC <sub>sw</sub> global max (µg L)	Fish acute	Aquatic invertebrates
		<i>Oncorhynchus mykiss</i>	<i>Daphnia magna</i>
		RAC (LC <sub>50</sub> )	RAC (EC <sub>50</sub> )
		1.56	2.03
FOCUS Step 1		PEC/RAC ratio	
	9.63	<b>6.17</b>	<b>4.74</b>
FOCUS Step 2			
North Europe	1.73	<b>1.11</b>	0.85
South Europe	3.15	<b>2.02</b>	<b>1.55</b>
FOCUS Step 3			
D1 ditch	1.181	0.76	0.49
D1 stream	0.7401	0.47	0.31
D3 ditch	0.4746	0.30	0.23
D4 pond	0.1224	0.08	0.04
D4 stream	0.388	0.25	0.20
D5 pond	0.1113	0.07	0.04
D5 stream	0.3992	0.26	0.20
R4 stream	0.4179	0.27	0.19

Values in **bold** are > 1 and therefore high risk

**FOCUS<sub>sw</sub> step 1-3 – Tier 1 PEC/RAC ratios for Isoflucypram in spring cereals (late application; June - September) at 1 x 75 g a.s./ha**

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

Scenario	PEC <sub>sw</sub> global max (µg L)	Fish acute	Fish chronic	Aquatic invertebrates	Aquatic invertebrates chronic	Algae	Higher plant	PEC <sub>sed</sub> global max (µg/kg)	Sed. dweller prolonged
		<i>Oncorhynchus mykiss</i>	<i>Pimephales promelas</i>	<i>Daphnia magna</i>	<i>Americamysis bahia</i>	<i>Pseudokirchneriella subcapitata</i>	<i>Lemna gibba</i>		<i>Chironomus riparius</i>
		RAC (LC <sub>50</sub> )	RAC (NOEC)	RAC (EC <sub>50</sub> )	RAC (NOEC)	RAC (ErC <sub>50</sub> )	RAC (ErC <sub>50</sub> )		RAC (NOEC)
		0.68	1.328	1.17	2.0	17.9	248.0		10000 µg a.s./kg sediment)
FOCUS Step 1		PEC/RAC ratio					PEC/RAC ratio		PEC/RAC ratio
	9.63	<b>14.16</b>	<b>7.25</b>	<b>8.23</b>	<b>4.82</b>	0.54	0.04	123.53	0.01
FOCUS Step 2		PEC/RAC ratio					PEC/RAC ratio		PEC/RAC ratio
North Europe	1.73	<b>2.54</b>	<b>1.30</b>	<b>1.48</b>	0.87	0.10	0.01	North Europe 22.36	<0.01
South Europe	2.44	<b>3.59</b>	<b>1.84</b>	<b>2.09</b>	<b>1.22</b>	0.14	0.01	South Europe 31.90	<0.01
FOCUS Step 3		PEC/RAC ratio					PEC/RAC ratio		PEC/RAC ratio
D1 ditch	0.6891	<b>1.01</b>	0.52	0.59	0.34	-	-		-
D1 stream	0.4226	0.62	0.32	0.36	0.21	-	-		-
D3 ditch	0.4750	0.70	0.36	0.41	0.24	-	-		-
D4 pond	0.0699	0.10	0.05	0.06	0.03	-	-		-
D4 stream	0.4090	0.60	0.31	0.35	0.20	-	-		-
D5 pond	0.0635	0.09	0.05	0.05	0.03	-	-		-
D5 stream	0.4142	0.61	0.31	0.35	0.21	-	-		-
R4 stream	0.4361	0.64	0.33	0.37	0.22	-	-		-

Values in **bold** are > 1 and therefore high risk

**FOCUS<sub>sw</sub> step 1-3 – Tier 2 PEC/RAC ratios for Isoflucypram in spring cereals (late application; June - September) at 1 x 75 g a.s./ha**

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

Scenario	PEC <sub>sw</sub> global max (µg L)	Fish acute
		<i>Oncorhynchus mykiss</i>
		RAC (LC <sub>50</sub> )
		1.56
FOCUS Step 1		PEC/RAC ratio
	9.63	<b>6.17</b>
FOCUS Step 2		PEC/RAC ratio
North Europe	1.73	<b>1.11</b>
South Europe	2.44	<b>1.56</b>
FOCUS Step 3		PEC/RAC ratio
D1 ditch	0.6891	0.44
D1 stream	0.4226	0.27
D3 ditch	0.475	0.30
D4 pond	0.0699	0.04
D4 stream	0.409	0.26
D5 pond	0.0635	0.04
D5 stream	0.4142	0.27
R4 stream	0.4361	0.28

Values in **bold** are > 1 and therefore high risk

## FOCUS<sub>sw</sub> step 4

For early application of isoflucypram in Winter cereals, there is an unresolved chronic risk to fish for the D1 and D2 ditch scenarios; for early application of isoflucypram in Spring cereals, there is an unresolved chronic risk to fish for the D1 ditch scenario.

As the main entry route for the D1 and D2 scenarios is driven by drainage, it is not possible to mitigate the risk under current EU models at FOCUS Step 4.

## Metabolites

**FOCUS<sub>sw</sub> step 1-3 – Tier 1 PEC/RAC ratios for BCS-CN88460-carboxylic acid (M12) in winter cereals at 1 x 75 g a.s./ha\***

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

Scenario	PEC <sub>sw</sub> global max (µg L)	Fish acute	Fish chronic	Aquatic invertebrates	Aquatic invertebrates chronic	Algae	Higher plant	PEC <sub>sed</sub> global max (µg/kg)	Sed. dweller prolonged
		<i>Oncorhynchus mykiss</i>	<i>Pimephales promelas</i>	<i>Daphnia magna</i>	<i>Americamysis bahia</i>	<i>Pseudokirchneriella subcapitata</i>	<i>Lemna gibba</i>		
		RAC (LC <sub>50</sub> )	RAC (NOEC)	RAC (EC <sub>50</sub> )	RAC (NOEC)	RAC (ErC <sub>50</sub> )	RAC (ErC <sub>50</sub> )		RAC (NOEC)
		335	1.328	240	2.0	3510	248.0		10000 µg a.s./kg sediment)
FOCUS Step 1					PEC/RAC ratio			PEC/RAC ratio	PEC/RAC ratio
	4.2	0.01	<b>3.16</b>	0.02	<b>2.10</b>	<0.01	0.02	1.56	<0.01
FOCUS Step 2					PEC/RAC ratio			PEC/RAC ratio	PEC/RAC ratio
North Europe	0.70	<0.01	0.53	<0.01	0.35	-	-	North Europe 0.26	<0.01
South Europe	1.35	<0.01	<b>1.02</b>	0.01	0.68	-	-	South Europe 0.50	<0.01
FOCUS Step 3					PEC/RAC ratio			PEC/RAC ratio	PEC/RAC ratio

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

Scenario	PEC <sub>sw</sub> global max (µg L)	Fish acute	Fish chronic	Aquatic invertebrates	Aquatic invertebrates chronic	Algae	Higher plant		PEC <sub>sed</sub> global max (µg/kg)	Sed. dweller prolonged
		<i>Oncorhynchus mykiss</i>	<i>Pimephales promelas</i>	<i>Daphnia magna</i>	<i>Americamysis bahia</i>	<i>Pseudokirchneriella subcapitata</i>	<i>Lemna gibba</i>			<i>Chironomus riparius</i>
		RAC (LC <sub>50</sub> )	RAC (NOEC)	RAC (EC <sub>50</sub> )	RAC (NOEC)	RAC (ErC <sub>50</sub> )	RAC (ErC <sub>50</sub> )			RAC (NOEC)
		335	1.328	240	2.0	3510	248.0			10000 µg a.s./kg sediment)
D1 ditch	0.4044	-	0.30	-	-	-	-	-	-	-
D1 stream	0.2584	-	0.19	-	-	-	-	-	-	-
D2 ditch	0.487	-	0.37	-	-	-	-	-	-	-
D2 stream	0.3164	-	0.24	-	-	-	-	-	-	-
D3 ditch	0.1650	-	0.12	-	-	-	-	-	-	-
D4 pond	0.4367	-	0.33	-	-	-	-	-	-	-
D4 stream	0.2194	-	0.17	-	-	-	-	-	-	-
D5 pond	0.3007	-	0.23	-	-	-	-	-	-	-
D5 stream	0.1334	-	0.10	-	-	-	-	-	-	-
D6 ditch	0.1417		0.11	-	-	-	-	-	-	-
R1 pond	0.0187		0.01	-	-	-	-	-	-	-
R1 stream	0.0081		0.01	-	-	-	-	-	-	-
R3 stream	0.03184		0.02	-	-	-	-	-	-	-
R4 stream	0.0159		0.01	-	-	-	-	-	-	-

Values in **bold** are > 1 and therefore high risk

\*PEC values for early application considered as these also cover the risk from late application

## FOCUS<sub>sw</sub> step 1-3 – Tier 1 PEC/RAC ratios for BCS-CN88460-carboxylic acid (M12) in spring cereals at 1 x 75 g a.s./ha\*

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

Scenario	PEC <sub>sw</sub> global max (µg L)	Fish acute	Fish chronic	Aquatic invertebrates	Aquatic invertebrates chronic	Algae	Higher plant	PEC <sub>sed</sub> global max (µg/kg)	Sed. dweller prolonged
		<i>Oncorhynchus mykiss</i>	<i>Pimephales promelas</i>	<i>Daphnia magna</i>	<i>Americamysis bahia</i>	<i>Pseudokirchneriella subcapitata</i>	<i>Lemna gibba</i>		<i>Chironomus riparius</i>
		RAC (LC <sub>50</sub> )	RAC (NOEC)	RAC (EC <sub>50</sub> )	RAC (NOEC)	RAC (ErC <sub>50</sub> )	RAC (ErC <sub>50</sub> )		RAC (NOEC)
		335	1.328	240	2.0	3510	248.0		10000 µg a.s./kg sediment)
FOCUS Step 1		PEC/RAC ratio					FOCUS Step 1		PEC/RAC ratio
	4.2	0.01	<b>3.16</b>	0.02	<b>2.10</b>	<0.01	0.02	1.56	<0.01
FOCUS Step 2		PEC/RAC ratio					PEC/RAC ratio		PEC/RAC ratio
North Europe	0.70	<0.01	0.53	<0.01	0.35	-	-	North Europe 0.26	<0.01
South Europe	1.35	<0.01	<b>1.02</b>	0.01	0.68	-	-	South Europe 0.50	<0.01
FOCUS Step 3		PEC/RAC ratio					PEC/RAC ratio		PEC/RAC ratio
D1 ditch	0.3904	-	0.29	-	-	-	-	-	-
D1 stream	0.2486	-	0.19	-	-	-	-	-	-
D3 ditch	0.2270	-	0.17	-	-	-	-	-	-
D4 pond	0.4145	-	0.31	-	-	-	-	-	-
D4 stream	0.1973	-	0.15	-	-	-	-	-	-
D5 pond	0.2859	-	0.22	-	-	-	-	-	-
D5 stream	0.1329	-	0.10	-	-	-	-	-	-
R4 stream	0.0072	-	0.01	-	-	-	-	-	-

Values in **bold** are > 1 and therefore high risk

\*PEC values for early application considered as these also cover the risk from late application

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

### Effects on bees (Regulation (EU) N° 283/2013, Annex Part A, point 8.3.1 and Regulation (EU) N° 284/2013 Annex Part A, point 10.3.1)\*

\* This section does reflect the new EFSA Guidance Document on bees which has not yet been noted by the Standing Committee on Plants, Animals, Food and Feed.

Species	Test substance	Time scale/type of endpoint	End point	toxicity
<i>Apis mellifera</i>	a.s.,	Acute	Oral toxicity (LD <sub>50</sub> )	<b>&gt;106.3 µg a.s./bee</b>
<i>Bombus terrestris</i>	a.s.	Acute	Oral toxicity (LD <sub>50</sub> )	>200.2 µg a.s./ bee
<i>Apis mellifera</i>	Isoflucypram EC 50	Acute	Oral toxicity (LD <sub>50</sub> )	<b>69.1µg a.s./bee</b>
<i>Apis mellifera</i>	a.s.,	Acute	Contact toxicity (LD <sub>50</sub> )	<b>&gt;100 µg a.s./bee</b>
<i>Apis mellifera</i>	a.s.,	Acute	Contact toxicity (LD <sub>50</sub> )	>100 µg a.s./bee
<i>Bombus terrestris</i>	a.s.	Acute	Contact toxicity (LD <sub>50</sub> )	>100 µg a.s./bee
<i>Apis mellifera</i>	Isoflucypram EC 50	Acute	Contact toxicity (LD <sub>50</sub> )	<b>14.1 µg a.s./bee</b>
<i>Apis mellifera</i>	Isoflucypram SC 200	Chronic	10 d-LDD <sub>50</sub> 10 d-NOEDD	>89.7 µg a.s./bee/day 89.7 µg a.s./bee/day (equivalent to 3333 mg a.s./kg diet)

Potential for accumulative toxicity: No

Semi-field test (Cage and tunnel test)

‘Isoflucypram EC50’

**Peters and Rohland (2016):** One application of ‘Isoflucypram EC50’ was made at a rate of 75 g a.s./ha (1.512 mL product/ha) to *Phacelia tanacetifolia* at BBCH 65 in a tunnel test conducted in Germany. *Apis mellifera* were exposed for 7 days followed by a monitoring period of 21 days. A reduction in flight intensity was observed 1 – 3 hours after application in the treatment group. Behavioural effects were also observed on the day of application.

**Hein (2017):** One application of ‘Isoflucypram EC50’ was made at a rate of 75 g a.s./ha (1447.7 g product/ha) to *Phacelia tanacetifolia* at BBCH 65 in a tunnel test conducted in Germany. *Apis mellifera* were exposed for 7 days followed by a monitoring period of 36 days. A reduction in flight intensity was observed 15 – 45 minutes after application in the treatment group. Behavioural effects were also observed on the day of application.

**Schmitzer (2017):** One application of ‘Isoflucypram EC50’ was made at a rate of 75 g a.s./ha (1.42 kg product/ha) to *Phacelia tanacetifolia* at BBCH 65 in a tunnel test conducted in Germany. *Apis mellifera* were exposed for 7 days followed by a monitoring period of 22 days. No clear effects of the test item were observed. Residue levels of up to 0.0206 and 13.1 mg/kg were measured in nectar and pollen respectively.

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

**Vallon (2017)):** One application of ‘Isoflucypram EC50’ was made at a rate of 75 g a.s./ha (1447.7 g product/ha) to *Phacelia tanacetifolia* at BBCH 65 in a tunnel test conducted in Spain. *Apis mellifera* were exposed for 7 days followed by a monitoring period of 36 days. No clear effects of the test item were observed. Residue levels of up to 0.073 and 33.0 mg/kg were measured in nectar and pollen respectively.

### **Risk assessment conclusion for ‘Isoflucypram EC50’**

The available data indicate that exposure to ‘Isoflucypram EC50’ may result in a decrease in foraging activity and other behavioural effects shortly following application; however, the effects were transient and inconsistent between studies and did not result in an overall adverse effect on the colony. Therefore the RMS considers the effects from these studies to be acceptable and supportive of the acceptable risk concluded at tier 1.

## Risk assessment for – ‘Isoflucypram EC50’ at 75 g a.s./ha

Species	Test substance	Risk quotient	HQ	Trigger
<i>Apis mellifera</i>	a.s., ‘Isoflucypram EC50’	HQ <sub>oral</sub>	<0.71 1.09	50
<i>Apis mellifera</i>	a.s., ‘Isoflucypram EC50’	HQ <sub>contact</sub>	<0.75 5.32	50

## Effects on other arthropod species (Regulation (EU) N° 283/2013, Annex Part A, point 8.3.2 and Regulation (EU) N° 284/2013 Annex Part A, point 10.3.2)

### Laboratory tests with standard sensitive species

Species	Test Substance	End point	Toxicity
<i>Typhlodromus pyri</i>	‘Isoflucypram EC 50’	Mortality, LR <sub>50</sub>	30.6 g/ha
<i>Aphidius rhopalosiphi</i>	‘Isoflucypram EC 50’	Mortality, LR <sub>50</sub>	14.13 g/ha
Additional species: None submitted at laboratory stage			

## First tier risk assessment for ‘Isoflucypram EC 50’ at 75.0 g a.s./ha x 1 application

Test substance	Species	Effect (LR <sub>50</sub> g/ha)	HQ in-field	HQ off-field <sup>1</sup>	Trigger
‘Isoflucypram EC 50’	<i>Typhlodromus pyri</i>	30.6	<b>2.5</b>	0.07	2
‘Isoflucypram EC 50’	<i>Aphidius rhopalosiphi</i>	14.13	<b>5.3</b>	0.15	2

<sup>1</sup> at 1 metre distance

**Bold** indicates that further refinements are required

## List of end points

Rapporteur Member State

Month and year

Active substance and Plant  
Protection Product (**Name**)

UK	March 2019	Isoflucypram
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## Section 5 Ecotoxicology

### Extended laboratory tests, aged residue tests

Species	Life stage	Test substance, substrate	Time scale	Dose (g a.s./ha)	End point	% effect <sup>1</sup>	ER <sub>50</sub>
<i>Typhlodromus pyri</i>	Protonymphs	'Isoflucypram EC 50' Bean leaves	Mortality: 7 days, Reproduction: 7 days	7.5	Mortality	6.7	> 42.2
				13.3	Reproduction	44.4	
				23.7	Mortality	9.0	
				42.2	Reproduction	31.3	
				75.0	Mortality	4.5	
					Reproduction	19.2	
					Mortality	19.9	
					Reproduction	21.2	
					Mortality	10.1	
					Reproduction	64.0	
<i>Aphidius rhopalosiphi</i>	Protonymphs	'Isoflucypram EC 50' Barley seedlings	Mortality: 24 h, Reproduction: 11 days	7.5	Mortality	0.0	> 7.5
				13.3	Reproduction	45.8	
				23.7	Mortality	0.0	
				42.2	Reproduction	53.8	
				75.0	Mortality	6.7	
					Reproduction	77.0	
					Mortality	6.7	
					Reproduction	62.8	
					Mortality	3.3	
					Reproduction	60.6	
<i>Chrysoperla carnea</i>	Larvae	'Isoflucypram EC 50' Bean leaves	36 days	7.5	Mortality	-5.3	> 75
				13.3	Reproduction	6.2	
				23.7	Mortality	13.2	
				42.2	Reproduction	1.4	
				75.0	Mortality	0.0	
					Reproduction	-3.1	
					Mortality	13.2	
					Reproduction	1.2	
					Mortality	10.5	
					Reproduction	-2.5	

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

Species	Life stage	Test substance, substrate	Time scale	Dose (g a.s./ha)	End point	% effect <sup>1</sup>	ER <sub>50</sub>
<i>Coccinella septempunctata</i>	Larvae	'Isoflucypram EC 50' Bean leaves	43 days	7.5	Mortality	-5.3	> 75
					Reproduction	19.0	
				13.3	Mortality	-2.2	
					Reproduction	12.0	
				23.7	Mortality	-11.8	
					Reproduction	30.0	
				42.2	Mortality	2.9	
					Reproduction	31.0	
<i>Aphidius rhopalosiphi</i>	Adult	Mortality: Potted maize plants, Reproduction: barley seedlings	Mortality: 48 h, Reproduction: 10 -12 days	75.0	0DAT: Mortality	3.3	<50% effects at 75.0 g a.s./ha
					Reproduction	44.7	
					14DAT: Mortality	0.0	
					Reproduction	13.8	

<sup>3</sup> Positive percentages relate to adverse effects

**Risk assessment** for 'Isoflucypram EC 50' at 75.0 g a.s./ha x 1 application based on extended lab test or aged residue tests

Species	ER <sub>50</sub> (g/ha)	In-field rate
<b>Extended laboratory tests</b>		
<i>A. rhopalosiphi</i>	> <b>7.50</b>	75.0
<i>T. pyri</i>	> <b>42.2</b>	75.0
<i>C. carnea</i>	> 75	75.0
<i>C. septempunctata</i>	> 75	75.0
<b>Aged residue tests</b>		
<i>A. rhopalosiphi</i>	< 50 % effects at 0DAT and 14DAT	75.0

**Bold** indicates that further refinements are required

Semi-field tests
None submitted

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

Field studies
None submitted
Additional specific test
None submitted

## Effects on non-target soil meso- and macro fauna; effects on soil nitrogen transformation (Regulation (EU) N° 283/2013, Annex Part A, points 8.4, 8.5, and Regulation (EU) N° 284/2013 Annex Part A, points 10.4, 10.5)

Test organism	Test substance	Application method of test a.s./ OM <sup>1</sup>	Time scale	End point	Toxicity
Earthworms					
<i>Eisenia fetida</i>	a.s.	Mixed/10%	Chronic	Reproduction	NOEC: 56 mg a.s./kg d.w.soil <b>NOEC<sub>corr</sub>: 28 mg a.s./kg d.w.soil</b>
<i>Eisenia fetida</i>	'Isoflucypram EC50'	Mixed/10%	Chronic	Reproduction	NOEC: 560 mg formulation/ kg d.w.soil (29 mg a.s./ kg d.w.soil) <b>NOEC<sub>corr</sub>: 280 mg formulation/ kg d.w.soil (14.5 mg a.s./ kg d.w.soil)</b>
<i>Eisenia fetida</i>	BCS-CN88460-carboxylic acid (M12)	Mixed/10%	Chronic	Growth/reproduction	NOEC: 100 mg p.m./kg d.w.soil <b>NOEC<sub>corr</sub>: 50 mg p.m./kg d.w.soil</b>
Other soil macroorganisms					
<i>Folsomia candida</i>	a.s.	Mixed/5%	Chronic	Reproduction	NOEC: 99 mg a.s./kg d.w.soil <b>NOEC<sub>corr</sub>: 49.5 mg a.s./kg d.w.soil</b>

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

Test organism	Test substance	Application method of test a.s./ OM <sup>1</sup>	Time scale	End point	Toxicity
<i>Folsomia candida</i>	'Isoflucypram EC50'	Mixed/5%	Chronic	Reproduction	<p>NOEC: 100 mg formulation/ kg d.w.soil (5.18 mg a.s./ kg d.w.soil) <b>NOEC<sub>corr</sub>: 50 mg formulation/ kg d.w.soil (2.59 mg a.s./ kg d.w.soil)</b></p> <p>EC<sub>10</sub>: 98 mg formulation/ kg d.w.soil (5.08 mg a.s./ kg d.w.soil) EC<sub>10corr</sub>: 49 mg formulation/ kg d.w.soil (2.54 mg a.s./ kg d.w.soil)</p> <p>EC<sub>20</sub>: 127 mg formulation/ kg d.w.soil (6.58 mg a.s./ kg d.w.soil) EC<sub>20corr</sub>: 63.5 mg formulation/ kg d.w.soil (3.29 mg a.s./ kg d.w.soil)</p>

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
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UK	March 2019	Isoflucypram
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## Section 5 Ecotoxicology

Test organism	Test substance	Application method of test a.s./ OM <sup>1</sup>	Time scale	End point	Toxicity
<i>Folsomia candida</i>	BCS-CN88460-carboxylic acid (M12)	Mixed/5%	Chronic	Reproduction	NOEC: 18 mg p.m./kg d.w.soil <b>NOEC<sub>corr</sub>: 9 mg p.m./kg d.w.soil</b>  EC <sub>10</sub> : 13 mg p.m./kg d.w.soil EC <sub>10corr</sub> : 6.5 mg p.m./kg d.w.soil  EC <sub>20</sub> : 20 mg p.m./kg d.w.soil EC <sub>20corr</sub> : 10 mg p.m./kg d.w.soil
<i>Hypoaspis aculeifer</i>	a.s.	Mixed/5%	Chronic	Reproduction	NOEC: 990 mg a.s./ kg d.w.soil <b>NOEC<sub>corr</sub>: 495 mg a.s./ kg d.w.soil</b>

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

### Section 5 Ecotoxicology

Test organism	Test substance	Application method of test a.s./ OM <sup>1</sup>	Time scale	End point	Toxicity
<i>Hypoaspis aculeifer</i>	'Isoflucypram EC50'	Mixed/5%	Chronic	Reproduction	<p>NOEC: 316 mg formulation/ kg d.w.soil (16.37 mg a.s./ kg d.w.soil) <b>NOECcorr: 158 mg formulation/ kg d.w.soil (8.18 mg a.s./ kg d.w.soil)</b></p> <p>EC<sub>10</sub>: 362 mg formulation/ kg d.w.soil (18.75 mg a.s./ kg d.w.soil) EC<sub>10corr</sub>: 181 mg formulation/ kg d.w.soil (9.38 mg a.s./ kg d.w.soil)</p> <p>EC<sub>20</sub>: 422 mg formulation/ kg d.w.soil (21.86 mg a.s./ kg d.w.soil) EC<sub>20corr</sub>: 211 mg formulation/ kg d.w.soil (10.93 mg a.s./ kg d.w.soil)</p>
<i>Hypoaspis aculeifer</i>	BCS-CN88460-carboxylic acid (M12)	Mixed/5%	Chronic	Reproduction	<p>NOEC: 990 mg a.s./ kg d.w.soil <b>NOECcorr: 495 mg a.s./ kg d.w.soil</b></p>

<sup>1</sup>To indicate whether the test substance was oversprayed/to indicate the organic content of the test soil (e.g. 5 % or 10 %).

Higher tier testing (e.g. modelling or field studies)

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

Nitrogen transformation	a.s.  'Isoflucypram EC50'	28 days	<25% effect at day 28 at 0.53 mg a.s./kg d.w.soil (375g a.s./ha) < 25% effect at day 28 at 9.74 mg formulation./kg (7.5 L formulation/ha) equivalent to 0.5 mg a.s./kg d.w.soil (375 g a.s./ha)
	BCS-CN88460-carboxylic acid (M12)	28 days	25% effect at day 28 at 0.54 mg p.m./kg d.w.soil (403 g p.m./ha)

## Toxicity/exposure ratios for soil organisms

### Risk assessment for 'Isoflucypram EC50' at 75 g a.s./ha

Test organism	Test substance	Time scale	Soil PEC <sub>max</sub> <sup>1</sup> (mg/kg)	TER	Trigger
Earthworms					
<i>Eisenia fetida</i>	a.s.	Chronic	0.0616 <sup>1</sup>	455	5
<i>Eisenia fetida</i>	'Isoflucypram EC50'	Chronic	0.0616 <sup>1</sup>	235*	5
<i>Eisenia fetida</i>	BCS-CN88460-carboxylic acid (M12)	Chronic	0.0001 <sup>2</sup>	500000	5
Other soil macroorganisms					
<i>Folsomia candida</i>	a.s.	Chronic	0.0616 <sup>1</sup>	804	5
<i>Folsomia candida</i>	'Isoflucypram EC50'	Chronic	0.0616 <sup>1</sup>	42*	5
<i>Folsomia candida</i>	BCS-CN88460-carboxylic acid (M12)	Chronic	0.0001 <sup>2</sup>	90000	5
<i>Hypoaspis aculeifer</i>	a.s.	Chronic	0.0616 <sup>1</sup>	8036	5
<i>Hypoaspis aculeifer</i>	'Isoflucypram EC50'	Chronic	0.0616 <sup>1</sup>	133*	5
<i>Hypoaspis aculeifer</i>	BCS-CN88460-carboxylic acid (M12)	Chronic	0.0001 <sup>2</sup>	4950000	5

<sup>1</sup>mg a.s./kg dws

<sup>2</sup>mg pure metabolite/kg dws

\*Calculated based on the endpoint expressed as a.s. content

## Soil nitrogen transformation

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

### Risk assessment for 'Isoflucypram EC50' at 75 g a.s./ha

Compound	Species	Endpoint [mg a.s./kg]	PEC <sub>soil,max</sub> [mg/kg]	>25% effects at PEC <sub>soil,max</sub>
Isoflucypram EC50	Soil micro-organisms	0.50*	0.0616 <sup>1</sup>	No
Isoflucypram	Soil micro-organisms	0.53	0.0616 <sup>1</sup>	No
BCS-CN88460-carboxylic acid (M12)	Soil micro-organisms	0.54	0.0001 <sup>2</sup>	No

<sup>1</sup>mg a.s./kg dws

<sup>2</sup>mg pure metabolite/kg dws

\*Expressed as a.s. content of the formulation

### Effects on terrestrial non target higher plants (Regulation (EU) N° 283/2013, Annex Part A, point 8.6 and Regulation (EU) N° 284/2013 Annex Part A, point 10.6)

#### Screening data

Seedling emergence screening data (single dose of 75.0 g a.s./ha) on 10 species showed that there were no effects  $\geq 50\%$  at a rate of 75 g a.s./ha, showing an acceptable risk. Despite this, the applicant provided a dose-response seedling emergence study on 4 species (TER conducted on this data below).

There was no screening data for vegetative vigour. Instead, a dose-response study was conducted on 10 species and the risk assessment for this is also detailed below.

#### Dose-response data

Dose response data						
Species	Test substance	ER <sub>50</sub> (g a.s./ha) vegetative vigour	ER <sub>50</sub> (g a.s./ha) emergence	Exposure <sup>1</sup> (g a.s./ha)	TER	Trigger
<i>Beta vulgaris</i>	'Isoflucypram EC 50'	> 75.0	> 75.0	2.0775	36.1	5
<i>Brassica napus</i>						
<i>Cucumis sativus</i> <sup>3</sup>						
<i>Glycine max</i>						
<i>Helianthus annuus</i> <sup>2</sup>						
<i>Solanum lycopersicum</i> <sup>2</sup>						
<i>Allium cepa</i>						
<i>Avena sativa</i> <sup>2</sup>						
<i>Lolium perenne</i> <sup>2</sup>						
<i>Zea mays</i> <sup>2</sup>						
Extended laboratory studies : None submitted.						
Semi-field and field test: None submitted.						

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product (Name)
UK	March 2019	Isoflucypram

## Section 5 Ecotoxicology

<sup>1</sup> exposure has been estimated based on maximum application rate x drift factor of 0.0277 (based on Ganzelmeier *et al*, 1995 drift data)

<sup>2</sup> This species was not included in the seedling emergence dose-response study.

## Effects on biological methods for sewage treatment (Regulation (EU) N° 283/2013, Annex Part A, point 8.8)

Test type/organism	end point
Activated sludge	EC <sub>50</sub> based on respiration rate: 1 000 000 µg a.s/L

## Conclusion:

The max PEC<sub>SW</sub> at FOCUS step 1 (as confirmed in the dossier for Environmental Fate and Behaviour B8 for 'Isoflucypram EC 59') is 9.63 µg a.s/L. As the EC<sub>50</sub> is much greater than the PEC<sub>SW</sub> value, no adverse effects are expected with regard to activated sewage sludge and the risk does not require further consideration.

## Monitoring data (Regulation (EU) N° 283/2013, Annex Part A, point 8.9 and Regulation (EU) N° 284/2013, Annex Part A, point 10.8)

None.
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## Definition of the residue for monitoring (Regulation (EU) N° 283/2013, Annex Part A, point 7.4.2) Ecotoxicologically relevant compounds<sup>1</sup>

Compartment	
soil	Isoflucypram
water	Isoflucypram
sediment	Isoflucypram
groundwater	Isoflucypram

<sup>1</sup> metabolites are considered relevant when, based on the risk assessment, they pose a risk comparable or higher than the parent

## List of end points

Rapporteur Member State	Month and year	Active substance and Plant Protection Product ( <b>Name</b> )
UK	March 2019	Isoflucypram

### Section 5 Ecotoxicology

#### Classification and labelling with regard to ecotoxicological data (Regulation (EU) N° 283/2013, Annex Part A, Section 10)

Substance	Isoflucypram
Harmonised classification according to Regulation (EC) No 1272/2008 and its Adaptations to Technical Process [Table 3.1 of Annex VI of Regulation (EC) No 1272/2008 as amended] <sup>11</sup> :	N/A
Peer review proposal <sup>12</sup> for harmonised classification according to Regulation (EC) No 1272/2008:	Acute Category 1 H400; M-Factor = 10 Chronic Category 1 H410; M-Factor = 1

<sup>11</sup> Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. OJ L 353, 31.12.2008, 1-1355.

<sup>12</sup> It should be noted that harmonised classification and labelling is formally proposed and decided in accordance with Regulation (EC) No 1272/2008. Proposals for classification made in the context of the evaluation procedure under Regulation (EC) No 1107/2009 are not formal proposals.

**List of end points**

<b>Rapporteur Member State</b>	<b>Month and year</b>	<b>Active substance and Plant Protection Product (<b>Name</b>)</b>
UK	March 2019	Isoflucypram

**Appendix****Used compounds code(s)**

<b>Code/Trivial name*</b>	<b>IUPAC name/SMILES notation</b>	<b>Structural formula</b>

\* The compound code / trivial name in bold is the name used in the list of endpoints.

## List of end points

Rapporteur Member State	Month and year	Microbial or Viral Agent (Name)
UK	March 2019	Isoflucypram

### FORMAT FOR THE LISTING OF END POINTS FOR A MICROBIAL OR VIRAL PEST CONTROL AGENT (MPCA) USED IN PLANT PROTECTION

#### General remark:

Testing of microorganisms will often be made using specifically tailored studies. Therefore, e. g. toxicity/effects endpoints may differ from case to case. This endpoint list can therefore be seen as indicative only, to be adapted in order to fit individual cases.

#### Identity, Biological properties, Details of uses, Further information, and Proposed Classification and Labelling

Active microorganism:	
Function ( <i>e.g.</i> control of fungi):	
Rapporteur Member State:	
Co-rapporteur Member State:	
<b>Identity of the Microbial or Viral Agent used in plant protection / Active Substance ) (Regulation (EU) N° 283/2013, Annex Part B, point 1 )</b>	
Name of the organism:	
Taxonomy:	
Species, subspecies, strain:	
Identification / detection:	
Culture collection:	
Minimum and maximum concentration of the MPCA used for manufacturing of the formulated product (cfu; g/kg):	
Identity and content of relevant impurities, additives, contaminating organisms in the technical grade of MPCA:	
Is the MPCA genetically modified; if so provide type of modification	

**List of end points**

<b>Rapporteur Member State</b>	<b>Month and year</b>	<b>Microbial or Viral Agent (Name)</b>
UK	March 2019	Isoflucypram

**Biological properties of the microorganism** (Regulation (EU) N° 283/2013, Annex Part B, point 2)

Origin and natural occurrence,	
Background level:	
Target organism(s):	
Mode of action:	
Host specificity:	
Life cycle:	
Infectivity, dispersal and colonisation ability:	
Relationships to known plant, animal or human pathogens:	
Genetic stability:	
Information on the production of relevant metabolites (especially toxins):	
Resistance/ sensitivity to antibiotics / anti-microbial agents used in human or veterinary medicine:	

## List of end points

Rapporteur Member State	Month and year	Microbial or Viral Agent (Name)
UK	March 2019	Isoflucypram

### Summary of uses supported by available data (Regulation (EU) N° 283/2013, Annex Part B, point 3)

Crop and /or situation	Member state or Country	Product name	F G or	Pest or Group of pests controlled	Preparation		Application				Application rate per treatment			PHI (days)	Remarks
					Type (d-f)	Conc. of MPCA (i)	Method Kind (f-h)	Growth stage & season (j)	Number min max (k)	Interval between applications (min)	kg MPCA/hL min max	water L/ha min max	kg MPCA/ha cfu MPCA/ha min max		
(a)			I (b)	(c)										(l)	(m)




- (a) For crops, the EU and Codex classifications (both) should be used; where relevant, the use situation should be described (*e.g.* fumigation of a structure)
- (b) Outdoor or field use (F), glasshouse application (G) or indoor application (I)
- (c) *e.g.* biting and sucking insects, soil born insects, foliar fungi, weeds
- (d) *e.g.* wettable powder (WP), emulsifiable concentrate (EC), granule (GR)
- (e) CropLife International Technical Monograph no 2, 6th Edition. Revised May 2008. Catalog of pesticide.
- (f) All abbreviations used must be explained
- (g) Method, *e.g.* high volume spraying, low volume spraying, spreading, dusting, drench

- (h) Kind, *e.g.* overall, broadcast, aerial spraying, row, individual plant, between the plant - type of equipment used must be indicated
- (I) cfu = colony forming units and g/kg or g/L
- (j) Growth stage at last treatment (BBCH Monograph, Growth Stages of Plants, 1997, Blackwell, ISBN 3-8263-3152-4), including where relevant, information on season at time of application
- (k) Indicate the minimum and maximum number of applications possible under practical conditions of use
- (l) PHI - minimum pre-harvest interval
- (m) Remarks may include: Extent of use/economic importance/restrictions

## List of end points

Rapporteur Member State	Month and year	Active Substance
UK	March 2019	Isoflucypram

## Classification and proposed labelling (Symbol, Indication of danger, Risk phrases, Safety phrases)

with regard to physical/chemical data:																							
with regard to toxicological data:																							
with regard to fate and behaviour:																							
with regard to ecotoxicological data:	<table> <tr> <td colspan="2"><b>Classification</b></td></tr> <tr> <td>Hazard category</td><td>H400 (M-Factor = 10) H410 (M-Factor = 1)</td></tr> <tr> <td>Hazard statement</td><td>H400 'Very toxic to aquatic life' H410 'Very toxic to aquatic life with long lasting effects'*</td></tr> <tr> <td colspan="2"><b>Labelling</b></td></tr> <tr> <td>Signal words</td><td>'Warning'</td></tr> <tr> <td>GHS09 Pictogram</td><td></td></tr> <tr> <td>Hazard statements</td><td>H410 'Very toxic to aquatic life with long lasting effects'*</td></tr> <tr> <td>Precautionary statements</td><td>P391 'Collect Spillage' P501 'Dispose of contents/ container to ...' (in accordance with local/ regional/ national/ international regulation - to be specified)'</td></tr> <tr> <td>Hazard statements</td><td>H410 'Very toxic to aquatic life with long lasting effects'*</td></tr> <tr> <td>Precautionary statements</td><td>P391 'Collect Spillage'</td></tr> <tr> <td>Note</td><td>* In line with Article 27 of CLP, to avoid unnecessary duplication of hazard statements, for labelling purposes where the criteria indicates H400 applies <u>in addition to</u> H410, the appropriate 'hazard statement' for inclusion on the label is 'H410' - together with its associated pictogram and 'signal word'.</td></tr> </table>	<b>Classification</b>		Hazard category	H400 (M-Factor = 10) H410 (M-Factor = 1)	Hazard statement	H400 'Very toxic to aquatic life' H410 'Very toxic to aquatic life with long lasting effects'*	<b>Labelling</b>		Signal words	'Warning'	GHS09 Pictogram		Hazard statements	H410 'Very toxic to aquatic life with long lasting effects'*	Precautionary statements	P391 'Collect Spillage' P501 'Dispose of contents/ container to ...' (in accordance with local/ regional/ national/ international regulation - to be specified)'	Hazard statements	H410 'Very toxic to aquatic life with long lasting effects'*	Precautionary statements	P391 'Collect Spillage'	Note	* In line with Article 27 of CLP, to avoid unnecessary duplication of hazard statements, for labelling purposes where the criteria indicates H400 applies <u>in addition to</u> H410, the appropriate 'hazard statement' for inclusion on the label is 'H410' - together with its associated pictogram and 'signal word'.
<b>Classification</b>																							
Hazard category	H400 (M-Factor = 10) H410 (M-Factor = 1)																						
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<b>Labelling</b>																							
Signal words	'Warning'																						
GHS09 Pictogram																							
Hazard statements	H410 'Very toxic to aquatic life with long lasting effects'*																						
Precautionary statements	P391 'Collect Spillage' P501 'Dispose of contents/ container to ...' (in accordance with local/ regional/ national/ international regulation - to be specified)'																						
Hazard statements	H410 'Very toxic to aquatic life with long lasting effects'*																						
Precautionary statements	P391 'Collect Spillage'																						
Note	* In line with Article 27 of CLP, to avoid unnecessary duplication of hazard statements, for labelling purposes where the criteria indicates H400 applies <u>in addition to</u> H410, the appropriate 'hazard statement' for inclusion on the label is 'H410' - together with its associated pictogram and 'signal word'.																						

## List of end points

Rapporteur Member State	Month and year	Active Substance
UK	March 2019	Isoflucypram

**Methods of analysis** (Regulation (EU) N° 283/2013, Annex Part B, point 4 and Regulation (EU) N° 284/2013, Annex Part B, point 5)

### Analytical methods for the microorganism (MA 4.1 & MP 5.1)

Manufactured microorganism (principle of method):	
Impurities and contaminating microorganisms in manufactured material (principle of method):	
Microbial Pest Control Product (principle of method):	

### Analytical methods for residues (viable and non-viable) in exposed compartments and organisms (MA 4.2 & MP 5.2)

of the active microorganism (principle of method):	
of relevant metabolites (principle of method):	

## List of end points

Rapporteur Member State	Month and year	Active Substance
UK	March 2019	Isoflucypram

**Impact on Human and Animal Health** (Regulation (EU) N° 283/2013, Annex Part B, point 5 and Regulation (EU) N° 284/2013, Annex Part B, point 7)

Medical data: (including medical surveillance on manufacturing plant personnel) (MA 5.1.1) )	
Sensitisation: (MA 5.2.1 & MP 7.2.3 )	
Acute oral infectivity, toxicity and pathogenicity: (MA 5.2.2.1 & MP 7.1.1)	
Acute intratracheal/inhalation infectivity, toxicity and pathogenicity: (MA 5.2.2.2 & MP 7.1.2)	
Acute intravenous/intraperitoneal infectivity: (MA 5.2.2.3)	
Genotoxicity: (MA 5.2.3)	
Cell culture study: (MA 5.2.4)	
Information on short-term toxicity and pathogenicity: (MA 5.2.5)	
Dermal toxicity: (MP 7.1.3)	
Specific toxicity, pathogenicity and infectivity: (MA 5.3)	
Genotoxicity – <i>in vivo</i> studies in germ cells: (MA 5.5)	

## Reference values

AOEL:	
ADI:	
ARfD:	
<b>Exposure (operator, workers, bystander, consumer):</b> (MA 6.1 & MP 7.3, 8.0)	

**Residues** (Regulation (EU) N° 283/2013, Annex Part B, point 6 and Regulation (EU) N° 284/2013, Annex Part B, point 8)

Viable residues:	
Non-viable residues:	

## List of end points

Rapporteur Member State	Month and year	Active Substance
UK	March 2019	Isolfucypram

**Fate and Behaviour in the Environment** (Regulation (EU) N° 283/2013, Annex Part B, point 7 and Regulation (EU) N° 284/2013, Annex Part B, point 9)

Persistence and multiplication (competitiveness) in soil, water and air:	
Mobility:	

**Effects on non-target organisms** (Regulation (EU) N° 283/2013, Annex Part B, point 8 and Regulation (EU) N° 284/2013, Annex Part B, point 10)

### Effects on birds (MA 8.1 & MP 10.1)

Application rate (kg MPCA/ha)	Crop	Category (e.g. insectivorous bird) and species	Time-scale	Toxicity, infectivity and pathogenicity (endpoint, value or other description of effects)

### Effects on aquatic organisms (MA 8.2 & 10.2)

Group	Test substance	Time-scale	Toxicity, infectivity and pathogenicity (endpoint, value or other description of effects)
<b>Laboratory tests</b>			
Fish species (specify):			
Invertebrate species: (specify)			

## List of end points

Rapporteur Member State	Month and year	Active Substance
UK	March 2019	Isoflucypram

<b>Effects on algae:</b> (species, growth, growth rate, capacity to recover) (MA 8.2.3 & MP 10.2)	
<b>Effects on aquatic plants</b> (species, growth, growth rate, capacity to recover)(MA 8.2.4 & MP 10.2)	

### Effects on bees (MA 8.3 & MP 10.3)

Species	Crop	Test Substance	Route/time-scale	Toxicity, infectivity and pathogenicity (endpoint, value or other description of effects)
<b>Laboratory Tests</b>				
<b>Other types of test</b>				

### Effects on terrestrial arthropods other than bees (MA 8.4 & MP 10.4)

Species	Stage	Test Substance	Dose (kg MPCA/ha)	Toxicity, infectivity and pathogenicity (endpoint, value or other description of effects)
<b>Laboratory Tests</b>				

### Effects on other terrestrial invertebrates (MA 8.5 & MP 10.5)

## List of end points

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Toxicity, infectivity and pathogenicity: (endpoint, value or other description of effects)	
Further information:	

### Effects on soil microorganisms (MA 8.6 & MP 10.6)

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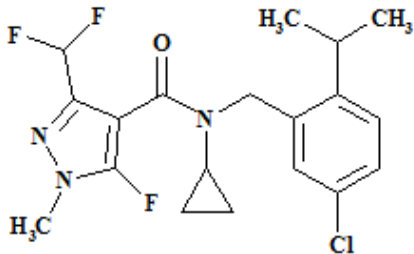
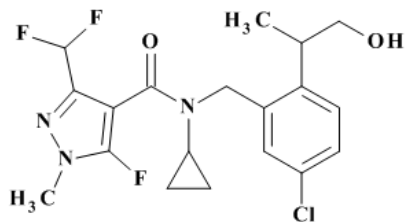
### Additional studies (MA 8.7 & MP 10.7)

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## List of end points

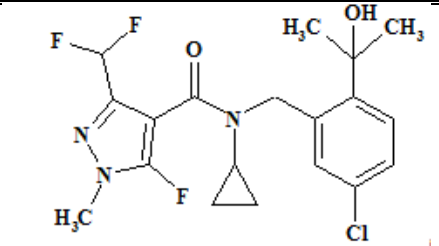
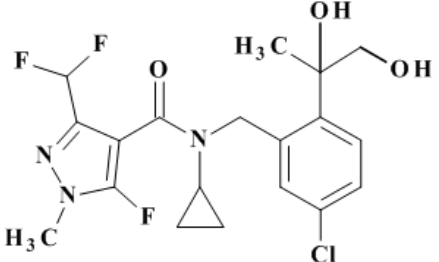
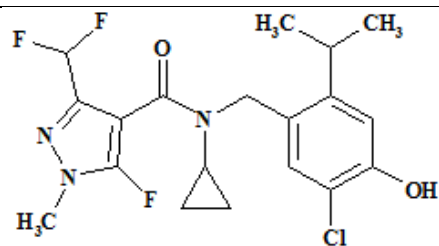
Rapporteur Member State	Month and year	Active Substance (Name)
UK	March 2019	Isoflucypram

## Substances and metabolites referred to in this document:

No.	Structure Empirical formula [Nominal mass]	Name Code no. Synonyms	IUPAC name	Found in:
a.s.	 <p><math>C_{19}H_{21}ClF_3N_3O</math> [399] Molecular weight: 399.84 g/mol</p>	<p><b>isoflucypram</b> BCS-CN88460 CAS: 1255734-28-1 ISY LYAM823-1-2 smiles code: <chem>C1(C(F)F)C(C(=O)N(CC3=C(C(C)C)C=CC(Cl)=C3)C2CC2)=C(F)N(C)N=1</chem></p>	<p>N-(5-chloro-2-isopropylbenzyl)-N-cyclopropyl-3-(difluoromethyl)-5-fluoro-1-methyl-1H-pyrazole-4-carboxamide</p> <p>CA name: 1H-pyrazole-4-carboxamide, N-[[5-chloro-2-(1-methyl-ethyl)phenyl]methyl]-N-cyclopropyl-3-(difluoromethyl)-5-fluoro-1-methyl-</p>	<p>animal: rat (faeces, liver, kidney); hen (eggs, muscle leg, fat); goat (milk, muscle, fat, liver, kidney, faeces) sunfish (edible parts, viscera)</p> <p>plant: soybean (forage, hay, straw, seed); wheat (hay, straw, grain); CRC (wheat forage, Swiss chard, turnip leaves); oilseed rape (intermediate harvest, mature plants, seeds), tomatoes</p> <p>soil: aerobic &amp; anaerobic, field dissipation, photolysis</p> <p>water: hydrolysis, photolysis, water-sediment</p>
M01	 <p><math>C_{19}H_{21}ClF_3N_3O_2</math> [415]</p>	<p><b>BCS-CN88460-propanol</b> BCS-CY24813 (M01)</p>	<p>N-[5-chloro-2-(1-hydroxypropan-2-yl)benzyl]-N-cyclopropyl-3-(difluoromethyl)-5-fluoro-1-methyl-1H-pyrazole-4-carboxamide</p>	<p>animal: rat (faeces); hen (eggs, muscle, fat, liver, excreta); goat (muscle, fat, liver, kidney, faeces, urine); sunfish (edible parts, viscera)</p> <p>plant: wheat hay, straw)</p> <p>soil: -</p> <p>water: -</p>

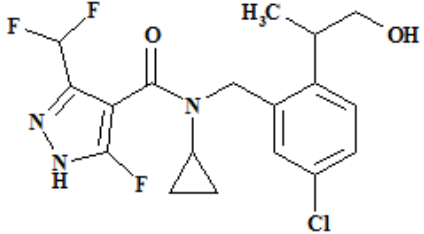
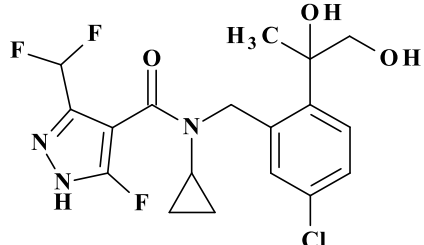
# List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
UK	March 2019	Isoflucypram

No.	Structure Empirical formula [Nominal mass]	Name Code no. Synonyms	IUPAC name	Found in:
M02	 $C_{19}H_{21}ClF_3N_3O_2$ [415]	<b>BCS-CN88460-2-propanol</b> BCS-DC20298 (M02)	N-[5-chloro-2-(2-hydroxypropan-2-yl)benzyl]-N-cyclopropyl-3-(difluoromethyl)-5-fluoro-1-methyl-1H-pyrazole-4-carboxamide	animal: rat (faeces); goat (milk, muscle, fat, liver, kidney, faeces, urine) plant: - soil: - water: -
M03	 $C_{19}H_{21}ClF_3N_3O_3$ [431]	<b>BCS-CN88460-1,2-propandiol</b>	N-[5-chloro-2-(1,2-dihydroxypropan-2-yl)benzyl]-N-cyclopropyl-3-(difluoromethyl)-5-fluoro-1-methyl-1H-pyrazole-4-carboxamide	animal: hen (excreta) plant: - soil: - water: -
M04		<b>BCS-CN88460-hydroxyphenyl</b>	N-(5-chloro-4-hydroxy-2-isopropylbenzyl)-N-cyclopropyl-3-(difluoromethyl)-5-fluoro-1-methyl-1H-pyrazole-4-carboxamide	animal: goat (urine) plant: - soil: - water: -

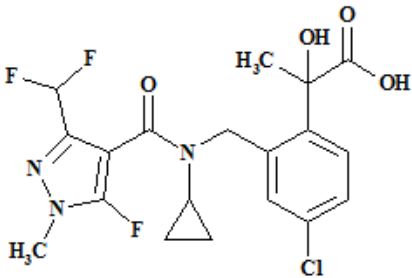
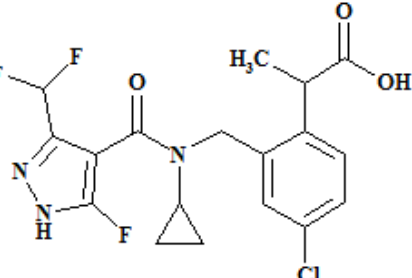
# List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
UK	March 2019	Isoflucypram

No.	Structure Empirical formula [Nominal mass]	Name Code no. Synonyms	IUPAC name	Found in:
	C <sub>19</sub> H <sub>21</sub> ClF <sub>3</sub> N <sub>3</sub> O <sub>2</sub> [415]			
M06	 C <sub>18</sub> H <sub>19</sub> ClF <sub>3</sub> N <sub>3</sub> O <sub>2</sub> [401]	<b>BCS-CN88460-desmethyl-propanol</b> BCS-DC22055 (M06)	N-[5-chloro-2-(1-hydroxypropan-2-yl)benzyl]-N-cyclopropyl-3-(difluoromethyl)-5-fluoro-1H-pyrazole-4-carboxamide	animal: rat (faeces, bile); hen (eggs, muscle, fat, liver, excreta); goat (milk, muscle, fat, liver, kidney, faeces, urine); sunfish (edible parts, viscera) plant: wheat (straw) soil: - water: -
M07	 C <sub>18</sub> H <sub>19</sub> ClF <sub>3</sub> N <sub>3</sub> O <sub>3</sub> [417]	<b>BCS-CN88460-desmethyl-1,2-propandiol</b>	N-[5-chloro-2-(1,2-dihydroxypropan-2-yl)benzyl]-N-cyclopropyl-3-(difluoromethyl)-5-fluoro-1H-pyrazole-4-carboxamide	animal: hen (eggs, muscle, fat, liver, excreta) plant: - soil: - water: -

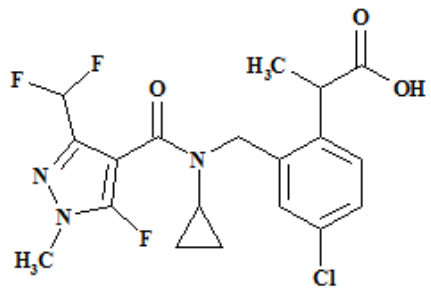
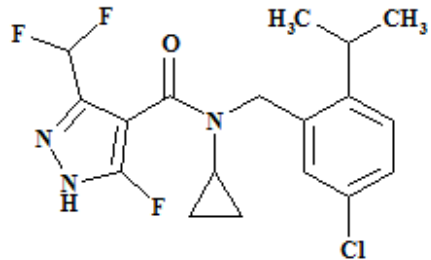
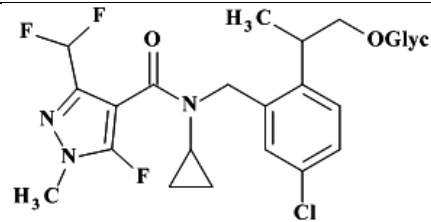
# List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
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No.	Structure Empirical formula [Nominal mass]	Name Code no. Synonyms	IUPAC name	Found in:
M10	 <p><math>C_{19}H_{19}ClF_3N_3O_4</math> [445]</p>	<b>BCS-CN88460-lactic acid</b> ROI 3	2-{4-chloro-2-[(cyclopropyl{[3-(difluoromethyl)-5-fluoro-1-methyl-1H-pyrazol-4-yl]carbonyl}amino)methyl]phenyl}-2-hydroxypropanoic acid	animal: rat (faeces, plasma, liver, kidney, bile); goat (liver, kidney, faeces, urine) plant: - soil: met., aerobic water: -
M11	 <p><math>C_{18}H_{17}ClF_3N_3O_3</math> [415]</p>	<b>BCS-CN88460-desmethyl-carboxylic acid</b> BCS-CX99799 ROI 5	2-{4-chloro-2-[(cyclopropyl{[3-(difluoromethyl)-5-fluoro-1H-pyrazol-4-yl]carbonyl}amino)methyl]phenyl}propionic acid	animal: rat (urine, faeces, plasma, liver, kidney, bile); hen (muscle, fat, liver, excreta); goat (liver, kidney, faeces, urine) plant: - soil: met., aerobic water: -

# List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
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No.	Structure Empirical formula [Nominal mass]	Name Code no. Synonyms	IUPAC name	Found in:
M12	 <p>C<sub>19</sub>H<sub>19</sub>ClF<sub>3</sub>N<sub>3</sub>O<sub>3</sub> [429]</p>	<p><b>BCS-CN88460-carboxylic acid</b></p> <p>BCS-CY26497 MXM 7275-1-5 ROI 1</p> <p>smiles code: C1(CN(C(=O)C3C(C(F)F)=N N(C)C=3F)C2CC2)=C(C(C)C (=O)O)C=CC(Cl)=C1</p>	2-{4-chloro-2-[(cyclopropyl{3-(difluoromethyl)-5-fluoro-1-methyl-1H-pyrazol-4-yl]-carbonyl}amino)-methyl]phenyl}-propanoic acid	<p>animal: rat (urine, faeces, plasma, liver, kidney, bile); hen (eggs, muscle, fat, liver, excreta); goat (muscle, fat, liver, kidney, faeces, urine)</p> <p>plant: -</p> <p>soil: met., aerobic</p> <p>water: met., aerobic</p>
M13	 <p>C<sub>18</sub>H<sub>19</sub>ClF<sub>3</sub>N<sub>3</sub>O [385]</p>	<p><b>BCS-CN88460-desmethyl</b></p>	N-(5-chloro-2-isopropylbenzyl)-N-cyclopropyl-3-(difluoromethyl)-5-fluoro-1H-pyrazole-4-carboxamide	<p>animal: rat (faeces, plasma, liver, kidney); sunfish (edible parts, viscera)</p> <p>plant: -</p> <p>soil: -</p> <p>water: -</p>
M18		<p><b>BCS-CN88460-propanol-Glyc</b></p>	N-{5-chloro-2-[1-(hexopyranosyloxy)propan-2-yl]benzyl}-N-cyclopropyl-3-(difluoromethyl)-5-fluoro-1-methyl-1H-pyrazole-4-carboxamide	<p>animal: -</p> <p>plant: wheat (hay, straw)</p> <p>soil: -</p> <p>water: -</p>

# List of end points

**Rapporteur Member State**

**Month and year**

**Active Substance (Name)**

UK	March 2019	Isoflucypram
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No.	Structure Empirical formula [Nominal mass]	Name Code no. Synonyms	IUPAC name	Found in:
	C <sub>25</sub> H <sub>31</sub> Cl F <sub>3</sub> N <sub>3</sub> O <sub>7</sub> [577]			

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## Rapporteur Member State

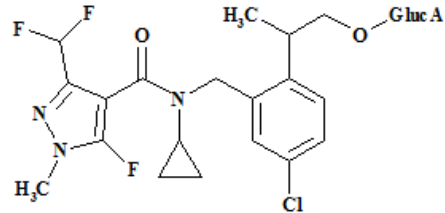
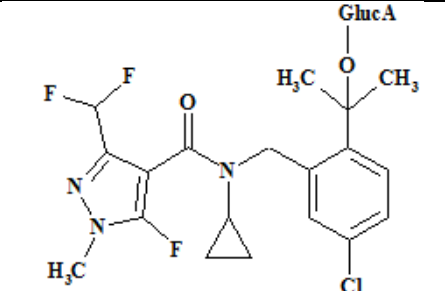
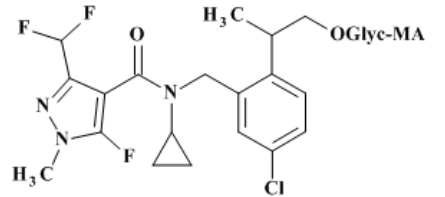
## Month and year

## Active Substance (Name)

UK

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Isoflucypram

No.	Structure Empirical formula [Nominal mass]	Name Code no. Synonyms	IUPAC name	Found in:
M19	 <p>C<sub>25</sub>H<sub>29</sub>ClF<sub>3</sub>N<sub>3</sub>O<sub>8</sub> [591]</p>	BCS-CN88460-propanol-GlucA (isomer 1 and 2)	2-{4-chloro-2-[(cyclopropyl{[3-(difluoromethyl)-5-fluoro-1-methyl-1H-pyrazol-4-yl]-carbonyl}amino)methyl]phenyl}propyl glucopyranosiduronic acid	animal: rat (faeces, bile); goat (milk, muscle, liver, kidney, faeces, urine); sunfish (edible parts, viscera)  plant: - soil: - water: -
M20	 <p>C<sub>25</sub>H<sub>29</sub>ClF<sub>3</sub>N<sub>3</sub>O<sub>8</sub> [591]</p>	BCS-CN88460-2-propanol-GlucA	2-{4-chloro-2-[(cyclopropyl{[3-(difluoromethyl)-5-fluoro-1-methyl-1H-pyrazol-4-yl]carbonyl}amino)methyl]phenyl}propan-2-yl beta-D-glucopyranosiduronic acid	animal: goat (liver, kidney, faeces, urine)  plant: - soil: - water: -
M21	 <p>C<sub>28</sub>H<sub>33</sub>ClF<sub>3</sub>N<sub>3</sub>O<sub>10</sub> [663]</p>	BCS-CN88460-propanol-Glyc-MA	2-{4-chloro-2-[(cyclopropyl{[3-(difluoromethyl)-5-fluoro-1-methyl-1H-pyrazol-4-yl]-carbonyl}amino)methyl]phenyl}propyl 6-O-(carboxyacetyl)hexopyranoside	animal: - plant: wheat (hay, straw); oilseed rape (intermediate harvest, mature plants) soil: - water: -

# List of end points

## Rapporteur Member State

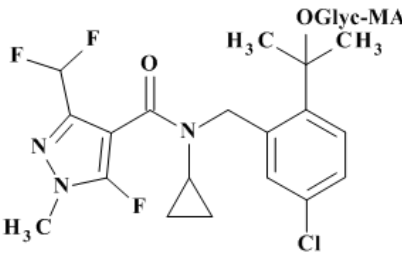
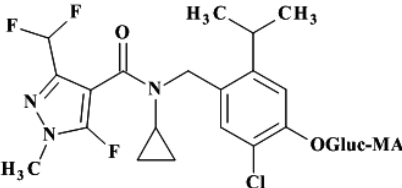
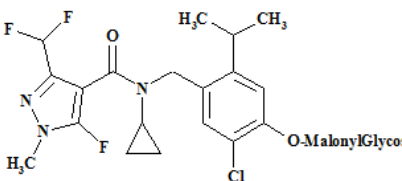
## Month and year

## Active Substance (Name)

UK

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Isoflucypram

No.	Structure Empirical formula [Nominal mass]	Name Code no. Synonyms	IUPAC name	Found in:
M22	 <p>C<sub>28</sub>H<sub>33</sub>ClF<sub>3</sub>N<sub>3</sub>O<sub>10</sub> [663]</p>	BCS-CN88460-2-propanol-Glyc-MA	2-{4-chloro-2-[(cyclopropyl{[3-(difluoromethyl)-5-fluoro-1-methyl-1H-pyrazol-4-yl]-carbonyl}amino)-methyl]phenyl}propan-2-yl 6-O-(carboxy-acetyl)hexopyranoside	animal: - plant: oilseed rape (intermediate harvest, mature plants) soil: - water: -
M23	 <p>C<sub>28</sub>H<sub>33</sub>ClF<sub>3</sub>N<sub>3</sub>O<sub>10</sub> [663]</p>	BCS-CN88460-hydroxyphenyl-Gluc-MA	2-chloro-4-[(cyclopropyl{[3-(difluoromethyl)-5-fluoro-1-methyl-1H-pyrazol-4-yl]-carbonyl}amino)-methyl]-5-isopropyl-phenyl 6-O-(carboxyacetyl)-beta-D-glucopyranoside	animal: - plant: oilseed rape (intermediate harvest, mature plants) soil: - water: -
M24	 <p>C<sub>28</sub>H<sub>33</sub>ClF<sub>3</sub>N<sub>3</sub>O<sub>10</sub> [663]</p>	BCS-CN88460-hydroxyphenyl-Glyc-MA	2-chloro-4-[(cyclopropyl{[3-(difluoromethyl)-5-fluoro-1-methyl-1H-pyrazol-4-yl]-carbonyl}amino)-methyl]-5-isopropyl-phenyl 6-O-(carboxyacetyl)-hexopyranoside	animal: - plant: oilseed rape (intermediate harvest, mature plants) soil: - water: -

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Rapporteur Member State

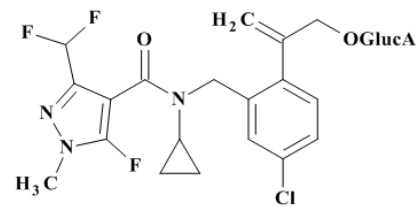
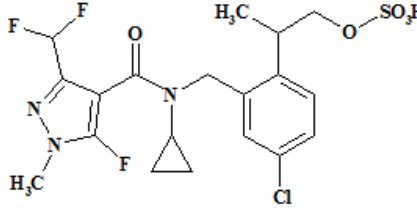
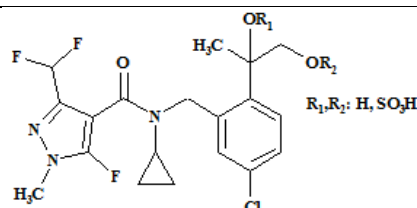
Month and year

Active Substance (Name)

UK

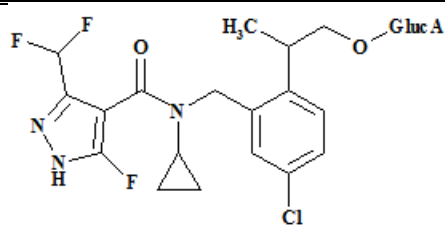
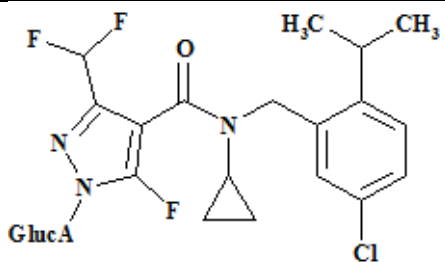
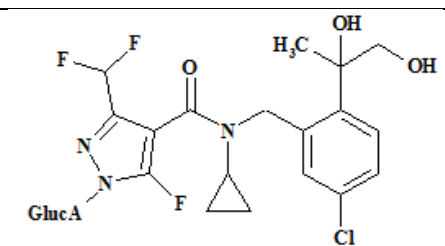
March 2019

Isoflucypram

No.	Structure Empirical formula [Nominal mass]	Name Code no. Synonyms	IUPAC name	Found in:
M25	 <p>C<sub>25</sub>H<sub>27</sub>ClF<sub>3</sub>N<sub>3</sub>O<sub>8</sub> [589]</p>	BCS-CN88460-propenol-GlucA	2-{4-chloro-2-[(cyclopropyl){3-(difluoromethyl)-5-fluoro-1-methyl-1H-pyrazol-4-yl]carbonyl}amino)methyl]phenyl}prop-2-en-1-yl beta-D-glucopyranosiduronic acid	animal: goat (kidney, urine) plant: - soil: - water: -
M26	 <p>C<sub>19</sub>H<sub>21</sub>ClF<sub>3</sub>N<sub>3</sub>O<sub>5</sub>S [495]</p>	BCS-CN88460-propanol-SA	2-{4-chloro-2-[(cyclopropyl){3-(difluoromethyl)-5-fluoro-1-methyl-1H-pyrazol-4-yl]carbonyl}amino)methyl]phenyl}propyl hydrogen sulfate	animal: hen (liver, excreta) plant: - soil: - water: -
M27	 <p>C<sub>19</sub>H<sub>21</sub>ClF<sub>3</sub>N<sub>3</sub>O<sub>6</sub>S [511]</p>	BCS-CN88460-1,2-propandiol-SA		animal: hen (excreta) plant: - soil: - water: -

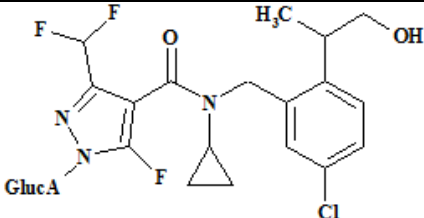
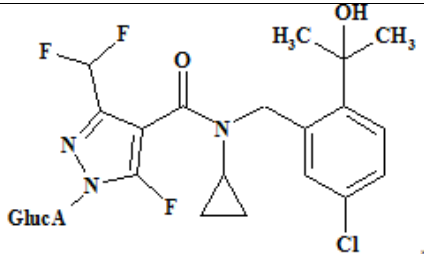
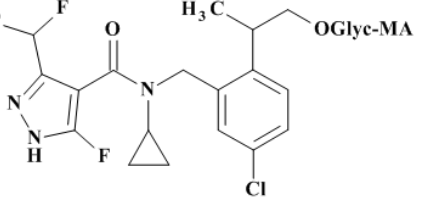
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Rapporteur Member State	Month and year	Active Substance (Name)
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No.	Structure Empirical formula [Nominal mass]	Name Code no. Synonyms	IUPAC name	Found in:
M31	 <p>C<sub>24</sub>H<sub>27</sub>ClF<sub>3</sub>N<sub>3</sub>O<sub>8</sub> [577]</p>	BCS-CN88460-desmethyl-propanol-GlucA (isomer 1 and 2)	2-{4-chloro-2-[(cyclopropyl{[3-(difluoromethyl)-5-fluoro-1H-pyrazol-4-yl]carbonyl}amino)methyl]phenyl}propyl glucopyranosiduronic acid	animal: rat (faeces, bile); sunfish (edible parts, viscera) plant: - soil: - water: -
M35	 <p>C<sub>24</sub>H<sub>27</sub>ClF<sub>3</sub>N<sub>3</sub>O<sub>7</sub> [561]</p>	BCS-CN88460-desmethyl-GlucA (isomer 1 and 2)	N-(5-chloro-2-isopropylbenzyl)-N-cyclopropyl-3-(difluoromethyl)-5-fluoro-1-(beta-D-glucopyranuronosyl)-1H-pyrazole-4-carboxamide	animal: rat (bile); sunfish (edible parts, viscera) plant: - soil: - water: -
M36	 <p>C<sub>24</sub>H<sub>27</sub>ClF<sub>3</sub>N<sub>3</sub>O<sub>9</sub> [593]</p>	BCS-CN88460-desmethyl-1,2-propandiol-N-GlucA	N-[5-chloro-2-(1,2-dihydroxypropan-2-yl)benzyl]-N-cyclopropyl-3-(difluoromethyl)-5-fluoro-1-(glucopyranuronosyl)-1H-pyrazole-4-carboxamide	animal: hen (muscle leg, liver, excreta) plant: soil: - water: -

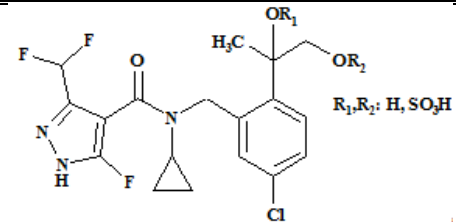
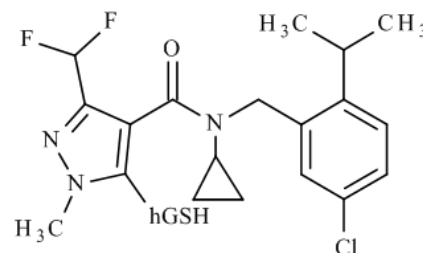
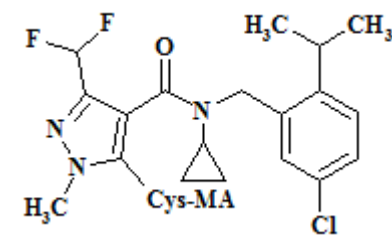
List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
UK	March 2019	Isoflucypram

No.	Structure Empirical formula [Nominal mass]	Name Code no. Synonyms	IUPAC name	Found in:
M37	 <p><math>C_{24}H_{27}ClF_3N_3O_8</math> [577]</p>	BCS-CN88460-desmethyl-propanol-N-GlucA	N-[5-chloro-2-(1-hydroxypropan-2-yl)benzyl]-N-cyclopropyl-3-(difluoromethyl)-5-fluoro-1-(glucopyranuronosyl)-1H-pyrazole-4-carboxamide	animal: hen (eggs, muscle leg, liver, excreta) plant: - soil: - water: -
M38	 <p><math>C_{24}H_{27}ClF_3N_3O_8</math> [577]</p>	BCS-CN88460-desmethyl-2-propanol-N-GlucA	N-[5-chloro-2-(2-hydroxypropan-2-yl)benzyl]-N-cyclopropyl-3-(difluoromethyl)-5-fluoro-1-(glucopyranuronosyl)-1H-pyrazole-4-carboxamide	animal: hen (liver, excreta) plant: - soil: - water: -
M41	 <p><math>C_{27}H_{31}ClF_3N_3O_{10}</math> [649]</p>	BCS-CN88460-desmethyl-propanol-Glyc-MA	2-{4-chloro-2-[(cyclopropyl{[3-(difluoromethyl)-5-fluoro-1H-pyrazol-4-yl]carbonyl}amino)methyl]phenyl}propyl 6-O-(carboxyacetyl)hexopyranoside	animal: - plant: wheat (hay, straw) soil: - water: -

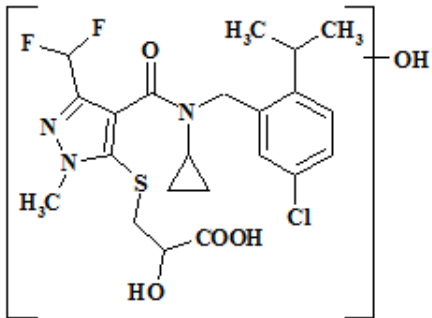
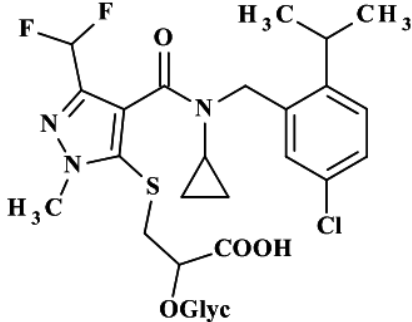
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No.	Structure Empirical formula [Nominal mass]	Name Code no. Synonyms	IUPAC name	Found in:
M42	 <p><math>C_{18}H_{19}ClF_3N_3O_6S</math> [497]</p>	BCS-CN88460-desmethyl-1,2-propandiol-SA		animal: hen (excreta) plant: - soil: - water: -
M44	 <p><math>C_{30}H_{39}ClF_2N_6O_7S</math> [700]</p>	BCS-CN88460-desfluoro-homoGSH	gamma-glutamyl-S-{4-[(5-chloro-2-isopropylbenzyl)(cyclopropyl)carbamoyl]-3-(difluoromethyl)-1-methyl-1H-pyrazol-5-yl}cysteinyl-beta-alanine	animal: - plant: soybean (forage, hay, straw) soil: - water: -
M45	 <p><math>C_{25}H_{29}ClF_2N_4O_6S</math> [586]</p>	BCS-CN88460-desfluoro-Cys-MA	N-(carboxyacetyl)-S-{4-[(5-chloro-2-isopropylbenzyl)(cyclopropyl)carbamoyl]-3-(difluoromethyl)-1-methyl-1H-pyrazol-5-yl}cysteine	animal: - plant: soybean (forage, hay, straw) soil: - water: -

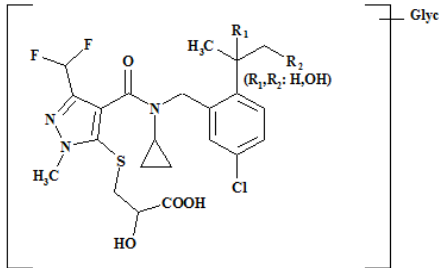
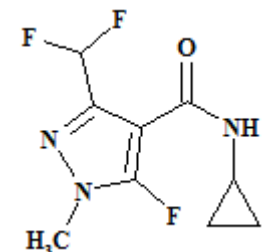
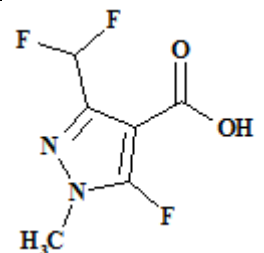
List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
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No.	Structure Empirical formula [Nominal mass]	Name Code no. Synonyms	IUPAC name	Found in:
M46	 <p>C<sub>22</sub>H<sub>26</sub>ClF<sub>2</sub>N<sub>3</sub>O<sub>5</sub>S [517]</p>	BCS-CN88460-desfluoro-mercapto-lactic acid-OH		animal: - plant: soybean (forage, hay, straw) soil: - water: -
M47	 <p>C<sub>28</sub>H<sub>36</sub>ClF<sub>2</sub>N<sub>3</sub>O<sub>9</sub>S [663]</p>	BCS-CN88460-desfluoro-mercapto-lactic acid-Glyc	3-({4-[(5-chloro-2-isopropylbenzyl)(cyclopropyl)carbamoyl]-3-(difluoromethyl)-1-methyl-1H-pyrazol-5-yl}sulfanyl)-2-(hexopyranosyloxy)propanoic acid	animal: - plant: soybean (forage, hay, straw) soil: - water: -

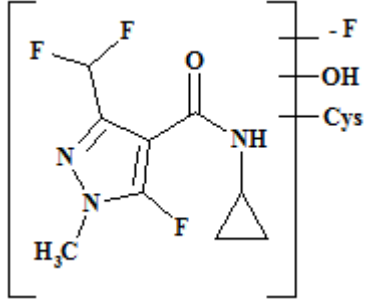
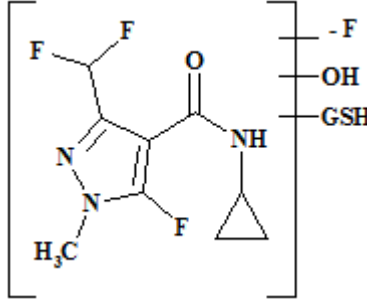
# List of end points

Rapporteur Member State	Month and year	Active Substance (Name)
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No.	Structure Empirical formula [Nominal mass]	Name Code no. Synonyms	IUPAC name	Found in:
M48	 <p><math>C_{28}H_{36}ClF_2N_3O_{10}S</math> [679]</p>	<b>BCS-CN88460-desfluoro-mercapto-lactic acid-propyl-OH-Glyc</b>		animal: - plant: soybean (forage, hay, straw) soil: - water: -
M49	 <p><math>C_9H_{10}F_3N_3O</math> [233]</p>	<b>BCS-CN88460-N-methyl-cyclopropyl-pyrazole-carboxamide</b>  BCS-CR60082	N-cyclopropyl-3-(difluoromethyl)-5-fluoro-1-methyl-1H-pyrazole-4-carboxamide	animal: - plant: CRC (wheat forage, wheat hay, wheat straw, Swiss chard immature, Swiss chard at maturity, turnip leaves) soil: - water: -
M50		<b>BCS-CN88460-N-methyl-pyrazole-carboxylic acid</b>  BCS-AB72918 BCS-CR73065 CAS: 1255735-09-1	3-(difluoromethyl)-5-fluoro-1-methyl-pyrazole-4-carboxylic acid  CA name: 1H-Pyrazole-4-carboxylic acid, 3-(difluoromethyl)-5-fluoro-1-methyl-	animal: rat (urine), goat (urine, kidney); sunfish (edible parts, viscera) plant: - soil: - water:

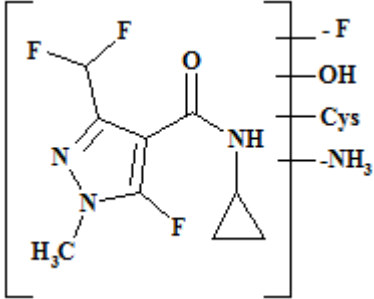
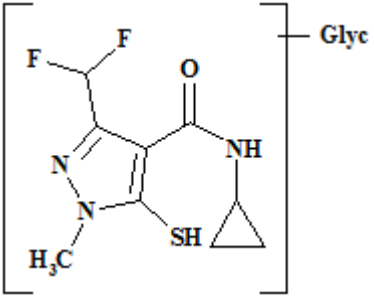
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Rapporteur Member State	Month and year	Active Substance (Name)
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No.	Structure Empirical formula [Nominal mass]	Name Code no. Synonyms	IUPAC name	Found in:
	C <sub>6</sub> H <sub>5</sub> F <sub>3</sub> N <sub>2</sub> O <sub>2</sub> [194]			
M52	 C <sub>12</sub> H <sub>16</sub> F <sub>2</sub> N <sub>4</sub> O <sub>3</sub> S [334]	BCS-CN88460-desfluoro-N-methyl-cyclopropyl-pyrazole-carboxamide-OH-Cys		animal: rat (bile) plant: CRC (wheat forage, wheat hay, wheat straw, Swiss chard immature, Swiss chard at maturity, turnip leaves) soil: - water: -
M54	 C <sub>19</sub> H <sub>26</sub> F <sub>2</sub> N <sub>6</sub> O <sub>7</sub> S [520]	BCS-CN88460-desfluoro-N-methyl-cyclopropyl-pyrazole-carboxamide-OH-GSH		animal: rat (bile) plant: CRC (wheat forage, wheat hay, wheat straw, Swiss chard immature, Swiss chard at maturity, turnip leaves) soil: - water: -

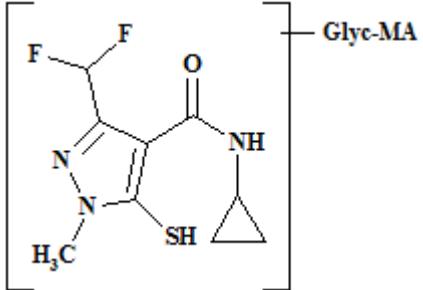
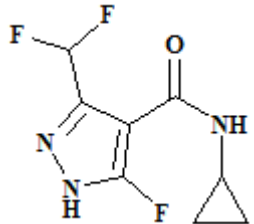
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Rapporteur Member State	Month and year	Active Substance (Name)
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No.	Structure Empirical formula [Nominal mass]	Name Code no. Synonyms	IUPAC name	Found in:
M55	 <p>C<sub>12</sub> H<sub>15</sub> F<sub>2</sub> N<sub>3</sub> O<sub>4</sub> S [335]</p>	BCS-CN88460-desfluoro-N-methyl-cyclopropyl-pyrazole-carboxamide-desamino-Cys		animal: - plant: CRC(wheat forage, wheat hay, wheat straw, Swiss chard immature, turnip leaves) soil: - water: -
M56	 <p>C<sub>15</sub> H<sub>21</sub> F<sub>2</sub> N<sub>3</sub> O<sub>6</sub> S [409]</p>	BCS-CN88460-desfluoro-N-methyl-cyclopropyl-pyrazole-carboxamide-mercapto-Glyc		animal: - plant: CRC (wheat forage, wheat hay, wheat straw, turnip leaves) soil: - water: -

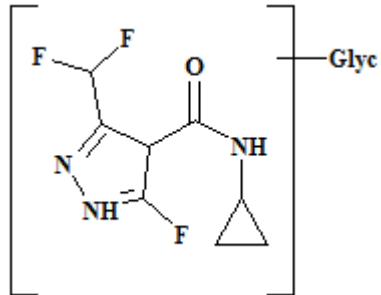
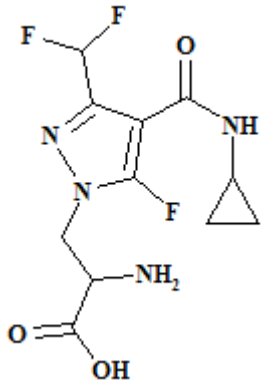
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Rapporteur Member State	Month and year	Active Substance (Name)
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No.	Structure Empirical formula [Nominal mass]	Name Code no. Synonyms	IUPAC name	Found in:
M57	 <p><chem>C18H23F2N3O9S</chem> [495]</p>	BCS-CN88460-desfluoro-N-methyl-cyclopropyl-pyrazole-carboxamide-mercapto-Glyc-MA		animal: - plant: CRC (wheat forage, wheat hay, wheat straw, turnip leaves) soil: - water: -
M58	 <p><chem>C8H8F3N3O</chem> [219]</p>	BCS-CN88460-cyclopropyl-pyrazole-carboxamide BCS-CX99798	N-cyclopropyl-3-(difluoromethyl)-5-fluoro-1H-pyrazole-4-carboxamide	animal: rat (urine, plasma, liver, kidney); sunfish (edible parts, viscera) plant: - soil: - water: -

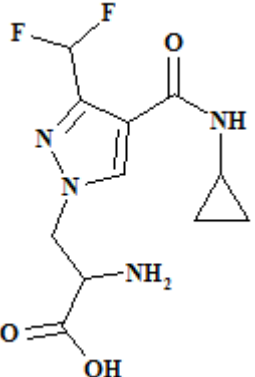
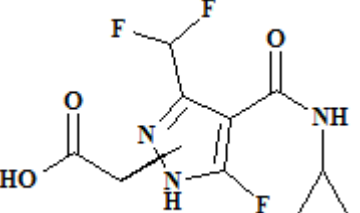
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No.	Structure Empirical formula [Nominal mass]	Name Code no. Synonyms	IUPAC name	Found in:
M62	 <p><math>C_{14}H_{18}F_3N_3O_6</math> [381]</p>	BCS-CN88460-cyclopropyl-pyrazole-carboxamide-Glyc (isomer 1 and 2)		animal: - plant: CRC (wheat forage, wheat hay, wheat straw, Swiss chard immature, Swiss chard at maturity, turnip leaves) soil: - water: -
M66	 <p><math>C_{11}H_{13}F_3N_4O_3</math> [306]</p>	BCS-CN88460-cyclopropyl-pyrazole-carboxamide-Ala	3-[4-(cyclopropylcarbamoyl)-3-(difluoromethyl)-5-fluoro-1H-pyrazol-1-yl]alanine	animal: - plant: CRC(wheat forage, wheat hay, wheat straw, wheat grain, Swiss chard immature, Swiss chard at maturity, turnip leaves) soil: - water: -

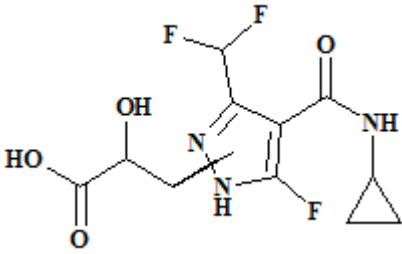
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No.	Structure Empirical formula [Nominal mass]	Name Code no. Synonyms	IUPAC name	Found in:
M67	 <p>C<sub>11</sub>H<sub>12</sub>F<sub>2</sub>N<sub>4</sub>O<sub>3</sub> [286]</p>	BCS-CN88460-desfluoro-cyclopropyl-pyrazole-carboxamide-Ala	3-[4-(cyclopropylcarbamoyl)-3-(difluoromethyl)-1H-pyrazol-1-yl]alanine	animal: - plant: CRC (wheat forage, wheat hay, wheat straw, wheat grain, Swiss chard immature, Swiss chard at maturity, turnip leaves) soil: - water: -
M68	 <p>C<sub>10</sub>H<sub>10</sub>F<sub>3</sub>N<sub>3</sub>O<sub>3</sub> [277]</p>	BCS-CN88460-cyclopropyl-pyrazole-carboxamide-acetic acid		animal: - plant: CRC (wheat hay, wheat straw) soil: - water: -

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No.	Structure Empirical formula [Nominal mass]	Name Code no. Synonyms	IUPAC name	Found in:
M69	 <p>C<sub>11</sub>H<sub>12</sub>F<sub>3</sub>N<sub>3</sub>O<sub>4</sub> [307]</p>	BCS-CN88460-cyclopropyl-pyrazole-carboxamide-OH-lactic acid (isomer 1 and 2)		animal: - plant: CRC (wheat forage, wheat hay, wheat straw, Swiss chard immature, Swiss chard at maturity) soil: - water: -