

REGISTRATION REPORT

Part B

Section 8

Environmental Fate

Detailed summary of the risk assessment

Product code: 102000028562

Product name: Deltamethrin + flupyradifurone EC 85 (10+75 g/L)

Chemical active substance:

Deltamethrin, 10 g/L

Flupyradifurone, 75 g/L

Central Zone

Zonal Rapporteur Member State: Poland

CORE ASSESSMENT

(authorisation)

Applicant: Bayer Crop Science Division

Submission date: August 2019 (updated in 2020 and 2021)

MS Finalisation date: October 2021 (initial Core Assessment)

March 2022 (final Core Assessment)

Version history

When	What
08/2019	Original Bayer Crop Science Division submission
11/2020	<p>Updated further to the ZRMS Poland's request from 10/09/2020 for new environmental exposure calculations :</p> <ul style="list-style-type: none"> - New groundwater and surface water modelling for deltamethrin and its metabolites based on EU agreed parameters. - New groundwater and surface water modelling for flupyradifuron performed with consideration of PUF (TSCF) of 0. <p>For flupyradifuron metabolites only additional groundwater modelling is required.</p>
03/2021	Updated further to the ZRMS Poland's request from 08/02/2021 maintaining the demand for groundwater and surface water additional modelling for flupyradifuron performed with consideration of PUF (TSCF) of 0 (due to the non-acceptance of Bayer argumentation and proposal to perform only calculations with PUF (TSCF) of 0.5).
10/2021	<p>Initial assessment by the zRMS</p> <p>The report in the dRR format has been prepared by the Applicant, therefore all comments, additional evaluations and conclusions of the zRMS are presented in grey commenting boxes. Minor changes are introduced directly in the text and highlighted in grey. Not agreed or not relevant information are struck through and shaded for transparency.</p>
03/2022	<p>Final report (Core Assessment updated following the commenting period)</p> <p>Additional information/assessments included by the zRMS in the report in response to comments recieved from the cMS and the Applicant are highlighted in yellow. Information no longer relevant is struck through and shaded.</p>

OECD Statement on Confidentiality

The summaries and evaluations contained in this monograph or review report may be based on unpublished proprietary data submitted for the purpose of the assessment undertaken by the regulatory authority that prepared it. Other registration authorities should not grant, amend, or renew a registration on the basis of the summaries and evaluation of unpublished proprietary data contained in this Monograph or review report unless they have received the data on which the summaries and evaluation are based, either:

From the owner of the data; or

From a second party that has obtained permission from the owner of the data for this purpose or, alternatively, the applicant has received permission from the data owner that the summaries and evaluation contained in this Monograph or review report may be used in lieu of the data; or

Following expiry of any period of exclusive use, by offering – in certain jurisdictions – mandatory compensation;

unless the period of protection of the proprietary data concerned has expired.

Applicants wishing to avail of information in this Monograph or review report should seek advice from the regulatory authority to which application is made concerning the requirements in their country.

Table of Contents

8	Fate and behaviour in the environment (KCP 9)	6
8.1	Critical GAP and overall conclusions.....	6
8.2	Metabolites considered in the assessment	9
8.3	Rate of degradation in soil (KCP 9.1.1)	10
8.3.1	Aerobic degradation in soil (KCP 9.1.1.1)	10
8.3.1.1	Deltamethrin and its metabolites	10
8.3.1.2	Flupyradifurone and its metabolites	13
8.3.2	Anaerobic degradation in soil (KCP 9.1.1.1)	17
8.4	Field studies (KCP 9.1.1.2)	18
8.4.1	Soil dissipation testing on a range of representative soils (KCP 9.1.1.2.1).....	18
8.4.1.1	Deltamethrin and its metabolites	18
8.4.1.2	Flupyradifurone and its metabolites	20
8.4.2	Soil accumulation testing (KCP 9.1.1.2.2)	20
8.5	Mobility in soil (KCP 9.1.2).....	21
8.5.1	Laboratory studies (KCP 9.1.2.1).....	21
8.5.1.1	Deltamethrin and its metabolites	21
8.5.1.2	Flupyradifurone and its metabolites	22
8.5.2	Lysimeter studies (KCP 9.1.2.2)	25
8.5.3	Field leaching studies (KCP 9.1.2.3).....	25
8.6	Degradation in the water/sediment systems (KCP 9.2, KCP 9.2.1, KCP 9.2.2, KCP 9.2.3).....	25
8.6.1	Deltamethrin and its metabolites	25
8.6.2	Flupyradifurone and its metabolites	26
8.7	Predicted Environmental Concentrations in soil (PEC _{soil}) (KCP 9.1.3)	28
8.7.1	Justification for new endpoints.....	28
8.7.2	Active substance(s) and relevant metabolite(s)	28
8.7.2.1	Deltamethrin and its metabolites	29
8.7.2.2	Flupyradifurone and its metabolites	32
8.7.2.3	PEC _{soil} of DLT+FPF EC 85	34
8.8	Predicted Environmental Concentrations in groundwater (PEC _{gw}) (KCP 9.2.4).....	35
8.8.1	Justification for new endpoints.....	36
8.8.2	Active substance(s) and relevant metabolite(s) (KCP 9.2.4.1).....	36
8.8.2.1	Deltamethrin and its metabolites	38
8.8.2.2	Flupyradifurone and its metabolites	41
8.9	Predicted Environmental Concentrations in surface water (PEC _{sw}) (KCP 9.2.5).....	55
8.9.1	Justification for new endpoints.....	55
8.9.2	Active substance(s), relevant metabolite(s) and the formulation (KCP 9.2.5)	57
8.9.2.1	Deltamethrin and its metabolites	59
8.9.2.2	Flupyradifurone and its metabolites	90
8.9.2.3	PEC _{sw/sed} of DLT+FPF EC 85	139
8.10	Fate and behaviour in air (KCP 9.3, KCP 9.3.1).....	141
Appendix 1	Lists of data considered in support of the evaluation.....	143
Appendix 2	Detailed evaluation of the new Annex II studies.....	182
A 2.1	KCA 7.1 Fate and behaviour in soil	182
A 2.1.1	KCA 7.1.1 Route of degradation in soil	182
A 2.1.2	KCA 7.1.2 Rate of degradation in soil	182
A 2.1.3	KCA 7.1.3 Adsorption and desorption in soil	185
A 2.1.4	KCA 7.1.4 Mobility in soil.....	185
A 2.2	KCA 7.2 Fate and behaviour in water and sediment	187

A 2.2.1	KCA 7.2.1 Route and rate of degradation in aquatic systems (chemical and photochemical degradation)	187
A 2.2.2	KCA 7.2.2 Route and rate of biological degradation in aquatic systems	187
A 2.2.3	KCA 7.2.3 Degradation in the saturated zone	187
A 2.3	KCA 7.3 Fate and behaviour in air	188
A 2.3.1	KCA 7.3.1 Route and rate of degradation in air	188
A 2.3.2	KCA 7.3.2 Transport via air	188
A 2.3.3	KCA 7.3.3 Local and global effects	188
A 2.4	KCA 7.4 Definition of the residue.....	188
A 2.4.1	KCA 7.4.1 Definition of the residue for risk assessment	188
A 2.4.2	KCA 7.4.2 Definition of the residue for monitoring	188
A 2.5	KCA 7.5 Monitoring data.....	188
Appendix 3	Additional information provided by the applicant (e.g. detailed modelling data)	189
A 3.1	8.7 Predicted Environmental Concentrations in soil (PEC _{soil}) (KCP 9.1.3)	189
A 3.2	8.8 Predicted Environmental Concentrations in groundwater (PEC _{gw}) (KCP 9.2.4.1).....	191
A 3.3	8.9 Predicted Environmental Concentrations in surface water (PEC _{sw}) (KCP 9.2.5).....	197

8 Fate and behaviour in the environment (KCP 9)

8.1 Critical GAP and overall conclusions

Table 8.1-1: Critical use pattern of the formulated product

Critical use pattern of the formulated product														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use- No. *	Member state(s)	Crop and/or situation (crop destination / purpose of crop)	F, Fn, G, Gn, Gpn or I **	Pests or Group of pests controlled (additionally: developmental stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks: e.g. g safener/ synergist per ha	Conclusion
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	L product/ha a) max. rate per appl. b) max. total rate per crop/season	g as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min/max			
Zonal uses (field or outdoor uses, certain types of protected crops)														
11	POL	Rape, winter (BRSNW)	F	CEUTNA, CEUTQU	spraying (foliar)	30-49 (spring)	a) 2 b) 2	14	a) 0.75 b) 1.5	a) DLT 7.5 + FPF 56.25 b) DLT 15 + FPF 112.5	200-600	as per growth stage	Autumn applications not covered by the surface water modelling performed at Steps 3+4	A
12	POL	Rape, spring (Canola) (BRSNS)	F	CEUTNA, CEUTQU	spraying (foliar)	30-49 (spring)	a) 2 b) 2	14	a) 0.75 b) 1.5	a) DLT 7.5 + FPF 56.25 b) DLT 15 + FPF 112.5	200-600	as per growth stage	Autumn applications not covered by the surface water modelling performed at Steps 3+4	A
13	POL	Rape, winter (BRSNW)	F	MELIAE	spraying (foliar)	50-59	a) 2 b) 2	14	a) 0.75 b) 1.5	a) DLT 7.5 + FPF 56.25 b) DLT 15 + FPF 112.5	200-600	as per growth stage		A
14	POL	Rape, spring (Canola) (BRSNS)	F	MELIAE	spraying (foliar)	50-59	a) 2 b) 2	14	a) 0.75 b) 1.5	a) DLT 7.5 + FPF 56.25 b) DLT 15 + FPF 112.5	200-600	as per growth stage		A
15	POL	Rape, winter (BRSNW)	F	CEUTAS, DASYBR	spraying (foliar)	65-79	a) 2 b) 2	14	a) 0.5 b) 1	a) DLT 5 + FPF 37.5 b) DLT 10 + FPF 75	200-600	45		A
16	POL	Rape, spring (Canola) (BRSNS)	F	CEUTAS, DASYBR	spraying (foliar)	65-79	a) 2 b) 2	14	a) 0.5 b) 1	a) DLT 5 + FPF 37.5 b) DLT 10 + FPF 75	200-600	45		A

* Use number(s) in accordance with the list of all intended GAPs in Part B, Section 0 should be given in column 1

** F: professional field use, Fn: non-professional field use, Fpn: professional and non-professional field use, G: professional greenhouse use, Gn: non-professional greenhouse use, Gpn: professional and non-professional greenhouse use, I: indoor application

Explanation for column 15 “Conclusion”

A	Safe use
R	Further refinement and/or risk mitigation measures required
C	To be confirmed by cMS
N	No safe use

Uses listed in the table below are the representative uses submitted in support of the re-approval process of deltamethrin.

Table 8.1-2: Assessed (critical) uses during approval of deltamethrin concerning the Section Environmental Fate

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Use- No. *	Member state(s)	Crop and/or situation (crop destination / purpose of crop)	F, Fn, Fpn G, Gn, Gpn or I **	Pests or Group of pests controlled (additionally: developmental stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks: e.g. g safener/ synergist per ha
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	kg or L product/ha a) max. rate per appl. b) max. total rate per crop/season	g or kg as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min/max		
	EU	Wheat (winter and spring variety)	F	Aphids: Sitobion avenae (Rhopalosiphum padi)	Foliar spray	BBCH 10- 83	a)2 b)2/2	14	a)0.0625 b)0.125/0.125	a)0.00625 b)0.0125/0.0125	100-600	30	
	EU	Sugarbeet	F	<i>Chaetocnema tibialis</i> or <i>Ch. spp</i>	Foliar spray	BBCH 10- 49	a)1 b)1/1	-	a)0.075 b)0.15/0.15	a)0.0075 b)0.015/0.015	100-600	30	
	EU	Cauliflower	F	Lepidoptera: Pieris brassicae (Plutella & Mamestra)	Foliar spray	BBCH 10- 69	a)2 b)2/2	14	a)0.075 b)0.15/0.15	a)0.0075 b)0.015/0.015	200-1000	7	

* Use number(s) in accordance with the list of all intended GAPs in Part B, Section 0 should be given in column 1

** F: professional field use, Fn: non-professional field use, Fpn: professional and non-professional field use, G: professional greenhouse use, Gn: non-professional greenhouse use, Gpn: professional and non-professional greenhouse use, I: indoor application

Table 8.1-3: Assessed (critical) uses during approval of flupyradifurone concerning the Section Environmental Fate

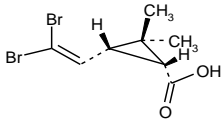
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Use- No. *	Member state(s)	Crop and/or situation (crop destination / purpose of crop)	F, Fn, Fpn G, Gpn or I**	Pests or Group of pests controlled (additionally: developmental stages of the pest or pest group)	Application				Application rate			PHI (days)	Remarks: e.g. g safener/ synergist per ha
					Method / Kind	Timing / Growth stage of crop & season	Max. number a) per use b) per crop/ season	Min. interval between applications (days)	L product/ha a) max. rate per appl. b) max. total rate per crop/season	g as/ha a) max. rate per appl. b) max. total rate per crop/season	Water L/ha min/max		
	N-EU (residue zone)	Hops	F	Aphids	Foliar spray	BBCH 31- 75 Apr-Sep	a) b) 1	n.a.	a) b) 0.75	a) b) 150	2000-3300	21	Max 1 application 24 months
	N/S-EU (residue zone)	Lettuce	F	Aphids	Foliar spray	BBCH 12- 40 Mar-Oct	a) b) 1	n.a.	a) b) 0.625	a) b) 125	500-1000	3	Max 1 application 24 months
	N/S-EU (residue zone)	Lettuce	F	Aphids	Foliar spray	BBCH 41- 49 Mar-Oct	a) b) 1	n.a.	a) b) 0.625	a) b) 125	500-1000	3	Max 1 application 12 months
	N/S-EU (residue zone)	Lettuce (soil bound)	G	Aphids	Foliar spray	BBCH 12- 49	a) b) 2	10	a) 0.625 b) 1,25	a) 125 b) 250	200-1000	3	Max 2 applications per 12 months

* Use number(s) in accordance with the list of all intended GAPs in Part B, Section 0 should be given in column 1

** F: professional field use, Fn: non-professional field use, Fpn: professional and non-professional field use, G: professional greenhouse use, Gn: non-professional greenhouse use, Gpn: professional and non-professional greenhouse use, I: indoor application

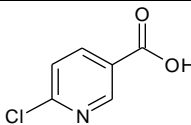
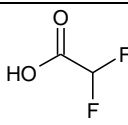
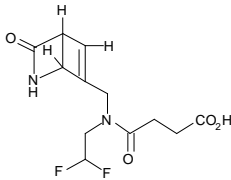
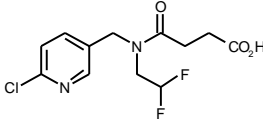
8.2 Metabolites considered in the assessment

Table 8.2-1: Metabolites of deltamethrin potentially relevant for exposure assessment

Metabolite	Molar mass	Chemical structure	Maximum observed occurrence in compartments	Exposure assessment required due to
Br ₂ CA (= AE F108565 = RU23441; CAS # 53179-78-5)	298.0 g/mole		Soil: 23% (aerobic), 52% (anaerobic) Water/sediment: 13.3% *	PEC _{soil} PEC _{gw} PEC _{sw} PEC _{sed}

*: Value was stated in the DAR (max formed in the outdoor microcosm study, [M-200619-01-1](#)) but not stated in the final LoEP.

Table 8.2-2: Metabolites of flupyradifurone potentially relevant for exposure assessment

Metabolite	Molar mass	Chemical structure	Maximum observed occurrence in compartments	Exposure assessment required due to
6-CNA 6-Chloronicotinic acid	157.6 g/mol		Soil: 17.1%	PEC _{soil} PEC _{gw} PEC _{sw} PEC _{sed}
DFA Difluoroacetic acid	96.0 g/mol		Soil: 33.9% Water/Sediment: 6.9%	PEC _{soil} PEC _{gw} PEC _{sw} PEC _{sed}
BYI 02960-azabicyclo-succinamide	288.3 g/mol		Water (plus light): 25.9%	PEC _{sw} PEC _{sed}
BYI 02960-succinamide	306.7 g/mol		Water (plus light): 39.6%	PEC _{sw} PEC _{sed}

zRMS comments:

Deltamethrin

Information regarding soil metabolites of deltamethrin is in line with the Review Report for deltamethrin 6504/VI/99-final of 2002, which is still valid LoEP.

With regard to maximum occurrence of metabolite Br₂CA in water it is noted that according to the LoEP its maximum formation in aquatic systems could not be determined due to position of ¹⁴C-labelling. No clear information may be also obtained from the DAR of 1998 or Addendum of 2002, since residues of metabolite Br₂CA are not expressed in terms of %AR, but as concentrations in water or sediment. In summary of the outdoor microcosm study by Schanné & van der Kolk (2001) and Schanné (2001a and 2001b) available in Addendum of 2002, the maximum occurrence of Br₂CA is reported as 20% AR, while in the LoEP prepared by the RMS (working document of 2002) it is indicated that in higher-tier studies (micro-mesocosms and natural ponds) metabolite Br₂CA was found at 23 and 53%. It should be, however, noted that none of these values was eventually reported in the Review Report of 2002 and metabolite was considered neither in exposure nor risk assessment.

It is noted that maximum occurrence of Br₂CA at 13.3% AR has been already agreed in the course of the zonal evaluations of at least two formulations of the same Applicant (Multirose, evaluated by AT as zRMS in 2016 and Decis 15 EW evaluated by BE as the zRMS in 2018) and for this reason this value is also agreed for DLT+FPF EC 85 for consistency.

Flupyradifurone

Information regarding metabolites of flupyradifurone is in line with EU agreed endpoints as reported in EFSA Journal 2015;13(2):4020.

8.3 Rate of degradation in soil (KCP 9.1.1)

Studies on degradation in soil with the formulation were not performed, since it is possible to extrapolate from data obtained with the active substance.

8.3.1 Aerobic degradation in soil (KCP 9.1.1.1)

8.3.1.1 Deltamethrin and its metabolites

The aerobic degradation of deltamethrin has been evaluated; full details of these studies are provided in the respective EU Monograph Annex B8 and related documents and summarised in the conclusions of the EU Review Report (6504/VI/99-final) on deltamethrin, and in particular Appendices I and II thereof, as finalised in the Standing Committee on the Food Chain and Animal Health on 18 October 2002. No additional studies have been performed since additional data was not required as a result of the review.

The aerobic degradation of deltamethrin has been evaluated; full details of these studies are provided in the respective EU Monograph Annex B8 and related documents and summarised in the EU Review Report (6504/VI/99-final). No additional studies have been performed.

Triggering endpoints

Table 8.3-1: Summary of aerobic degradation rates for deltamethrin—laboratory studies (triggering endpoints)

Deltamethrin, Laboratory studies, aerobic conditions, triggering endpoints									
Soil name	Soil type (acc. USDA)	pH (CaCl ₂)	T (°C)	MWHC (%)	DT ₅₀ (d)	DT ₉₀ (d)	Chi ² (%)	Kinetic model	Evaluated on EU level y/n/ Reference
Casa Grand (n=2)	Sandy loam	8.1	25	75% of 1/3 bar	16.7 *	n.l.	n.l.	SFO	Y/ EU Review Report (6504/VI/99-final)
Dubbs (n=13)	Fine sandy loam	5.9	25	75% of 1/3 bar	17.6 *	n.l.	n.l.	SFO	Y/ EU Review Report (6504/VI/99-final)
Hagerstown (n=4)	Silty clay loam	7.5	25	75% of 1/3 bar	11.0 *	n.l.	n.l.	SFO	Y/ EU Review Report (6504/VI/99-final)
Memphis (n=4)	Silt loam	5.8	25	75% of 1/3 bar	26.5 *	n.l.	n.l.	SFO	Y/ EU Review Report (6504/VI/99-final)
Arithmetic mean / Median (n=9)					n.l.				Y/ EU Review Report (6504/VI/99-final)
Maximum (n=9)					26.5				Y/ EU Review Report (6504/VI/99-final)
pH dependency: y/n					no				Y/ EU Review Report (6504/VI/99-final)

*: DT₅₀ values listed are the geometric means from multiple values for each soil at 25 °C and field capacity.

n.l.: not listed in LoEP; not relevant for risk assessment.

Table 8.3-2: Summary of aerobic degradation rates for Br₂CA metabolite – laboratory studies (triggering endpoints)

Br ₂ CA metabolite, Laboratory studies, aerobic conditions, triggering endpoints									
Soil-name	Soil-type (acc. USDA)	pH (CaCl ₂)	T (°C)	MWHC (%)	DT ₅₀ (d)	DT ₉₀ (d)	Chi ² (%)	Kinetic model	Evaluated on EU level y/n/ Reference
Casa Grand	Sandy loam	8.1	25	75% of 1/3 bar	12.3 *	n.l.	n.l.	SFO	Y/ EU Review Report (6504/VI/99 final)
Dubbs	Fine sandy loam	5.9	25	75% of 1/3 bar	1.4 *	n.l.	n.l.	SFO	Y/ EU Review Report (6504/VI/99 final)
Hagerstown	Silty clay loam	7.5	25	75% of 1/3 bar	0.8 *	n.l.	n.l.	SFO	Y/ EU Review Report (6504/VI/99 final)
Geometric mean (n = 7)					2.3				Y/ EU Review Report (6504/VI/99 final)
Maximum (n = 3)					12.3				Y/ EU Review Report (6504/VI/99 final)
pH dependency: y/n					no				Y/ EU Review Report (6504/VI/99 final)

*: DT₅₀ values listed are the geometric means from multiple values for each soil at 25 °C.

n.l.: not listed in LoEP; not relevant for risk assessment

Modelling endpoints

Modelling endpoints for parent compound were EU agreed and derived from field study data (see Section 8.4.1.1).

The EU list of endpoints gives a DT_{50f} with the following estimated values: 2–3 weeks for both cropped and bare US soil (Minnesota), , 1–4 weeks at 4 locations in Germany on bare soil. The list of endpoints stated the following estimated values as DT_{90f}: > 4 month for study in Minnesota (US), both cropped and bare soil, 1–3 month at 4 locations in Germany on bare soil, overall estimate < 1 year.

Since the EU review the laboratory aerobic soil degradation studies have been re-evaluated on request of several member states to determine first order degradation rates for deltamethrin and its soil metabolite, referenced to standard conditions of 25 °C and field capacity for use in exposure modelling (see report M-236281-01-1, Appendix 2). The respective results are listed in the following table.

Table 8.3-3: Summary of aerobic degradation rates for deltamethrin – laboratory studies – modelling endpoints

Deltamethrin, laboratory studies, aerobic conditions, modelling endpoints										
Soil-name	Soil-type (acc. USDA)	pH (CaCl ₂)	T (°C)	MWHC (%)	DT ₅₀ (d) 25°C/pF2	k ₁	k ₂	g	Kinetic model	Evaluated on EU level y/n/
Casa Grand (n = 2)	Sandy loam	8.1	25	75% of 1/3 bar	16.7	n.l.	–	–	SFO	N/ new data Appendix 2 Schäfer & Mikolash, 2004 M-236281-01-1
Dubbs (n = 13)	Fine sandy loam	5.9	25	75% of 1/3 bar	17.6	n.l.	–	–	SFO	N/ new data Appendix 2 Schäfer & Mikolash, 2004 M-236281-01-1
Hagerstown (n = 4)	Silty clay loam	7.5	25	75% of 1/3 bar	11.0	n.l.	–	–	SFO	N/ new data Appendix 2 Schäfer & Mikolash, 2004 M-236281-01-1
Memphis (n = 4)	Silt loam	5.8	25	75% of 1/3 bar	26.5	n.l.	–	–	SFO	N/ new data Appendix 2 Schäfer & Mikolash, 2004 M-236281-01-1
Geometric mean					17.1					N/ new data

			Appendix 2 Schäfer & Mikolash, 2004 M-236281-01-1
pH dependency: y/n	no		Y/ EU Review Report (6504/VI/99-final)

n.l.: not relevant for risk assessment

Table 8.3-4: Summary of aerobic degradation rates for Br₂CA metabolite – laboratory studies – modelling endpoints

Br ₂ CA metabolite, Laboratory studies, aerobic conditions, modelling endpoints											
Soil name	Soil type (acc. USDA)	pH (CaCl ₂)	T (°C)	MWHC (%)	DT ₅₀ (d)*	DT ₉₀ (d)	DT ₅₀ (d) 25°C pF2	f.f.	Chi ² (%)	Kinetic model	Evaluated on EU level y/n/ Reference
Casa Grand	Sandy loam	8.1	25	75% of 1/3 bar	12.3	n.l.	11.6	0.74	n.l.	SFO	N/ new data Appendix 2 Schäfer & Mikolash, 2004 M-236281-01-1
Dubbs	Fine sandy loam	5.9	25	75% of 1/3 bar	1.4	n.l.	0.9	0.53-1.0	n.l.	SFO	N/ new data Appendix 2 Schäfer & Mikolash, 2004 M-236281-01-1
Hagerstown	Silty clay loam	7.5	25	75% of 1/3 bar	0.8	n.l.	0.7	1.0	n.l.	SFO	N/ new data Appendix 2 Schäfer & Mikolash, 2004 M-236281-01-1
Geometric mean (n=7) Maximum (n=7)							2.0 11.6				N/ new data Appendix 2 Schäfer & Mikolash, 2004 M-236281-01-1
pH dependency: y/n						no					N

*: DT₅₀ values listed are the geometric means from multiple values for each soil at 25 °C.

n.l.: not listed in LoEP; not relevant for risk assessment

f.f.: formation fraction

zRMS comments:

Triggering endpoints

Values provided by the Applicant in Tables 8.3-1 and 8.3-2 above could not be reproduced by the zRMS based on the information available in the DAR (1998) or Addendum (2002), however the mean DT₅₀ of 2.3 days given for metabolite Br₂CA is in line with this reported in the Review Report for deltamethrin (6504/VI/99-final of 2002). Nevertheless, the maximum value for this compound is higher (21 days).

For the parent compound the mean DT₅₀ of 26 days is reported in the current LoEP and maximum DT₅₀ of 35 days is given.

Modelling endpoints

Values reported in Tables 8.3-3 and 8.3-4 originate from the kinetic re-evaluation of the EU agreed laboratory soil degradation studies for deltamethrin performed by Schäfer & Mikolash (2004) and are not in line with values reported in the Review Report for deltamethrin (6504/VI/99-final of 2002). In the correspondence with the zRMS the Applicant explained that values available in the LoEP of 2002 were obtained using old versions of the models and new kinetic evaluation was deemed necessary in order to adhere to new standards. It should be, however, noted that the kinetic re-evaluation was performed in 2004, so it does not comply with the most recent version of the FOCUS guidance on degradation kinetics either. In addition to that, the DT₅₀ values were normalised to 25°C, while currently normalisation to 20°C is required. In opinion of the zRMS, the new DT₅₀ values calculated on the basis of indications of the outdated guidance should not replace the EU agreed values, especially information on soil degradation of deltamethrin and metabolite Br₂CA available in the current list of endpoints is sufficient to finalise the exposure assessment. Taking this into account, the modelling endpoints proposed by the Applicant were not validated by the zRMS.

zRMS approach is fully in line with indications of the Working Document of the Central Zone in area of Section 8¹, which clearly states that the new active substance data may be considered in the Core Assessments only in exceptional cases and that kinetic re-evaluation may be considered at zonal/national level only when no safe use may be derived using the agreed endpoints.

Since the information provided by the Applicant above is not agreed by the zRMS, data from the current LoEP are reproduced below while information provided by the Applicant above is struck through.

Deltamethrin, 25°C, SFO:

DT₅₀: 18, 20, 22, 23, 25, 25, 26, 28, 30, 30, 34, 35 days, mean 26 days (n=12)

DT₉₀: 58, 66, 72, 76, 82, 82, 85, 92, 98, 100, 112, 117 days

Br₂CA, 25°C, SFO:

DT₅₀: 0.7, 0.7, 0.8, 1.1, 1.6, 1.9, 9.1 days, mean 2.3 days (n=7) ; 21 days (estimated from study with deltamethrin in one soil)

8.3.1.2 Flupyradifurone and its metabolites

The aerobic degradation of flupyradifurone has been evaluated, full details of these studies are provided in the respective EU DAR and related documents and summarised in the EFSA conclusion (EFSA Journal 2015;13(2):4020, 101 pp.) no additional studies have been performed.

Triggering endpoints (parent compound)

Table 8.3-5: Summary of aerobic degradation rates for flupyradifurone - laboratory studies (triggering endpoints)

Flupyradifurone, laboratory studies, aerobic conditions, triggering endpoints									
Soil name	Soil type (acc. USDA)	pH (x)	T (°C)	MWHC (%)	DT ₅₀ (d)	DT ₉₀ (d)	Chi2 (%)	Kinetic model	Evaluated on EU level y/n/Reference
AX	Sandy loam	6.4	20	55	63.4	443.3	1.2	DFOP	Y/ EFSA Journal 2015;13(2):4020
AX	Sandy loam	6.1	20	55	62.2	390.6	1.6	DFOP	Y/ EFSA Journal 2015;13(2):4020
AX	Loam sand	6.2	20	55	62.0	538.1	1.6	DFOP	Y/ EFSA Journal 2015;13(2):4020
AX Geo mean					62.5	453.3			
HF	Silt loam	6.5	20	55	52.4	209.3	0.6	DFOP	Y/ EFSA Journal 2015;13(2):4020
HF	Silt loam	6.5	20	55	33.2	229.5	1.7	DFOP	Y/ EFSA Journal 2015;13(2):4020
HF	Silt loam	6.5	20	55	34.1	329.8	2.3	DFOP	Y/ EFSA Journal 2015;13(2):4020
HF	Silt loam	6.5	20	55	33.0	221.3	2.0	DFOP	Y/ EFSA Journal 2015;13(2):4020
HF Geo mean					37.4	243.3			
HN	Loam	5.4	20	55	120.0	489.7	1.2	DFOP	Y/ EFSA Journal 2015;13(2):4020
HN	Silt loam	4.8	20	55	98.3	462.5	2.0	DFOP	Y/ EFSA Journal 2015;13(2):4020
HN Geo mean					108.6	475.9			
DD	Clay loam	7.4	20	55	56.4	265.1	1.7	DFOP	Y/ EFSA Journal 2015;13(2):4020
DD	Silty clay	7.1	20	55	49.3	303.1	2.3	DFOP	Y/ EFSA Journal 2015;13(2):4020

¹ Working Document of the Central Zone in the Authorisation of Plant Protection Products, Section 8, Environmental Fate and Behaviour, Version 1, rev. 1, June 2018

Flupyradifurone, laboratory studies, aerobic conditions, triggering endpoints									
Soil name	Soil type (acc. USDA)	pH (x)	T (°C)	MWHC (%)	DT ₅₀ (d)	DT ₉₀ (d)	Chi2 (%)	Kinetic model	Evaluated on EU level y/n/Reference
DD	Clay loam	7.1	20	55	33.9	649.1	1.9	DFOP	Y/ EFSA Journal 2015;13(2):4020
DD geo mean					45.5	373.7			
SF	Silt loam	6.5	20	pF2-2.5	228	757	1.3	SFO	Y/ EFSA Journal 2015;13(2):4020
SF	Silt loam	6.5	20	pF2-2.5	242	898	0.7	DFOP	Y/ EFSA Journal 2015;13(2):4020
SF geo mean					234.9	824.5 234.9			
S	Sandy loam	7.0	20	pF2-2.5	58.3	273	1.1	DFOP	Y/ EFSA Journal 2015;13(2):4020
S	Sandy loam	7.0	20	pF2-2.5	56.3*	324**	1.8	FOMC	Y/ EFSA Journal 2015;13(2):4020
S geo mean					57.3 [#]	299 [#]			
pH-dependency: y/n							N		

(x): measured in CaCl₂

Ax = Laacher Hof, HF = Hofchen an Hohenseh, HN = Hanscheiderhof, DD = Dollendorf II, SF = Springfield, S = Sanger soil

* DT₅₀ value based on FOMC , ** DT₉₀ value based on DFOP

[#] Geomean of two DT₅₀ values, 1 based on DFOP, 1 based on FOMC. In EFSA 2015, a geomean of 56.8 days is stated which is incorrect, the agreed individual DT₅₀ values are correct hence the geomean is 57.3 days.

[#] Geomean of the two DT₉₀ values listed above (both DFOP). In EFSA 2015 an incorrect value of 522.5 days is given.

Modelling endpoints (parent compound)

Table 8.3 -6: Summary of aerobic degradation rates for flupyradifurone - laboratory studies (modelling endpoints)

Flupyradifurone, laboratory studies, aerobic conditions, modelling end-points							
Soil name	Soil type (acc. USDA)	DT ₅₀ (d) 20°C/pF2	k ₁	k ₂	g	Kinetic model	Evaluated on EU level y/n/Reference
AX	Sandy loam	169.1 ¹⁾	0.0438	0.0041	0.3822	DFOP	Y/ EFSA Journal 2015;13(2):4020
AX	Sandy loam	141.5 ¹⁾	0.0650	0.0049	0.3312	DFOP	Y/ EFSA Journal 2015;13(2):4020
AX	Loam sand	210.3 ¹⁾	0.0546	0.0033	0.4023	DFOP	Y/ EFSA Journal 2015;13(2):4020
AX Geo mean		171.3 ¹⁾					
HF	Silt loam	54.4	-	-	-	SFO	Y/ EFSA Journal 2015;13(2):4020
HF	Silt loam	40.5	-	-	-	SFO	Y/ EFSA Journal 2015;13(2):4020
HF	Silt loam	43.0	-	-	-	SFO	Y/ EFSA Journal 2015;13(2):4020
HF	Silt loam	90.0	-	-	-	SFO	Y/ EFSA Journal 2015;13(2):4020
HF Geo mean		54.0					
HN	Loam	157.5 ¹⁾	0.1031	0.0044	0.1571	DFOP	Y/ EFSA Journal 2015;13(2):4020
HN	Silt loam	157.5 ¹⁾	0.1079	0.0044	0.2280	DFOP	Y/ EFSA Journal 2015;13(2):4020
HN Geo mean		157.5 108.6					
DD	Clay loam	60.1	-	-	-	SFO	Y/ EFSA Journal 2015;13(2):4020
DD	Silty clay	55.1	-	-	-	SFO	Y/ EFSA Journal 2015;13(2):4020
DD	Clay loam	38.6	-	-	-	SFO	Y/ EFSA Journal 2015;13(2):4020

Flupyradifurone, laboratory studies, aerobic conditions, modelling end-points							
Soil name	Soil type (acc. USDA)	DT ₅₀ (d) 20°C/pF2	k ₁	k ₂	g	Kinetic model	Evaluated on EU level y/n/Reference
DD geo mean		50.4					
SF	Silt loam	166.4	-	-	-	SFO	Y/ EFSA Journal 2015;13(2):4020
SF	Silt loam	179.7	-	-	-	SFO	Y/ EFSA Journal 2015;13(2):4020
SF geo mean		172.9 234.9					
S	Sandy loam	55.5	-	-	-	SFO	Y/ EFSA Journal 2015;13(2):4020
S	Sandy loam	58.8	-	-	-	SFO	Y/ EFSA Journal 2015;13(2):4020
S geo mean		57.1 56.8					
Geometric mean / Median (n = 6)		94.8 / 107.3					
pH-dependency: y/n		N					

¹⁾ DFOP slow phase DT₅₀

Ax = Laacher Hof, HF = Hofchen an Hohenseh, HN = Hanscheiderhof, DD = Dollendorf II, SF = Springfield, S = Sanger

Triggering endpoints (metabolite 6-CNA)

Table 8.3 -7: Summary of aerobic degradation rates for 6-CNA metabolite - laboratory studies (triggering endpoints)

6-CNA, laboratory studies, aerobic conditions, triggering endpoints											
Soil name	Soil type (acc. USDA)	pH (x)	T (°C)	MWHC (%)	DT ₅₀ (d)	DT ₉₀ (d)	DT ₅₀ (d) 20°C pF2	f.f.	Chi ² (%)	Kinetic model	Evaluated on EU level y/n/Reference
Aldham’s Farm	Sandy loam	5.8	20	45	2.9	9.7	2.9	-	8.5	SFO	Y/ EFSA Journal 2015;13(2):4020
Flint Hall Farm	Clay	7.4	20	45	2.2	7.4	2.2	-	6.9	SFO	Y/ EFSA Journal 2015;13(2):4020
Boarded Barns Farm	Loam	7.0	20	45	5.3	17.5	5.3	-	8.5	SFO	Y/ EFSA Journal 2015;13(2):4020
Hoefchen	Silt loam	6.5	20	55	3.1	10.4	-	-	17.0	FOMC-SFO	Y/ EFSA Journal 2015;13(2):4020
Sanger	Sandy loam	7.0	20	pF2-2.5	36.6	121	-	-	13.8	DFOP-SFO	Y/ EFSA Journal 2015;13(2):4020
pH-dependency: y/n					-						

(x): measured in CaCl₂

f.f.: formation fraction

Modelling endpoints (metabolite 6-CNA)

Table 8.3 -8: Summary of aerobic degradation rates for 6-CNA metabolite - laboratory studies (modelling endpoints)

6-CNA, laboratory studies, aerobic conditions, modelling endpoints						
Soil name	Soil type (acc. USDA)	DT ₅₀ (d) 20°C, pF2	f.f.	Chi ² (%)	Kinetic model	Evaluated on EU level y/n/Reference
Aldham's Farm	Sandy loam	2.9	-	8.5	SFO	Y/ EFSA Journal 2015;13(2):4020
Flint Hall Farm	Clay	2.2	-	6.9	SFO	Y/ EFSA Journal 2015;13(2):4020
Boarded Barns Farm	Loam	5.3	-	8.5	SFO	Y/ EFSA Journal 2015;13(2):4020
Hoefchen	Silt loam	3.0	0.266	15.4	DFOP-SFO	Y/ EFSA Journal 2015;13(2):4020
Sanger	Sandy loam	22.4	0.694	15.1	SFO-SFO	Y/ EFSA Journal 2015;13(2):4020
Geometric mean (n = 5)		4.7	-			
Arithmetic mean (n = 2)		-	0.480			

f.f.: formation fraction

Triggering endpoints (metabolite DFA)

Table 8.3 -9: Summary of aerobic degradation rates for DFA metabolite - laboratory studies (triggering endpoints)

DFA, laboratory studies, aerobic conditions, triggering endpoints									
Soil name	Soil type (acc. USDA)	pH (x)	T (°C)	MWHC %	DT ₅₀ (d)	DT ₉₀ (d)	Chi ² (%)	Kinetic model	Evaluated on EU level y/n/Reference
Dollendorf	Clay loam	7.1 5.8	20	55	44.9	149.9	5.4	DFOP-SFO	Y/ EFSA Journal 2015;13(2):4020
Laacher Hof AXXa	Loamy sand	6.2 7.4	20	55	73.6	244.5	8.4	SFO-SFO	Y/ EFSA Journal 2015;13(2):4020
Hoefchen	Silt loam	6.5 7.0	20	55	67.4	223.9	7.4	FOMC-SFO	Y/ EFSA Journal 2015;13(2):4020
Geometric mean / Median (n = 3)					60.6 / 67.4				
pH-dependency: y/n					-				

(x): measured in CaCl₂

f.f.: formation fraction

Modelling endpoints (metabolite DFA)

Table 8.3 -10: Summary of aerobic degradation rates for DFA metabolite - laboratory studies: modelling endpoints

DFA, laboratory studies, aerobic conditions											
Soil name	Soil type (acc. USDA)	pH (x)	T (°C)	MWHC %	DT ₅₀ (d)	DT ₉₀ (d)	DT ₅₀ (d) 20°C pF2	f.f.	Chi ² (%)	Kinetic model	Evaluated on EU level y/n/Reference
Dollendorf	Clay loam	7.1 5.8	20	55	32.0	106.2	32.0	0.909	5.2	SFO-SFO	Y/ EFSA Journal 2015;13(2):4020
Laacher Hof AXXa	Loamy sand	6.2 7.4	20	55	73.6	244.5	73.6	0.590	8.4	SFO-SFO	Y/ EFSA Journal 2015;13(2):4020
Hoefchen	Silt loam	6.5 7.0	20	55	37.8	125.7	37.8	1.00	4.0	SFO-SFO	Y/ EFSA Journal 2015;13(2):4020
Geometric mean / Median (n = 3)							44.7 / 37.8				
Arithmetic mean (n = 3)							-	0.833			

(x): measured in CaCl₂

f.f.: formation fraction

zRMS comments:

Soil degradation data for flupyradifurone and its metabolites are in line with EU agreed endpoints reported in EFSA Journal 2015;13(2):4020. Some typing errors were corrected by the zRMS in tables above, but with no impact on the calculated mean/median values.

8.3.2 Anaerobic degradation in soil (KCP 9.1.1.1)

Deltamethrin and its metabolites

The anaerobic degradation of deltamethrin has been evaluated; full details of these studies are provided in the respective EU Monograph Annex B8 and related documents and summarised in the conclusions of the EU Review Report (6504/VI/99-final) on deltamethrin, and in particular Appendices I and II thereof, as finalised in the Standing Committee on the Food Chain and Animal Health on 18 October 2002. No additional studies have been performed since additional data was not required as a result of the review.

Table 8.3 -11: Summary of anaerobic degradation rates for deltamethrin - laboratory studies (triggering endpoints)

Deltamethrin, Laboratory studies, anaerobic conditions, triggering endpoints									
Soil name	Soil type (acc. USDA)	pH (CaCl ₂)	T (°C)	MWHC (%)	DT ₅₀ (d)	DT ₉₀ (d)	Chi ² (%)	Kinetic model	Evaluated on EU level y/n/ Reference
Casa Grand (n =2)	Sandy loam	8.1	25	flooded	34 *	n.l.	n.l.	SFO	Y/ EU Review Report (6504/VI/99-final)
Dubbs (n = 3)	Fine sandy loam	5.9	25	flooded	90 *	n.l.	n.l.	SFO	Y/ EU Review Report (6504/VI/99-final)
Arithmetic mean / Median (n = 5)					68				Y/ EU Review Report (6504/VI/99-final)
pH-dependency: y/n					no				Y/ EU Review Report (6504/VI/99-final)

*: DT₅₀ values listed are the geometric means from multiple values for each soil at 25 °C.

n.l.: not listed in LoEP; not relevant for risk assessment.

zRMS comments:

Anaerobic soil degradation data for deltamethrin presented in Table 8.3-11 are in line with the EU Review Report (6504/VI/99-final). It is noted that in the Review Report single values are provided as follows: 32, 36, 69, 100 and 105 days. The mean value given in the LoEP is the same as value given in Table 8.3-11 above.

Flupyradifurone and its metabolites

The anaerobic degradation of flupyradifurone has been evaluated, full details of these studies are provided in the respective EU DAR and related documents and summarised in the EFSA conclusion (EFSA Journal 2015;13(2):4020, 101 pp.) no additional studies have been performed.

Table 8.3-12: Summary of anaerobic degradation rates for flupyradifurone - laboratory studies

Flupyradifurone, laboratory studies, anaerobic conditions									
Soil name	Soil type (acc. USDA)	pH (x)	T (°C)	MWHC ¹⁾ (%)	DT ₅₀ (d)	DT ₉₀ (d)	Chi ² (%)	Kinetic model	Evaluated on EU level y/n/Reference
Hoefchen	Silt loam	6.4	20	55	581.8	>1000	1.4	SFO	Y/ EFSA Journal 2015;13(2):4020
Hoefchen	Silt loam	6.4	20	55	693.2	>1000	1.3	SFO	Y/ EFSA Journal 2015;13(2):4020
Hoefchen	Silt loam	6.4	20	55	631.0	>1000	0.9	SFO	Y/ EFSA Journal 2015;13(2):4020
Sanger	Loamy sand	6.7	20	55	152	506	11.9	SFO	Y/ EFSA Journal 2015;13(2):4020
Springfield	Sandy clay loam	6.5	20	55	>1000	>1000	n.r.	n.r. ²⁾	Y/ EFSA Journal 2015;13(2):4020
Geometric mean / Median (n = 3 soil sources)					458.4 /633.7				
pH-dependency: y/n					-				

(x) = measured in CaCl₂

1): MWHC % before flooding to create anaerobic conditions

2): no degradation observed

zRMS comments:

Anaerobic soil degradation data for flupyradifurone presented in Table 8.3-12 are in general in line with EU agreed endpoints reported in EFSA Journal 2015;13(2):4020. It is noted that DT₅₀ of 633.7 days indicates as the median value in Table 8.3-12 is actually the geometric mean DT₅₀ calculated for Hoefchen soil.

8.4 Field studies (KCP 9.1.1.2)

8.4.1 Soil dissipation testing on a range of representative soils (KCP 9.1.1.2.1)

8.4.1.1 Deltamethrin and its metabolites

The degradation of deltamethrin in terrestrial field dissipation studies has been evaluated; full details of these studies are provided in the respective EU Monograph Annex B8 and related documents and summarised in the conclusions of the EU Review Report (6504/VI/99-final) on deltamethrin, and in particular Appendices I and II thereof, as finalised in the Standing Committee on the Food Chain and Animal Health on 18 October 2002. No additional experimental studies have been performed since additional data was not required as a result of the review.

The list of endpoints stated as DT_{50f} the following estimated values: 2-3 weeks for study in Minnesota (UA), both cropped and bare soil, 1 – 4 weeks at 4 locations in Germany on bare soil. The list of endpoints stated as DT_{90f} the following estimated values: > 4 month for study in Minnesota (UA), both cropped and bare soil, 1 – 3 month at 4 locations in Germany on bare soil, overall estimate < 1 year.

~~The kinetics of terrestrial field dissipation studies has been re-evaluated as the existing evaluations were based on the “Timme-Frehse” log-linear fitting approach (in the original study reports), which is no longer recommended for kinetic evaluations and was considered to deliver unreliable DT₅₀-values by the RMS during the review of deltamethrin under EU directive 91/414.~~

~~The objective of the kinetic re-evaluation was therefore to derive reliable input parameters for the calculation of PEC_{soil}-values. The EU Monograph on deltamethrin and EU Review Report on deltamethrin were fully taken into account (see report M-221665-01-1, Appendix 2). The respective results are listed in-~~

Triggering endpoints

Triggering endpoints were not derived from field studies in case of deltamethrin and its residues in soil, and are not required.

Modelling endpoints

Table 8.4-1: Summary of aerobic degradation rates for deltamethrin – field studies: Modelling endpoints

Deltamethrin, field studies, bare soil conditions										
Soil name	Soil type (USDA)	Country	pH (x)	Depth (cm)	DT ₅₀ actual (d)	DT ₉₀ actual (d)	Chi ² (% ²) ²⁾	Kinetic model	DT ₅₀ (d) 20°C pF2	Evaluated on EU level y/n/ Reference [*]
Minnesota ¹⁾	Loamy sand	USA	5.6	0–15	16.6	55.3	0.808	SFO	n.r.	N/ new data, Appendix 2 Schäfer, 2003, M-221665-01-1
Stelle	Silty sand	GER	4.7	0–20	23.7	78.8	0.563	SFO	n.r.	N/ new data, Appendix 2 Schäfer, 2003, M-221665-01-1
Bornheim	Sandy loam	GER	7.1	0–20	17.0	56.3	0.934	SFO	n.r.	N/ new data, Appendix 2 Schäfer, 2003, M-221665-01-1
Gersthofen	Loamy sand	GER	5.8	0–20	7.5	25.0	0.986	SFO	n.r.	N/ new data, Appendix 2 Schäfer, 2003, M-221665-01-1
Hattersheim	Sandy silty loam	GER	5.2	0–20	28.3	94.0	0.976	SFO	n.r.	N/ new data, Appendix 2 Schäfer, 2003, M-221665-01-1
Maximum (n=5)					28.3					N/ new data, Appendix 2 Schäfer, 2003, M-221665-01-1

(x): medium not specified, probably measured in water.

¹⁾: only the bare soil plot was considered.

²⁾: only the r² value without dimension was given.

zRMS comments:

First of all it should be noted that values reported in Table 8.4-1 above are actually triggering values since they were not normalised to 20°C and pF2 and for this reason they are not relevant for modelling purposes. Furthermore, they originate from the kinetic re-evaluation of the EU agreed soil field degradation data for deltamethrin performed by Schäfer (2003) and are not in line with EU agreed values reported in the Review Report for deltamethrin (6504/VI/99-final of 2002). In the dRR in area of Section 8 the Applicant stated that the kinetic re-evaluation of the field dissipation data for deltamethrin was necessary as at the EU level the degradation kinetics was estimated using not relevant approach and respective DT₅₀ values were derived by the RMS (Sweden) from the visual inspection of the dissipation curves.

It should be, however, noted that the kinetic re-evaluation was performed in 2003, so it does not comply with the most recent version of the FOCUS guidance on degradation kinetics. In opinion of the zRMS, the new DT₅₀ values calculated on the basis of indications of the outdated guidance should not replace the EU agreed values, especially information on soil degradation of deltamethrin available in the current list of endpoints is sufficient to finalise the exposure assessment. Taking this into account, the endpoints proposed by the Applicant in table above were not validated by the zRMS.

zRMS approach is fully in line with indications of the Working Document of the Central Zone in area of Section 8² and , which clearly states that the new active substance data may be considered in the Core Assessments only in exceptional cases and that kinetic re-evaluation may be considered at zonal/national level only when no safe use may be derived using the agreed endpoints.

Since the information provided by the Applicant above is not agreed by the zRMS, data from the current LoEP are reproduced below while information provided by the Applicant above is struck through.

² Working Document of the Central Zone in the Authorisation of Plant Protection Products, Section 8, Environmental Fate and Behaviour, Version 1, rev. 1, June 2018

Field DT₅₀:

2-3 weeks US (Minnesota, both cropped and bare soil)
1-4 weeks (4 bare soils in Germany)
Overall realistic estimate DT₅₀: 3 weeks

Field DT₉₀:

>4 months US (Minnesota, both cropped and bare soil)
1-3 months (3 bare soils in Germany)
>13 months (1 bare soil in Germany)
Overall realistic estimate DT₉₀: <1 year

8.4.1.2 Flupyradifurone and its metabolites

The field dissipation of flupyradifurone has been evaluated, full details of these studies are provided in the respective EU DAR and related documents and summarised in the EFSA conclusion (EFSA Journal 2015;13(2):4020, 101 pp.) no additional studies have been performed.

Triggering endpoints

Table 8.4-2: Summary of aerobic degradation rates for flupyradifurone - field studies: triggering endpoints

Flupyradifurone, Field studies – Triggering endpoints									
Soil type (acc. USDA)	Location	pH (x)	Depth (cm)	DissT ₅₀ (d) actual	DT ₉₀ (d) actual	Kinetic parameters	St. (x ²)	Method of calculation	Evaluated on EU level y/n/Reference
Sandy loam	Monheim, GER	6.3	0 - 30	41.0	749	k ₁ 0.0547 k ₂ 0.0021 g 0.5144	7.5	DFOP	Y/ EFSA Journal 2015;13(2):4020
Clay loam	Great Chishill UK	5.8	0 - 30	251	>1000	k ₁ 31.6805 k ₂ 0.0015 g 0.2716	7.5	DFOP	Y/ EFSA Journal 2015;13(2):4020
Silt loam	Burscheid, GER	6.3	0 - 30	42.8	484	k ₁ 0.0646 k ₂ 0.0035 g 0.4518	6.3	DFOP	Y/ EFSA Journal 2015;13(2):4020
Clay loam	Albaro, ITA	7.4	0 - 30	8.3	279	k ₁ 0.1984 k ₂ 0.0050 g 0.5989	7.1	DFOP	Y/ EFSA Journal 2015;13(2):4020
Loam	Vilobi d'Onyar, ESP	5.9	0 - 30	22.6	215	k ₁ 0.3350 k ₂ 0.0084 g 0.3960	6.6	DFOP	Y/ EFSA Journal 2015;13(2):4020
Loam	Hanscheider Hof, GER	5.5	0 - 30	39.0	579	k ₁ 0.0295 k ₂ 0.0019 g 0.6993	11.3	DFOP	Y/ EFSA Journal 2015;13(2):4020
Maximum (n = 6)				251	>1000				
pH-dependency: y/n				n					

(x): measured in CaCl₂

zRMS comments:

Field degradation data for flupyradifurone are in line with EU agreed endpoints reported in EFSA Journal 2015;13(2):4020.

8.4.2 Soil accumulation testing (KCP 9.1.1.2.2)

It has been acknowledged in the respective EU Monograph and related documents, and was concluded in the EU Review Report (6504/VI/99-final) that field soil accumulation studies are not requested for deltamethrin. No additional studies have been performed.

The accumulation of flupyradifurone has been evaluated, full details of these studies are provided in the respective EU DAR and related documents and summarised in the EFSA conclusion (EFSA Journal 2015;13(2):4020, 101 pp.) no additional studies have been performed.

zRMS comments:

Studies on accumulation of deltamethrin in soil were not required in the course of the EU Review Report (6504/VI/99-final) and are also deemed not necessary for this zonal evaluation.

With regard to flupyradifurone no accumulation studies were performed in the course of the EU review and the following is stated in the DAR (Vol. 3, B.8 of December 2014):

No field accumulation studies have been performed as the accumulation of BYI 02960 can be calculated from the degradation data obtained. The results of modelling, considering specific application rates and crops are presented in the PEC_{soil} calculations for the representative uses.

Based on that, information provided in the Applicants' text above has been struck through as being not confirmed by the data available from the EU review.

Nevertheless, no soil accumulation studies were deemed necessary since potential for accumulation may be addressed in the soil exposure assessment (see point 8.7.2.2 for details).

8.5 Mobility in soil (KCP 9.1.2)

Studies on mobility in soil with the formulation were not performed, since it is possible to extrapolate from data obtained with the active substances.

8.5.1 Laboratory studies (KCP 9.1.2.1)

8.5.1.1 Deltamethrin and its metabolites

The adsorption/desorption of deltamethrin and its metabolites has been evaluated; full details of these studies are provided in the respective EU Monograph and related documents and summarised in the EU Review Report (6504/VI/99-final). No additional studies are submitted within this dRR.

Table 8.5-1: Summary of soil adsorption/desorption for deltamethrin

Deltamethrin							
Soil name	Soil type (USDA)	OC (%)	pH (CaCl ₂)	K _r (mL/g)	K _{foc} (mL/g)	1/n (-)	Evaluated on EU level y/n/ Reference
Arizona I	Sandy loam	0.06	8.5	9600	16,300,000	0.77	Y/ EU Review Report (6504/VI/99-final)
Arizona II	Sandy loam	0.23	8.1	30000	12,800,000	1.20	Y/ EU Review Report (6504/VI/99-final)
Arizona III	Clay	0.23	7.6	26700	11,400,000	0.74	Y/ EU Review Report (6504/VI/99-final)
Mississippi	Silty clay loam	0.81	6.5	3790	460,000	1.01	Y/ EU Review Report (6504/VI/99-final)
Arithmetic mean (n = 4)					10,240,000	0.93	Y/ EU Review Report (6504/VI/99-final)
pH-dependency y/n					n		Y/ EU Review Report (6504/VI/99-final)

*: medium not specified.

Table 8.5-2: Summary of soil adsorption/desorption for Br₂CA metabolite

Br₂CA metabolite,							
Soil name	Soil type (USDA)	OC (%)	pH (CaCl₂)*	K_r (mL/g)	K_{foc} (mL/g)	1/n (-)	Evaluated on EU level y/n/ Reference
Mississippi	Silty clay loam	0.81	6.5	0.355	43.7	0.96	Y/ EU Review Report (6504/VI/99-final)
USA	Sandy loam	2.56	6.4	0.587	23.0	0.89	Y/ EU Review Report (6504/VI/99-final)
Michigan	Clay loam	2.65	6.8	0.267	10.1	0.83	Y/ EU Review Report (6504/VI/99-final)
Arithmetic mean (n = 3)					25.6	0.89	Y/ EU Review Report (6504/VI/99-final)
pH-dependency y/n					n		Y/ EU Review Report (6504/VI/99-final)

*: medium not specified.

zRMS comments:

Soil sorption data for deltamethrin and metabolite Br₂CA presented in Tables 8.5-1 and 8.5-2 are in line with EU agreed endpoints reported in EU Review Report (6504/VI/99-final).

It is noted that neither in the LoEP nor in the DAR information on 1/n values may be found. Nevertheless, arithmetic mean 1/n of 0.93 and 0.89 for deltamethrin and Br₂CA have been already agreed in the course of the zonal evaluations of at least two formulations of the same Applicant (Multirose, evaluated by AT as zRMS in 2016 and Decis 15 EW evaluated by BE as the zRMS in 2018) and for this reason they are also agreed for purposes of evaluation of DLT+FPF EC 85 for consistency.

It is further noted that post-Annex I inclusion the Koc values for deltamethrin were re-evaluated by the RMS (SE) and it was proposed to replace the mean Koc of 10 240 000 mL/g with new value of 408 250 mL/g. Details of the calculation and underlying data are given in the letter of KEMI to the European Commission of March 2008. However, it is not known if the newly proposed value was agreed and for this reason the zRMS is of the opinion that the Koc as reported in the Review Report should be used.

8.5.1.2 Flupyradifurone and its metabolites

The adsorption/desorption of flupyradifurone has been evaluated, full details of these studies are provided in the respective EU DAR and related documents and summarised in the EFSA conclusion (EFSA Journal 2015;13(2):4020, 101 pp.). No additional studies have been performed.

Time dependant sorption parameters were evaluated in the DAR but were not included in the EFSA conclusion, the studies and parameters derived from these studies can be found in the Flupyradifurone DAR (Draft Assessment Report – public version – flupyradifurone, December 2014, Volume 3 B8, pages 152 to 172). EFSA has recently published an opinion on the derivation of TDS parameters for the use in groundwater risk assessment (Scientific Opinion about the Guidance of the Chemical Regulation Directorate (UK) on how aged sorption studies for pesticides should be conducted, analysed and used in regulatory assessments. EFSA Journal 2018;16(8):5382, 86 pp. <https://doi.org/10.2903/j.efsa.2018.5382>, flupyradifurone was one of the compounds used in this opinion (designated ECPA-07 in the opinion) and the parameters derived in the EFSA opinion are used for risk assessment.

Table 8.5-3: Summary of soil adsorption/desorption for flupyradifurone

Flupyradifurone							
Soil name	Soil type (USDA)	OC (%)	pH (CaCl₂)	K_r (mL/g)	K_{foc} (mL/g)	1/n (-)	Evaluated on EU level y/n/Reference
Laacher Hof AXXa	Sandy loam*	2.1	6.2	2.077	98.9	0.8445	Y/ EFSA Journal 2015;13(2):4020
Hoefchen	Loam*	2.4	6.6	2.213	92.2	0.8682	Y/ EFSA Journal 2015;13(2):4020
Hanscheider Hof	Loam*	2.2	5.3	2.354	107.0	0.8643	Y/ EFSA Journal 2015;13(2):4020
Dollendorf II	Loam*	5.1	7.2	3.822	74.9	0.8648	Y/ EFSA Journal 2015;13(2):4020
Sanger	Sandy loam	0.7	6.8	0.597	85.2	0.9021	Y/ EFSA Journal 2015;13(2):4020
Springfield	Silt loam	1.9	6.5	2.512	132.2	0.8505	Y/ EFSA Journal 2015;13(2):4020
Arithmetic mean (n = 6)					98.4	0.8657	Y/ EFSA Journal 2015;13(2):4020
pH-dependency y/n					n		

* Soils used for determination of 1/n in the time dependent sorption

Table 8.5-4: Time dependant sorption parameters of flupyradifurone

Flupyradifurone						
Soil^A	k_{des} (1/d)	f_{ne} (-)	DegT50_{eq} (d)	K_{om,eq} (L/kg)	1/n (-)	Evaluated on EU level y/n/Reference
AXXa (A)	0.032	0.752	55.692	42.668	0.845	Y/ EFSA Journal 2018;16(8):5382 (page 75, Table C.7)
Hoefchen (B)	0.037	0.313	45.41	46.664	0.868	Y/ EFSA Journal 2018;16(8):5382 (page 75, Table C.7)
Hanscheider Hof (C)	0.037	0.698	80.962	61.156	0.864	Y/ EFSA Journal 2018;16(8):5382 (page 75, Table C.7)
Dollendorf II (D)	0.027	0.473	50.199	39.873	0.865	Y/ EFSA Journal 2018;16(8):5382 (page 75, Table C.7)

^A Notation of soils in brackets as in EFSA (2018, Table C.7)

Table 8.5-5: Summary on degradation and adsorption results obtained in lower-tier, aged sorption studies and with combining both for flupyradifurone (EFSA Journal 2018;16(8):5382, Table C.8)

Soil type (origin, label)	DegT50_{eq} (days) Batch^A	DegT50_{eq} (days) TDS	DegT50_{eq} (days) Combined	K_{om,eq} (mL/g) Batch	K_{om,eq} (mL/g) TDS	1/n Batch	k_{des} (days⁻¹) TDS	f_{ne} TDS
Sandy loam (AX, FUR)	56.1		56.1					
Sandy loam (AX, PYM)		55.7	55.7	57.3	42.7	0.84	0.032	0.752
Loamy sand (AX, ETH)	59.6		59.6					
AX geometric mean			57.1					
Silt loam (HF, PYR)	32.1		32.1					
Silt loam (HF, PYM)		45.4	45.4	53.5	46.7	0.87	0.037	0.313
Silt loam (HF, FUR)	34.7		34.7					
Silt loam (HF, ETH)	33.8		33.8					
HF geometric mean			36.2					
Loam (HN, FUR)	75.0		75.0					
Silt loam (HN, PYM)		80.9	80.9	62.1	61.2	0.86	0.037	0.698
HN geometric mean			77.9					
Clay loam (DD, FUR)	41.5		41.5					
Silty loam (DD, PYM)		50.2	50.2	43.5	39.9	0.86	0.027	0.473
Clay loam (DD, ETH)	28.6		28.6					
DD geometric mean			39.1					

Soil type (origin, label)	DegT50eq (days) Batch ^A	DegT50eq (days) TDS	DegT50eq (days) Combined	K _{om,eq} (mL/g) Batch	K _{om,eq} (mL/g) TDS	1/n Batch	k _{des} (days ⁻¹) TDS	f _{ne} TDS
Silt loam (SF, FUR)	131.1		131.1					
Silt loam (SF, PYR)	122.4		122.4	76.7		0.85		
SF geometric mean			126.7					
Sandy loam (S, FUR)	10.9		10.9					
Sandy loam (S, PYR)	43.3		43.3	49.5		0.9		
S geometric mean			21.7					
All geometric mean			50.9	56.2 ^B			0.033	0.53
All arithmetic mean						0.86		

PYM (= pyridinyl-methyl-¹⁴C-label), PYR (= pyridine-2,6-¹⁴C-label), FUR (= furanone-4-¹⁴C-label) and ETH (= ethyl-1-¹⁴C-label);

AX = Laacher Hof AXXa, HF = Hoefchen, HN = Hanscheider Hof, DD = Dollendorf II, SF = Springfield, S = Sanger
Table C.8. of EFSA opinion on the aged sorption guidance (EFSA, 2018) refers to the values in this table with soil AX=A, HF=B, HN=C, DD=D, SF=E, S=F

TDS: time dependant sorption.

^A Calculated from lower-tier DegT50 on the basis of option 3. i.e. refitting the lower-tier residue data

^B Calculated using the lower-tier data only; the K_{om,eq} fitted in the aged sorption experiment is not used in the leaching assessment.

Table 8.5-6: Summary of soil adsorption/desorption for metabolite 6-CNA

Metabolite 6-CNA							
Soil Name	Soil Type (USDA)	OC* (%)	pH (CaCl ₂)	K _r (mL/g)	K _{foc} (mL/g)	1/n (-)	Evaluated on EU level y/n/Reference
Loamy Sand	Loamy Sand	2.54 1.47	6.2	1.027	70	1.0069	Y/ EFSA Journal 2015;13(2):4020
Silt Loam	Silt loam	0.76 0.44	6.6	0.569	129	0.9706	Y/ EFSA Journal 2015;13(2):4020
Clay	Clay	2.05 1.19	7.5	0.833	70	0.8941	Y/ EFSA Journal 2015;13(2):4020
Clay Loam	Clay loam	1.41 0.82	8.3	0.690	84	0.9262	Y/ EFSA Journal 2015;13(2):4020
Arithmetic mean (n = 4)					88.3	0.9495	
pH-dependency: y/n					n		

* In the LoEP the respective %OM values were incorrectly included in the %OC column.

Table 8.5-7: Summary of soil adsorption/desorption for metabolite DFA

Metabolite DFA							
Soil Name	Soil Type (USDA)	OC (%)	pH (CaCl ₂)	K _r (mL/g)	K _{foc} (mL/g)	1/n (-)	Evaluated on EU level y/n/Reference
Hoefchen	Silt loam	2.4	6.5	1.74	9.5	0.9053	Y/ EFSA Journal 2015;13(2):4020
Hanscheider Hof	Loam	2.9	5.8	1.07	7.8	0.8013	Y/ EFSA Journal 2015;13(2):4020
Dollendorf II	Clay loam	4.5	7.4	1.78	8.2	0.9579	Y/ EFSA Journal 2015;13(2):4020
Sanger, CA	Sandy loam	0.5	6.0	0.594	6.7	0.6902	Y/ EFSA Journal 2015;13(2):4020
Springfield, NE	Silty clay loam	1.7	6.5	0.274	1.7	0.8194	Y/ EFSA Journal 2015;13(2):4020
Arithmetic mean (n = 5)					6.8	0.8348	
pH-dependency: y/n					n		

zRMS comments:

Soil mobility data for flupyradifurone and its metabolites are in line with EU agreed endpoints reported in EFSA Journal 2015;13(2):4020.

It is noted that for metabolite 6-CNA the Applicant changed the OC content of tested soils stating that in the LoEP respective %OM values were incorrectly included in the %OC column. In absence of the study report the zRMS cannot verify this information, however in the DAR (Vol. 3, B.8 of December 2014) the %OC content is given as in the LoEP. Respective correction was thus made by the zRMS noting that full verification would be possible only based on information in the study report. Nevertheless, this issue has no impact on input parameters considered in the subsequent exposure assessment.

The information on time-dependent sorption and summary of degradation and adsorption results obtained for flupyradifurone in lower-tier, aged sorption studies and with combination of both is in line with data reported in EFSA Journal 2018;16(8):5382 and may be used for higher tier groundwater modelling, as already agreed for one of the formulations of the same Applicant (Flupyradifurone FS 480) during the interzonal evaluation performed by Finland as the izRMS (for details, see final Core Assessment, Part B, Section 8 of September 2019). Please note that during this evaluation the Applicant used slightly different values, while values reported in Tables 8.5-4 and 8.5-5 are fully in line with these given in EFSA (2018).

8.5.2 Lysimeter studies (KCP 9.1.2.2)

Lysimeter studies for deltamethrin or flupyradifurone were not required for EU registration; no additional studies have been performed.

zRMS comments:

Information on lysimeter studies for both active compounds is in line with conclusions derived at the EU level.

8.5.3 Field leaching studies (KCP 9.1.2.3)

Field leaching studies for deltamethrin or flupyradifurone were not required for EU registration; no additional studies have been performed.

zRMS comments:

Information on field leaching studies for both active compounds is in line with conclusions derived at the EU level.

8.6 Degradation in the water/sediment systems (KCP 9.2, KCP 9.2.1, KCP 9.2.2, KCP 9.2.3)

Studies on degradation in water/sediment systems with the formulation were not performed, since it is possible to extrapolate from data obtained with the active substances.

8.6.1 Deltamethrin and its metabolites

The degradation of deltamethrin in water/sediment systems has been evaluated; full details of these studies are provided in the respective EU Monograph and related documents and summarised in the conclusions of the EU Review Report (6504/VI/99-final) on deltamethrin, and in particular Appendices I and II thereof, as finalised in the Standing Committee on the Food Chain and Animal Health on 18 October 2002. No additional experimental studies have been performed since additional data was not required as a result of the review.

When entering the water column, deltamethrin disappears very rapidly by partitioning to the sediment, suspended organic matter and biota. A worst case DT_{50} of 17 hours was stated for the water phase in the list of endpoints.

Reliable DT_{50} values for dissipation from the sediment (5 to 14 days) could only be determined in one of the pond studies while in the water/sediment study report only the total system DT_{50} values of 40 days and

85 to 90 days are given. The water/sediment study was therefore re-evaluated (see in Appendix 2 report M-553324-02-1 by Schad and Zerbe, 2016, new data in the document “Deltamethrin – core information for surface water risk assessment”) in order to derive reliable input parameters for the calculation of PEC_{sw} and PEC_{sed} values. The EU Monograph on deltamethrin and EU Review Report on deltamethrin were fully taken into account.

zRMS comments:

Information on degradation of deltamethrin and its metabolite in water/sediment systems presented above is in line with EU Review Report (6504/VI/99-final).

With regard to the kinetic re-evaluation of the degradation data in water/sediment systems, in report by Schad & Zerbe (2016, M-553324-02-1) it is indicated that this procedure was deemed necessary as reliable DT_{50} values for dissipation from the sediment could only be determined in one of the pond studies (Muir et al., 1985) while in the water/sediment study report by Muttzall (1993) only the total system DT_{50} values were given.

It should be, however, noted that the most recent version of the *Generic guidance for FOCUS surface water scenarios* (May 2015) clearly indicates that in case it is not possible to derive specific DT_{50} values for the individual phases (water and sediment), the geometric mean DT_{50} for the whole system is recommended to be used in the exposure evaluation of the surface water scenarios. However, as deltamethrin K_{foc} is >2000 mL/g, the whole system geometric mean DT_{50} should be used as input for the sediment phase, while default DT_{50} of 1000 days should be used for the water phase. Please note that this approach has been followed in the course of the renewal process of deltamethrin and is considered to be relevant also for this zonal evaluation.

Taking into account that sufficient data on degradation in water/sediment systems are available in the current list of endpoints (6504/VI/99-final of October 2002) and in line with indications of the Central Zone working document on evaluation in area of Section 8, generation of new active substance endpoints for purposes of this zonal evaluation is considered to be not justified.

8.6.2 Flupyradifurone and its metabolites

The degradation of flupyradifurone in water/sediment systems has been evaluated, full details of these studies are provided in the respective EU DAR and related documents and summarised in the EFSA conclusion (EFSA Journal 2015;13(2):4020, 101 pp.); no additional studies have been performed.

Table 8.6-1: Summary of degradation in aerobic water/sediment of flupyradifurone

Flupyradifurone									
Distribution in water decreased to 11.4% (Sandy loam), 22.3% (Loamy sand), 14.1-14.3% (Loam) and 35.6-36.8% (Sand) at termination of the studies. Maximum sediment: 59.4% (Sandy loam) at 59 d, 49.5% (Loamy sand) at termination, 58.3-58.7% (Loam) after 45-60 d and 37.6-38.9 % (Sand) at termination.									
Water/ sediment system	pH water/ sed.	DegT₅₀ whole syst. (d)	DegT₉₀ whole syst. (d)	Kinetic fit	DissT₅₀ water (d)	DissT₉₀ water (d)	Kinetic fit	DissT₅₀ sed. (d)*	Evaluated on EU level y/n/Reference
Sandy loam	7.4 / 5.2	193.1	641.3	SFO	8.5	174.6	FOMC	-	Y/ EFSA Journal 2015;13(2):4020
Loamy sand	7.7 / 6.7	246.9	820.1	SFO	34.5	181.8	DFOP	-	Y/ EFSA Journal 2015;13(2):4020
Loam	6.5 / 4.8	208.2	691.6	SFO	48.5	161.0	DFOP	-	Y/ EFSA Journal 2015;13(2):4020
Sand	6.9 / 6.8	246.1	817.4	SFO	123.8	411.2	DFOP	-	Y/ EFSA Journal 2015;13(2):4020
Loam	6.5 / 4.8	202.4	672.2	SFO	50.2	116.9	DFOP	-	Y/ EFSA Journal 2015;13(2):4020
Sand	6.9 / 6.8	285.0	946.9	SFO	117.5	390.3	DFOP	-	Y/ EFSA Journal 2015;13(2):4020
Geometric mean (n = 6)		228.1	757.7						

* not calculated

Table 8.6-2: Summary of observed metabolites

DFA Water/sediment system	Max. in water/sediment: 6.9% after 120 d (Angler Wieher, ethyl label). Max. in water: 6.0% after 120 d (Angler Wieher, ethyl label). Max. in sediment: 0.9% after 120 d (Angler Wieher, ethyl label).	Evaluated on EU level Y/ EFSA Journal 2015;13(2):4020
BYI 02960- succinamide	Max. 39.6% in water (photolytic degradation)	Y/ EFSA Journal 2015;13(2):4020
BYI 02960- azabicyclo- succinamide	Max. 25.9% in water (photolytic degradation)	Y/ EFSA Journal 2015;13(2):4020

Table 8.6-3: Summary of degradation in water/sediment of flupyradifurone metabolite DFA

DFA									
Distribution in water decrease to 32.3% (Loam) at termination of the study and 72.3% (Loamy sand) at 79 d. Maximum sediment: 25.2% (Loam) and 16.5% (Loamy sand) both after 79 d.									
Water/ sediment system	pH water/ sed.	DegT₅₀ whole syst. (d)	DegT₉₀ whole syst. (d)	Kinetic fit	DissT₅₀ water (d)	DissT₉₀ water (d)	Kinetic fit	DissT₅₀ sed. (d)*	Evaluated on EU level y/n/Reference
Loam	6.9/5.2	109.0	362.2	SFO	75.3	250.3	DFOP	-	Y/ EFSA Journal 2015;13(2):4020
Loamy sand	7.5/7.0	567.2	>1000	SFO	371.5	>1000	SFO	-	Y/ EFSA Journal 2015;13(2):4020
Geometric mean (n = 6)		248.6	601.8						

* not calculated

zRMS comments:

Information on degradation of flupyradifurone and its metabolite DFA in water/sediment systems presented in Tables 8.6-1 to 8.6-3 above is in line with data reported in EFSA Journal 2015;13(2):4020.

8.7 Predicted Environmental Concentrations in soil (PEC_{soil}) (KCP 9.1.3)

8.7.1 Justification for new endpoints

Table 8.7-1: Justification for new endpoints

Compound	Parameter	EU Endpoint	Used endpoint	Justification
Deltamethrin	DT _{50,soil field} (d)	Overall realistic estimate: 3 weeks (field study)	28.3 days (28 days from field or 35 days from laboratory studies should have been used)	In the EU Review Report on Deltamethrin (EU, 2002), field DT ₅₀ values of one to four weeks are given. A re-evaluation of the field data by Schäfer (2003, M-221665-01-1, Appendix 2) confirmed that visual assessment and gave first-order DT ₅₀ values between 7.5 and 28.3 days. The worst case DT ₅₀ from kinetic evaluation of field data was chosen.
Br ₂ CA	DT _{50,soil lab} (d)	DT ₅₀ = 2.3 (mean, n = 7)	12.3 days (21 days should have been used)	Maximum of laboratory DT ₅₀ values used as worst case, see Schäfer & Mikolasch (2004, M-236281-01-1, Appendix 2)

No deviations from EU agreed endpoints for flupyradifurone.

zRMS comments:

As already mentioned in zRMS comments in points 8.3.1.1 and 8.4.1.1 of this document, kinetic re-evaluation of the EU agreed laboratory degradation and field dissipation studies for deltamethrin and its metabolites was deemed not necessary as the soil exposure assessment may be finalised with consideration of the EU agreed endpoints. Furthermore, kinetic re-evaluation provided by the Applicant has been performed in 2004 (laboratory data) and 2003 (field data) and in opinion of the zRMS, the new DT₅₀ values calculated on the basis of indications of the outdated guidance should not replace the EU agreed values. Taking this into account the new endpoints derived by the Applicant and provided in Table 8.7-1 above were not validated by the zRMS. The soil exposure should have been calculated with consideration of DT₅₀ of 28 and 21 days for deltamethrin and Br₂CA, respectively. Alternatively, for deltamethrin also maximum laboratory soil DT₅₀ of 35 days could have been used.

For comments on acceptability of the PEC_{soil} calculations for deltamethrin and metabolite Br₂CA, based on endpoints deviating from the EU agreed data, please refer to point 8.7.2.1 below.

8.7.2 Active substance(s) and relevant metabolite(s)

PEC_{soil} reports provided by the applicant are listed in Appendix 3.1.

Table 8.7-2: Input parameters related to application for PEC_{soil} calculations

Use No.	12	16
Crop	Oil seed rape (winter, spring)	Oil seed rape (winter, spring)
Application rate (g as/ha)	Deltamethrin: 7.5 Flupyradifurone: 56.25	Deltamethrin: 5.0 Flupyradifurone: 37.5
Number of applications/interval	2/14	2/14
Crop interception (%)	2 × 80	2 × 80
Depth of soil layer (relevant for plateau concentration) (cm)	20 (tillage)	20 (tillage)

Table 8.7-3: Input parameter for active substance(s) and relevant metabolite(s) for PEC_{soil} calculation

Compound	Molecular weight (g/mol)	Max. occurrence (%)	DT ₅₀ (days)	Value in accordance to EU endpoint y/n/ Reference
Deltamethrin	505.2	100	28.3 (maximum first-order field DT ₅₀ , n = 5) (28 days from field or 35 days from laboratory studies should have been used)	N/ See justification
Br ₂ CA	298.0	23	12.3 (maximum first-order lab. DT ₅₀ , n = 3) (21 days should have been used)	N/ See justification
Flupyradifurone	288.7	100	0.02 (fast), 462 (slow) (DFOP, $k_1 = 34.66$, $k_2 = 0.0015$, $g = 0.2716$, maximum field, not-normalised, n = 6)	Y/ EFSA Journal 2015;13(2):4020
6-CNA	157.6	17.1	36.6 (SFO, maximum lab., not-normalised, n = 5)	Y/ EFSA Journal 2015;13(2):4020
DFA	96.0	33.9	73.6 (SFO, maximum lab., not-normalised, n = 3)	Y/ EFSA Journal 2015;13(2):4020

zRMS comments:

The application pattern presented in Table 8.7-2 and assumed in soil exposure calculation is in line with the critical Central Zone GAP as presented in Table 8.1-1.

As already indicated in point 8.7.1 above, the soil DT₅₀ values for deltamethrin and Br₂CA reported in table 8.7-3 were derived from kinetic re-evaluation of the EU agreed soil laboratory and field degradation/dissipation studies which were not validated by the zRMS, since the soil exposure assessment may be finalised with consideration of the EU agreed endpoints and in such case new active substance data should not be generated at the zonal level. Nevertheless, it is noted that the new field DT₅₀ of 28.3 days considered in Applicants' soil exposure assessment for deltamethrin is in good agreement with the worst case field DT₅₀ of 4 weeks reported in the Review Report for deltamethrin (6504/VI/99-final of 2002). Therefore, the soil exposure calculated with consideration of this DT₅₀ may be accepted.

With regard to metabolite Br₂CA the potential for accumulation in soil is considered to be low due to DT₅₀ <60 days and based on log Pow <3 bioaccumulation or biomagnification in the food chain is not expected. Therefore calculation of PEC_{SOIL} depending on soil DT₅₀ (i.e. $PEC_{SOIL, ACCU}$ and TWA PEC_{SOIL}) is deemed not necessary, while initial PEC_{SOIL} values (relevant for the soil risk assessment for the metabolite) do not depend on soil degradation and may be thus accepted.

Input parameters for flupyradifurone and its metabolites presented in Table 8.7-3 are in general in line with EU agreed parameters defined for soil exposure calculations reported in EFSA Journal 2015;13(2):4020 with exception of k_1 value, which was corrected by the zRMS to comply with the LoEP. It should be, however, noted that the k_1 value provided by the Applicant in Table 8.7-3 is also reported in the LoEP (see page 50 of EFSA Journal 2015;13(2):4020), but was not indicated as an input for calculation of the PEC_{SOIL} (EU agreed input parameters are given on page 52 of the LoEP).

8.7.2.1 Deltamethrin and its metabolites

Table 8.7-4: PEC_{soil} for deltamethrin on oil seed rape (spring and winter) (2×7.5 g a.s./ha)

PECsoil (mg/kg)		Oil Seed Rape winter, summer			
		Single application		Multiple applications	
		Actual	TWA	Actual	TWA
Initial Short term	24 h	0.002	-	0.0034 0.003	-
	2 d	0.002	0.002	0.003	0.003
	4 d	0.002	0.002	0.003	0.003
	7 d	0.002	0.002	0.003	0.003
	14 d	0.001	0.002	0.002	0.003
Long term	21 d	0.001	0.002	0.002	0.003
	28 d	0.001	0.001	0.002	0.002
	42 d	<0.001	0.001	0.001	0.002
	50 d	<0.001	0.001	0.001	0.002
	100 d	<0.001	< 0.001	<0.001	0.001
Plateau concentration (20 cm) after year 0		<0.001	-	<0.001	-
PECaccumulation (PECact + PECsoil plateau)		0.002	-	0.0034 0.003	-

Table 8.7-5: PEC_{soil} for Br₂CA on oil seed rape (spring and winter) (2×7.5 g a.s./ha)

PECsoil (mg/kg)		Oil Seed Rape winter, summer			
		Single application		Multiple applications	
		Actual	TWA	Actual	TWA
Initial Short term	24 h	<0.001	-	<0.001	-
	2 d	<0.001	< 0.001	<0.001	< 0.001
	4 d	<0.001	< 0.001	<0.001	< 0.001
	7 d	<0.001	< 0.001	<0.001	< 0.001
	14 d	<0.001	< 0.001	<0.001	< 0.001
Long term	21 d	<0.001	< 0.001	<0.001	< 0.001
	28 d	<0.001	< 0.001	<0.001	< 0.001
	42 d	<0.001	< 0.001	<0.001	< 0.001
	50 d	<0.001	< 0.001	<0.001	< 0.001
	100 d	<0.001	< 0.001	<0.001	< 0.001
Plateau concentration (20 cm) after year 0		<0.001	-	<0.001	-
PECaccumulation (PECact + PECsoil plateau)		<0.001	-	<0.001	-

Table 8.7-6: PEC_{soil} for deltamethrin on oil seed rape (spring and winter) (2×5 g a.s./ha)

PECsoil (mg/kg)		Oil seed rape winter, summer			
		Single application		Multiple applications	
		Actual	TWA	Actual	TWA
Initial Short term	24 h	0.0013 0.001	-	0.0023 0.002	-
	2 d	0.001	0.001	0.002	0.002
	4 d	0.001	0.001	0.002	0.002
	7 d	0.001	0.001	0.002	0.002
	14 d	<0.001	0.001	0.002	0.002
Long term	21 d	<0.001	0.001	0.001	0.002
	28 d	<0.001	< 0.001	0.001	0.002
	42 d	<0.001	< 0.001	<0.001	0.001
	50 d	<0.001	< 0.001	<0.001	0.001
	100 d	<0.001	< 0.001	<0.001	< 0.001
Plateau concentration (20 cm) after year 0		<0.001	-	<0.001	-
PECaccumulation (PECact + PECsoil plateau)		0.0013 0.001	-	0.0023 0.002	-

Table 8.7-7: PEC_{soil} for Br₂CA on oil seed rape (spring and winter) (2×5 g a.s./ha)

PEC _{soil} (mg/kg)		Oil seed rape winter, summer			
		Single application		Multiple applications	
		Actual	TWA	Actual	TWA
Initial Short term	24 h	<0.001	-	<0.001	-
	2 d	<0.001	< 0.001	<0.001	< 0.001
	4 d	<0.001	< 0.001	<0.001	< 0.001
	7 d	<0.001	< 0.001	<0.001	< 0.001
	14 d	<0.001	< 0.001	<0.001	< 0.001
Long term	21 d	<0.001	< 0.001	<0.001	< 0.001
	28 d	<0.001	< 0.001	<0.001	< 0.001
	42 d	<0.001	< 0.001	<0.001	< 0.001
	50 d	<0.001	< 0.001	<0.001	< 0.001
	100 d	<0.001	< 0.001	<0.001	< 0.001
Plateau concentration (20 cm) after year 0		<0.001	-	<0.001	-
PEAccumulation (PEC _{act} + PEC _{soil} plateau)		<0.001	-	<0.001	-

zRMS comments:

As already mentioned in points 8.7.1 and 8.7.2 above, although the soil DT₅₀ considered by the Applicant in calculation of the soil exposure to deltamethrin and Br₂CA from uses of DLT+FPF EC 85 were not validated by the zRMS, the performed calculations may be entirely (parent) or partially (metabolite, only initial PEC_{SOIL}) accepted for the following reasons:

- DT₅₀ of 28.3 days considered for the parent compound is in good agreement with the maximum EU agreed field DT₅₀ of 28 days. The slight difference between both values will have no impact on the obtained results.
- The EU agreed maximum laboratory DT₅₀ of 21 days for metabolite Br₂CA is longer than 12.3 days assumed in Applicants' calculations, however for the metabolite only initial PEC_{SOIL} values are necessary for the risk assessment and considered DT₅₀ will have no impact on the initial soil exposure.

The soil exposure calculated by the Applicant was independently validated by the zRMS using ESCAPE ver. 2 with consideration of relevant EU agreed parameters. Metabolite was calculated like the parent with application rate corrected for molar ratio (0.59) and maximum occurrence in soil (23%). Despite differences in parameters used in zRMS calculations, obtained PEC_{SOIL} values were the same as these derived by the Applicant. It is noted that most probably due to the rounding procedure, slightly lower initial PEC_{SOIL} values for deltamethrin were reported in Tables 8.7-4 and 8.7-6. However, in opinion of the zRMS, more accurate values should be reported and for this reason initial values were amended accordingly.

Although the short- and long-term as well as TWA PEC_{SOIL} values for the metabolite were not agreed by the zRMS, additional calculations based on relevant EU agreed parameters gave the same results as these provided by the Applicant and for this reason values reported in Tables 8.7-5 and 8.7-7 were retained as being correct.

Since results reported in Tables 8.7-4 to 8.7-7 above are relevant for both, winter and spring OSR, respective information has been added in tables above.

8.7.2.2 Flupyradifurone and its metabolites

Table 8.7-8: PEC_{soil} for flupyradifurone on oil seed rape (spring and winter) (2×56.25 g a.s./ha)

PECsoil (mg/kg)		Oil seed rape winter, summer			
		Single application		Multiple applications	
		Actual	TWA	Actual	TWA
Initial Short term	24 h	0.015	-	0.0297 0.026	-
	2 d	0.015 0.011	0.015 0.013	0.0296 0.022	0.0297 0.024
	4 d	0.015 0.011	0.015 0.012	0.0296 0.022	0.0296 0.023
	7 d	0.015 0.011	0.015 0.011	0.0294 0.021	0.0295 0.022
	14 d	0.015 0.011	0.015 0.011	0.0291 0.021	0.0294 0.022
	21 d	0.015 0.011	0.015 0.011	0.0288 0.021	0.0292 0.021
Long term	28 d	0.014 0.010	0.015 0.011	0.0285 0.021	0.0291 0.021
	42 d	0.014 0.010	0.015 0.011	0.0279 0.020	0.0288 0.021
	50 d	0.014 0.010	0.015 0.011	0.0275 0.020	0.0286 0.021
	100 d	0.013 0.009	0.014 0.010	0.0256 0.019	0.0276 0.020
Plateau concentration (20 cm) after year 10-8		0.051 0.004	-	0.0101 0.008	-
PECaccumulation (PECact + PECsoil plateau)		0.0201 0.019	-	0.0398 0.034	-

Table 8.7-9: PEC_{soil} for difluoroacetic acid on oil seed rape (spring and winter) (2×56.25 g a.s./ha)

PECsoil (mg/kg)		Oil seed rape winter, summer			
		Single application		Multiple applications	
		Actual	TWA	Actual	TWA
Initial Short term	24 h	0.002	-	0.003	-
	2 d	0.002	0.002	0.003	0.003
	4 d	0.002	0.002	0.003	0.003
	7 d	0.002	0.002	0.003	0.003
	14 d	0.002 0.001	0.002	0.003	0.003
	21 d	0.001	0.002	0.003	0.003
Long term	28 d	0.001	0.002 0.001	0.002	0.003
	42 d	0.001	0.001	0.002	0.003
	50 d	0.001	0.001	0.002	0.003
	100 d	<0.001	0.001	0.001	0.002
Plateau concentration (20 cm) after year 1		<0.001	-	<0.001	-
PECaccumulation (PECact + PECsoil plateau)		0.002	-	0.003	-

Table 8.7-10: PEC_{soil} for 6-chloronicotinic acid on oil seed rape (spring and winter) (2×56.25 g a.s./ha)

PECsoil (mg/kg)		Oil seed rape winter, summer			
		Single application		Multiple applications	
		Actual	TWA	Actual	TWA
Initial Short term	24 h	0.001	-	0.0025 0.002	-
	2 d	0.001	0.001	0.0025 0.002	0.0025 0.002
	4 d	0.001	0.001	0.002	0.0025 0.002
	7 d	0.001	0.001	0.002	0.002
	14 d	0.001	0.001	0.002	0.002
	21 d	<0.001	0.001	0.002	0.002
	28 d	<0.001	0.001	0.002 0.001	0.002
	42 d	<0.001	<0.001	0.001	0.002
	50 d	<0.001	<0.001	<0.001	0.002
	100 d	<0.001	<0.001	<0.001	0.001
Plateau concentration (20 cm) after year 1		<0.001	-	<0.001	-
PECaccumulation (PECact + PECsoil plateau)		0.001	-	0.0025 0.002	-

Table 8.7-11: PEC_{soil} for flupyradifurone on oil seed rape (spring and winter) (2×37.5 g a.s./ha)

PECsoil (mg/kg)		Oil seed rape winter, summer			
		Single application		Multiple applications	
		Actual	TWA	Actual	TWA
Initial Short term	24 h	0.010	-	0.0198 0.017	-
	2 d	0.010 0.007	0.010 0.009	0.0198 0.014	0.0198 0.016
	4 d	0.010 0.007	0.010 0.008	0.0197 0.014	0.0198 0.015
	7 d	0.010 0.007	0.010 0.008	0.0197 0.014	0.0197 0.015
	14 d	0.010 0.007	0.010 0.007	0.0194 0.014	0.0196 0.014
	21 d	0.010 0.007	0.010 0.007	0.0192 0.014	0.0195 0.014
	28 d	0.010 0.007	0.010 0.007	0.0190 0.014	0.0194 0.014
	42 d	0.009 0.007	0.010 0.007	0.0186 0.013	0.0192 0.014
	50 d	0.009 0.007	0.010 0.007	0.0184 0.013	0.0191 0.014
	100 d	0.009 0.006	0.009 0.007	0.0170 0.012	0.0184 0.013
Plateau concentration (20cm) after year 7		0.0034 0.002	-	0.0067 0.005	-
PECaccumulation (PECact + PECsoil plateau)		0.0134 0.012	-	0.0265 0.022	-

Table 8.7-12: PEC_{soil} for difluoroacetic acid on oil seed rape (spring and winter) (2×37.5 g a.s./ha)

PECsoil (mg/kg)		Oil seed rape winter, summer			
		Single application		Multiple applications	
		Actual	TWA	Actual	TWA
Initial Short term	24 h	0.001	-	0.002	-
	2 d	0.001	0.001	0.002	0.002
	4 d	0.001	0.001	0.002	0.002
	7 d	0.001	0.001	0.002	0.002
	14 d	<0.001	0.001	0.002	0.002
	21 d	<0.001	0.001	0.002	0.002
	28 d	<0.001	<0.001	0.002	0.002
	42 d	<0.001	<0.001	0.002 0.001	0.002
	50 d	<0.001	<0.001	0.002 0.001	0.002
	100 d	<0.001	<0.001	<0.001	0.001
Plateau concentration (20 cm) after year 1		<0.001	-	<0.001	-
PECaccumulation (PECact + PECsoil plateau)		0.001	-	0.002	-

Table 8.7-13: PEC_{soil} for 6-chloronicotinic acid on oil seed rape (spring and winter) (2×37.5 g a.s./ha)

PEC _{soil} (mg/kg)		Oil seed rape winter, summer			
		Single application		Multiple applications	
		Actual	TWA	Actual	TWA
Initial Short term	24 h	<0.001	-	0.002	-
	2 d	<0.001	< 0.001	0.002	0.002
	4 d	<0.001	< 0.001	0.002	0.002
	7 d	<0.001	< 0.001	0.001	0.002
	14 d	<0.001	< 0.001	0.001	0.001
	21 d	<0.001	< 0.001	0.001	0.001
	28 d	<0.001	< 0.001	<0.001	0.001
	42 d	<0.001	< 0.001	<0.001	0.001
	50 d	<0.001	< 0.001	<0.001	0.001
	100 d	<0.001	< 0.001	<0.001	< 0.001
Plateau concentration (20 cm) after year 1		<0.001	-	<0.001	-
PEC _{accumulation} (PEC _{act} + PEC _{soil} plateau)		<0.001	-	0.002	-

zRMS comments:

The soil exposure calculated by the Applicant for flupyradifurone and its metabolites was independently validated by the zRMS using ESCAPE ver. 2 with consideration of the same EU agreed input parameters. Metabolites were calculated like the parent with application rate corrected for molar ratio and maximum occurrence in soil. Although the same endpoints and application data were used, the PEC_{SOIL} values calculated by the zRMS for the parent were higher comparing to values obtained by the Applicant (with exception of the initial PEC_{SOIL} for single application). Soil exposure in Tables 8.7-8 and 8.7-11 was thus amended accordingly.

Issue of higher PEC_{SOIL} values obtained by the zRMS was further clarified during the commenting period and it was noted that for simplicity the zRMS calculations were performed with consideration of slow phase degradation of flupyradifurone only, while lower exposure would be obtained with fast phase also included. Nevertheless, zRMS recalculations were retained as representing worst case and resulting with acceptable risk to soil organisms. However, in case of evaluation due to e.g. label extension resulting with higher soil exposure, the fast phase may be considered in calculations when necessary to resolve the risk to soil organisms.

Since results reported in Tables 8.7-8 to 8.7-13 above are relevant for both, winter and spring OSR, respective information has been added in tables above.

8.7.2.3 PEC_{soil} of DLT+FPF EC 85

PEC_{soil} is calculated using a standard approach with 5 cm mixing depth and soil density of 1.5 kg/L. All loadings are considered to occur in a single pseudo-application (interception is considered for individual applications). No degradation data is available for the product. Therefore, TWA, plateau, and accumulation concentrations are not calculated, and tillage depth is not relevant here.

Table 8.7-14: PECsoil for DLT+FPF EC 85 on OSR (summer/winter)

Active substance/ preparation	Application rate (g/ha)	PECact (mg/kg)	PECTwa21 d (mg/kg)	Tillage depth (cm)	PECsoil,plateau (mg/kg)	PECaccu = PECact + PECsoil,plateau (mg/kg)
DLT+FPF EC 85	2×867.75 ¹⁾	0.463 ²⁾	-	-	-	-
DLT+FPF EC 85	2×578.5 ¹⁾	0.309 ²⁾	-	-	-	-

¹⁾ Based on a product density of 1.157 kg/L

²⁾ Considering a crop interception of $2 \times 80\%$

zRMS comments:

Soil exposure for the formulated product calculated by the zRMS with consideration of the above application rates was slightly lower (0.409 and 0.273 mg/kg dws for higher and lower rate, respectively) comparing to values obtained by the Applicant. As PEC_{SOIL} values reported in Table 8.7-14 represent worst case, they may be used in the risk assessment.

8.8 Predicted Environmental Concentrations in groundwater (PEC_{gw}) (KCP 9.2.4)

8.8.1 Justification for new endpoints

Table 8.8-1: Justification for new endpoints

Compound	Parameter	EU Endpoint	Used endpoint	Justification
Br ₂ CA	Water solubility (mg/L)	Not stated	9000 at 20°C	Wiche, A.; Bogdoll, B.; 2012; AE F108565 (Br ₂ CA): Solubility in water at pH 5, pH 7 and pH 9; M-435779-01-1 Submitted in 2013 to RMS in AIR3 dossier (Appendix 2)
Br ₂ CA	Saturated vapour pressure (Pa)	Not stated	2.3×10^{-3} at 20°C	Dornhagen, J.; 2012; AE F108565 (Br ₂ CA): Vapour pressure; M-438493-01-1 Submitted in 2013 to RMS in AIR3 dossier (Appendix 2)

No deviations from EU agreed endpoints for flupyradifurone at Tier 1.

Tier 2 (TDS) has been applied according to the recent EFSA opinion on TDS (see statement M-642729-01-1, Appendix 3) where flupyradifurone was one of the example compounds for which TDS parameters were derived and these parameters have been implemented.

zRMS comments:

No endpoints for water solubility and vapour pressure of deltamethrin metabolite Br₂CA are available in the Review Report (6504/VI/99-final of 2002) and for this reason consideration of values reported in Table 8.8-1 is agreed by the zRMS, especially provided values have been already agreed in the course of the zonal evaluation of another deltamethrin formulation of the same Applicant (Decis 15 EW evaluated by BE as the zRMS in 2018). Furthermore, both these values were also agreed by the RMS in the course of the ongoing EU renewal process of deltamethrin (LoEP amended in 2019 is available on EFSA DMS).

8.8.2 Active substance(s) and relevant metabolite(s) (KCP 9.2.4.1)

PEC_{gw} reports provided by the applicant are listed in Appendix 3.2.

Table 8.8-2: Input parameters related to application for PEC_{gw} calculations (OSR, BBCH 30-49)

Use No.	12	11
Crop	Oil seed rape (spring) (BBCH 30-49)	Oil seed rape (winter) (BBCH 30-49)
Application rate (g as/ha)	Deltamethrin: 7.5 Flupyradifurone: 56.25	Deltamethrin: 7.5 Flupyradifurone: 56.25
Number of applications/interval (d)	2/14	2/14
Relative application date	Absolute dates are given in table below	Absolute dates are given in table below
Crop interception (%)	2 × 80	2 × 80
Frequency of application	Annual	Annual
Models used for calculation	FOCUS PEARL v4.4.4, FOCUS PELMO v5.5.3, FOCUS MACRO v5.5.4	FOCUS PEARL v4.4.4, FOCUS PELMO v5.5.3, FOCUS MACRO v5.5.4

Table 8.8-3: Input parameters related to application for PECgw calculations (OSR, BBCH 50-59)

Use No.	14	13
Crop	Oil seed rape (spring) (BBCH 50-59)	Oil seed rape (winter) (BBCH 50-59)
Application rate (g as/ha)	Deltamethrin: 7.5 Flupyradifurone: 56.25	Deltamethrin: 7.5 Flupyradifurone: 56.25
Number of applications/interval (d)	2/14	2/14
Relative application date	Absolute dates are given in table below	Absolute dates are given in table below
Crop interception (%)	2 × 80	2 × 80
Frequency of application	Annual	Annual
Models used for calculation	FOCUS PEARL v4.4.4, FOCUS PELMO v5.5.3, FOCUS MACRO v5.5.4	FOCUS PEARL v4.4.4, FOCUS PELMO v5.5.3, FOCUS MACRO v5.5.4

Table 8.8-4: Input parameters related to application for PECgw calculations (OSR, BBCH 65-79)

Use No.	16	15
Crop	Oil seed rape (spring) (BBCH 65-79)	Oil seed rape (winter) (BBCH 65-79)
Application rate (g as/ha)	Deltamethrin: 5.0 Flupyradifurone: 37.5	Deltamethrin: 5.0 Flupyradifurone: 37.5
Number of applications/interval (d)	2/14	2/14
Relative application date	Absolute dates are given in table below	Absolute dates are given in table below
Crop interception (%)	2 × 80	2 × 80
Frequency of application	Annual	Annual
Models used for calculation	FOCUS PEARL v4.4.4, FOCUS PELMO v5.5.3, FOCUS MACRO v5.5.4	FOCUS PEARL v4.4.4, FOCUS PELMO v5.5.3, FOCUS MACRO v5.5.4

Table 8.8-5: Application dates used for groundwater risk assessment

Crop	Scenario	Application dates (absolute)
OSR (spring) (BBCH 30-49)	Châteaudun	-
	Hamburg	-
	Jokioinen	13 Jun
	Kremsmünster	-
	Okehampton	23 Apr
	Piacenza	-
	Porto	27 Apr
	Sevilla	-
	Thiva	-
OSR (winter) (BBCH 30-49)	Châteaudun	11 Mar
	Hamburg	18 Apr
	Jokioinen	-
	Kremsmünster	15 Apr
	Okehampton	09 Apr
	Piacenza	07 Mar
	Porto	29 Dec
	Sevilla	-
	Thiva	-
OSR (spring) (BBCH 50-59)	Châteaudun	-
	Hamburg	-
	Jokioinen	24 Jun
	Kremsmünster	-
	Okehampton	04 May
	Piacenza	-

Crop	Scenario	Application dates (absolute)
	Porto	14 May
	Sevilla	-
	Thiva	-
OSR (winter) (BBCH 50-59)	Châteaudun	31 Mar
	Hamburg	27 Apr
	Jokioinen	-
	Kremsmünster	25 Apr
	Okehampton	20 Apr
	Piacenza	27 Mar
	Porto	23 Feb
	Sevilla	-
	Thiva	-
OSR (spring) (BBCH 65-79)	Châteaudun	-
	Hamburg	-
	Jokioinen	14 Jul
	Kremsmünster	-
	Okehampton	31 May
	Piacenza	-
	Porto	14 Jun
	Sevilla	-
	Thiva	-
OSR (winter) (BBCH 65-79)	Châteaudun	04 May
	Hamburg	19 May
	Jokioinen	-
	Kremsmünster	19 May
	Okehampton	14 May
	Piacenza	26 Apr
	Porto	04 May
	Sevilla	-
	Thiva	-

zRMS comments:

The application pattern assumed in simulations is in line with the critical Central Zone GAP as presented in Table 8.1-1. The crop interception is relevant for BBCH stages at which the product will be used. Absolute application dates in Table 8.8-5 were checked by the zRMS using AppDate ver. 3.06 tool and are considered acceptable with the interval between applications set to 14 days.

8.8.2.1 Deltamethrin and its metabolites

Table 8.8-6: Input parameters related to active substance deltamethrin and metabolite for PECgw calculations

Compound	Deltamethrin	Br ₂ CA	Value in accordance with EU endpoint y/n/ Reference
Molecular weight (g/mol)	505.2	298.0	Y/ EU review report 6504/VI/99-final (2002)
Water solubility (mg/L)	0.0002 at 25°C	9000 at 20°C	N/ See justification
Saturated vapour pressure (Pa)	1.24×10^{-8} at 25°C	2.30 E-3 Pa at 20°C	N/ See justification
DT ₅₀ in soil (d) lab	26.0	2.3	Y/ EU review report 6504/VI/99-final (2002)
Transformation rate	0.02666	0.30137	FOCUS PELMO calculation
K _{foc} (mL/g)/K _{fom}	10240000.0 / 5940000.0 (arithmetic mean, n = 4)	25.6 / 14.9 (arithmetic mean, n = 3)	Y/ EU review report 6504/VI/99-final (2002)
1/n	0.93 (arith. mean; n = 4)	0.89 (arith. mean; n = 3)	Y/ EU review report 6504/VI/99-final (2002)
Plant uptake factor	0.0	0.0	Default
Formation fraction	-	1 (formed from deltamethrin)	worst case assumption

Table 8.8-7: PECgw for deltamethrin and Br₂CA on oil seed rape (spring) (2×7.5 g a.s./ha, BBCH 30-49) (with FOCUS PEARL 4.4.4/PELMO 5.5.3)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)							
		Deltamethrin		Br ₂ CA					
		PEARL	PELMO	PEARL	PELMO				
Oil Seed Rape summer	Jokioinen	<0.001	<0.001	<0.001	<0.001				
	Okehampton	<0.001	<0.001	<0.001	<0.001				
	Porto	<0.001	<0.001	<0.001	<0.001				
		MACRO		MACRO					
Oil Seed Rape summer	Chateaudun	not relevant		not relevant					

Table 8.8-8: PECgw for deltamethrin and Br₂CA on oil seed rape (winter) (2×7.5 g a.s./ha, BBCH 30-49) (with FOCUS PEARL 4.4.4/PELMO 5.5.3)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)							
		Deltamethrin		Br ₂ CA					
		PEARL	PELMO	PEARL	PELMO				
Oil seed rape winter	Chateaudun	<0.001	<0.001	<0.001	<0.001				
	Hamburg	<0.001	<0.001	<0.001	<0.001				
	Kremsmuenster	<0.001	<0.001	<0.001	<0.001				
	Okehampton	<0.001	<0.001	<0.001	<0.001				
	Piacenza	<0.001	<0.001	<0.001	<0.001				
	Porto	<0.001	<0.001	<0.001	<0.001				
		MACRO		MACRO					
Oil seed rape winter	Chateaudun	not relevant		not relevant					

Table 8.8-9: PECgw for deltamethrin and Br₂CA on oil seed rape (spring) (2×7.5 g a.s./ha, BBCH 50-59) (with FOCUS PEARL 4.4.4/PELMO 5.5.3)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)							
		Deltamethrin		Br ₂ CA					
		PEARL	PELMO	PEARL	PELMO	PEARL	PELMO	PEARL	PELMO
Oil seed rape summer	Jokioinen Okehampton Porto	<0.001	<0.001	<0.001	<0.001				
		<0.001	<0.001	<0.001	<0.001				
		<0.001	<0.001	<0.001	<0.001				
		MACRO		MACRO		MACRO		MACRO	
Oil seed rape summer	Chateaudun	not relevant		not relevant					

Table 8.8-10: PECgw for deltamethrin and Br₂CA on oil seed rape (winter) (2×7.5 g a.s./ha, BBCH 50-59) (with FOCUS PEARL 4.4.4/PELMO 5.5.3)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)							
		Deltamethrin		Br ₂ CA					
		PEARL	PELMO	PEARL	PELMO	PEARL	PELMO	PEARL	PELMO
Oil seed rape winter	Chateaudun	<0.001	<0.001	<0.001	<0.001				
	Hamburg	<0.001	<0.001	<0.001	<0.001				
	Kremsmuenster	<0.001	<0.001	<0.001	<0.001				
	Okehampton	<0.001	<0.001	<0.001	<0.001				
	Piacenza	<0.001	<0.001	<0.001	<0.001				
	Porto	<0.001	<0.001	<0.001	<0.001				
		MACRO		MACRO		MACRO		MACRO	
Oil seed rape winter	Chateaudun	not relevant		not relevant					

Table 8.8-11: PECgw for deltamethrin and Br₂CA on oil seed rape (spring) (2×5 g a.s./ha, BBCH 65-79) (with FOCUS PEARL 4.4.4/PELMO 5.5.3)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)							
		Deltamethrin		Br ₂ CA					
		PEARL	PELMO	PEARL	PELMO	PEARL	PELMO	PEARL	PELMO
Oil seed rape summer	Jokioinen Okehampton Porto	<0.001	<0.001	<0.001	<0.001				
		<0.001	<0.001	<0.001	<0.001				
		<0.001	<0.001	<0.001	<0.001				
		MACRO		MACRO		MACRO		MACRO	
Oil seed rape summer	Chateaudun	not relevant		not relevant					

Table 8.8-12: PECgw for deltamethrin and Br₂CA on oil seed rape (winter) (2×5 g a.s./ha, BBCH 65-79) (with FOCUS PEARL 4.4.4/PELMO 5.5.3)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)							
		Deltamethrin		Br ₂ CA					
		PEARL	PELMO	PEARL	PELMO	PEARL	PELMO	PEARL	PELMO
Oil seed rape winter	Chateaudun	<0.001	<0.001	<0.001	<0.001				
	Hamburg	<0.001	<0.001	<0.001	<0.001				
	Kremsmuenster	<0.001	<0.001	<0.001	<0.001				
	Okehampton	<0.001	<0.001	<0.001	<0.001				
	Piacenza	<0.001	<0.001	<0.001	<0.001				
	Porto	<0.001	<0.001	<0.001	<0.001				
		MACRO		MACRO		MACRO		MACRO	
Oil seed rape winter	Chateaudun	not relevant		not relevant					

zRMS comments:

The groundwater modelling provided by the Applicant was based on EU agreed input parameters with exception of the water solubility and vapour pressure of metabolite Br₂CA, for which values for these parameters were not available from the EU review. As already indicated in the zRMS comment in point 8.8.1 above, considered values were already used in the course of the zonal evaluation of one of deltamethrin formulations of the same Applicant and were also agreed by the RMS in the course of the not finalised yet EU renewal process (LoEP amended in 2019 is available on EFSA DMS). Taking this into account, consideration of these values for the exposure assessment following application of DLT+FPF EC 85 was justified.

It is noted that post-Annex I inclusion the Koc values for deltamethrin were re-evaluated by the RMS (SE) and it was proposed to replace the mean Koc of 10 240 000 mL/g with new value of 408 250 mL/g. Details of the calculation and underlying data are given in the letter of KEMI to the European Commission of March 2008. However, it is not known if the newly proposed value was agreed and for this reason the zRMS is of the opinion that the Koc as reported in the Review Report should be used.

The groundwater modelling for deltamethrin and Br₂CA was independently validated by the zRMS with consideration of the same input parameters using FOCUS PEARL 4.4.4 and FOCUS PELMO 5.5.3. The same results were obtained (PEC_{GW} in all scenarios and for both crops <0.001 µg/L for both compounds).

Overall, based on the performed modelling no unacceptable leaching of deltamethrin or metabolite Br₂CA is expected following application of DLT+FPF EC 85 according to the intended use pattern.

Since PEC_{GW} values calculated with FOCUS PEARL and FOCUS PELMO were <0.001 µg/L, in line with indications of the Working Document of the Central Zone in area of Section 8³ additional simulations using FOCUS MACRO are deemed not necessary.

Simulations performed for applications in winter oilseed rape are considered protective for application of the product in spring OSR in Central Zone scenarios not defined for this crop.

The zRMS would like to point out that initially, the Applicant provided modelling based on new, not EU agreed degradation data, derived in kinetic re-evaluation of the EU agreed laboratory and field degradation/dissipation studies. However, as already indicated in points 8.3.1.1 and 8.4.1.1 of this document, kinetic re-evaluation is considered to be the new active substance data, which may be used at the zonal level only in exceptional cases, when e.g. no safe use is identified using the EU agreed endpoints. Furthermore, the Working Document of the Central Zone in area of Section 8 indicates that modelling based on new/refined input parameters should be presented in addition to (and not instead of) simulations based on EU agreed data. Taking this into account, the Applicant was requested to provide groundwater modelling performed with consideration of the EU agreed endpoints, which are now presented in tables above. Since PEC_{GW} calculated based on EU agreed parameters were all <0.1 µg/L for the parent and metabolite, simulations based on the new active substance data were removed from the Core Assessment in order to avoid confusion.

Please note that additional groundwater modelling may be required by the concerned Member States that do not accept simulations performed according to FOCUS recommendations.

³ Working Document of the Central Zone in the Authorisation of Plant Protection Products, Section 8, Environmental Fate and Behaviour, Version 1, rev. 1, June 2018

8.8.2.2 Flupyradifurone and its metabolites

Table 8.8-13: Input parameters related to active substance flupyradifurone and metabolites for PEC_{gw} calculations (Tier 1)

Compound	Flupyradifurone	6-CNA	DFA	Value in accordance with EU endpoint y/n/ Reference
Molecular weight (g/mol)	288.7	157.6 (452.33, PELMO ^A)	96.0	Y/ EFSA Journal 2015;13(2):4020
Water solubility (mg/L):	3200	1430	500000	Y/ EFSA Journal 2015;13(2):4020
Saturated vapour pressure (Pa):	9.1×10^{-7}	1×10^{-10}	1×10^{-10}	Y/ EFSA Journal 2015;13(2):4020
DT ₅₀ in soil (d)	94.8 (geomean, normalisation to pF2, 20°C with Q ₁₀ of 2.58, n = 6)	4.7 (geomean, lab, normalisation to pF2, 20°C with Q ₁₀ of 2.58, n = 5)	44.7 (geomean, lab, normalisation to pF2, 20°C with Q ₁₀ of 2.58, n = 3)	Y/ EFSA Journal 2015;13(2):4020
Transformation rate	to DFA: 0.006078 ^B to 6-CNA: 0.001218 ^B	0.14748	0.01551	Y/ DAR, Volume 3 B8 (page 237) ^C
K _{foc} (mL/g)/K _{fom}	98.4 / 57.1 (arithmetic mean, n = 6)	88.0 / 51.0 (arithmetic mean, n = 4)	6.8 / 3.9 (arithmetic mean, n = 5)	Y/ EFSA Journal 2015;13(2):4020
1/n	0.866 (arithmetic mean, n = 6)	0.950 (arithmetic mean, n = 4)	0.835 (arithmetic mean, n = 5)	Y/ EFSA Journal 2015;13(2):4020
Plant uptake factor	0.5 ^D (retained for CMS information) 0 ^F	0	0	Y/ EFSA Journal 2015;13(2):4020
Formation fraction	-	0.48 from parent	0.83 from parent	Y/ EFSA Journal 2015;13(2):4020

^A Pseudo-molecular mass to account for sum of formations >1 in FOCUS PELMO model

^B Split degradation rates

^C Table B.8.6.3-04, Table B.8.6.3-05 in DAR: European Commission, 2014: Flupyradifurone, Draft assessment Report and Proposed Decision of the Netherlands, Vol 3, Annex B, B.8 fate and behavior, December 2014

^D Applicability of TSCF = 0.5 (plant uptake factor) for active Flupyradifurone for exposure modelling (PEC_{gw}, PEC_{sw}) - M-755019-01-1 (see Appendix 3). Please note that calculations based on TSCF of 0.5 were retained for CMS information only, since zRMS is of the opinion that available data are not sufficient to derived the exact TSCF value for flupyradifurone. See commenting box below for more details.

^F TSCF = 0 (plant uptake factor) as requested by zRMS Poland. ~~Calculations based on PUF/TSCF = 0.5 should still be considered as described in the EFSA Journal 2015;13(2):4020.~~

Table 8.8-14: Input parameters related to active substance flupyradifurone and metabolites for PEC_{gw} calculations (Tier 2/TDS^D)

Compound	Flupyradifurone	6-CNA	DFA	Value in accordance with EU endpoint y/n/ Reference
Molecular weight (g/mol)	288.7	157.6 (452.33, PELMO ^A)	96.0	Y/ EFSA Journal 2015;13(2):4020
Water solubility (mg/L):	3200	1430	500000	Y/ EFSA Journal 2015;13(2):4020
Saturated vapour pressure (Pa):	9.1×10^{-7}	1×10^{-10}	1×10^{-10}	Y/ EFSA Journal 2015;13(2):4020
DT ₅₀ in soil (d)	50.9 ^E (geomean, lab, normalisation to pF2, 20°C with Q ₁₀ of 2.58, n = 6)	4.7 (geomean, lab, normalisation to pF2, 20°C with Q ₁₀ of 2.58, n = 5)	44.7 (geomean, lab, normalisation to pF2, 20°C with Q ₁₀ of 2.58, n = 3)	Y/ EFSA Journal 2018;16(8):5382, Table C.8 Y/ EFSA Journal 2015;13(2):4020
Transformation rate k (1/d) for FOCUS PELMO	to DFA: 0.011344 ^{G, B} to 6-CNA: 0.002274 ^{G, B}	0.14748	0.01551	Y/ DAR, Volume 3 B8 (page 237) ^F
TDS parameter for FOCUS PEARL: <i>k_{des}</i> (1/d) <i>f_{ne}</i>	0.033 (geometric mean, n = 4) 0.53 (arithmetic mean, n = 4)	-	-	Y/ EFSA Journal 2018;16(8):5382, Table C.8
TDS parameter for FOCUS MACRO: SORPRATE (1/d) FRACEQ	0.0114 ^C (recalculated from <i>k_{des}</i>) 0.346 ^C (recalculated from <i>f_{ne}</i>)	-	-	-
K _{foc} (mL/g)/K _{fom}	96.9 / 56.2 (geometric mean, n = 6)	88.0 / 51.0 (arithmetic mean, n = 4)	6.8 / 3.9 (arithmetic mean, n = 5)	Y/ EFSA Journal 2018;16(8):5382, Table C.8 Y/ EFSA Journal 2015;13(2):4020
1/n	0.86 (arithmetic mean, n = 6)	0.950 (arithmetic mean, n = 4)	0.835 (arithmetic mean, n = 5)	Y/ EFSA Journal 2018;16(8):5382, Table C.8 Y/ EFSA Journal 2015;13(2):4020
Plant uptake factor	0.5 ^H (retained for cMS information) 0 ^I	0	0	Y/ EFSA Journal 2015;13(2):4020
Formation fraction	-	0.48 from parent	0.83 from parent	Y/ EFSA Journal 2015;13(2):4020

^A Pseudo-molecular mass to account for sum of formations >1 in FOCUS PELMO model

^B Split degradation rates

^C $\text{SORPRATE} = k_{\text{des}} \times f_{\text{ne}} / (1 + f_{\text{ne}})$, $\text{FRACEQ} = f_{\text{ne}} / (1 + f_{\text{ne}})$

^D Time dependent sorption or aged sorption

^E From EFSA (2018) opinion on TDS, there denoted as DegT50eq

^F Table B.8.6.3-04 in DAR: European Commission, 2014: Flupyradifurone, Draft assessment Report and Proposed Decision of the Netherlands, Vol 3, Annex B, B.8 fate and behavior, December 2014

^G Calculated from formation fraction and DegT50eq

^H Applicability of TSCF = 0.5 (plant uptake factor) for active Flupyradifurone for exposure modelling (PEC_{gw}, PEC_{sw}) – [M. 755019-01-1](#) (see Appendix 3). Please note that calculations based on TSCF of 0.5 were retained for cMS information only, since zRMS is of the opinion that available data are not sufficient to derived the exact TSCF value for flupyradifurone. See commenting box below for more details.

^I TSCF = 0 (plant uptake factor) as requested by zRMS Poland. Calculations based on $\text{PUF/TSCF} = 0.5$ should still be considered as described in the EFSA Journal 2015;13(2):4020.

Tier 1 (PUF = 0.5), retained for information of the concerned Member States that do accept consideration of Briggs equation for TSCF refinement. Please note that below results were not validated by the zRMS in additional modelling and for this reason they are given in grey letters, in order to distinguish fully validated from non-validated information.

Table 8.8-15: PECgw for flupyradifurone and metabolites on oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 30-49) (with FOCUS PEARL 4.4.4/PELMO 5.5.3)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)							
		Flupyradifurone		Difluoroacetic acid		6-chloronicotinic acid			
		PEARL	PELMO	PEARL	PELMO	PEARL	PELMO	PEARL	PELMO
Oil seed rape summer	Jokioinen	0.036	0.031	0.618	0.563	0.001	0.001		
	Okehampton	0.127	0.112	0.406	0.374	0.003	0.003		
	Porto	0.050	0.066	0.243	0.256	0.002	0.002		
		MACRO		MACRO		MACRO		MACRO	
Oil seed rape summer	Chateaudun	not relevant		not relevant		not relevant			

Table 8.8-16: PECgw for flupyradifurone and metabolites on oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 30-49) (with FOCUS PEARL 4.4.4/PELMO 5.5.3/MACRO 5.5.4)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)							
		Flupyradifurone		Difluoroacetic acid		6-chloronicotinic acid			
		PEARL	PELMO	PEARL	PELMO	PEARL	PELMO	PEARL	PELMO
Oil seed rape winter	Chateaudun	0.029	0.018	0.378	0.314	<0.001	0.001		
	Hamburg	0.137	0.108	0.693	0.600	0.003	0.003		
	Kremsmuenster	0.101	0.088	0.411	0.406	0.002	0.002		
	Okehampton	0.141	0.137	0.408	0.400	0.003	0.003		
	Piacenza	0.063	0.059	0.239	0.267	0.001	0.002		
	Porto	0.079	<0.001	0.306	<0.001	0.002	<0.001		
		MACRO		MACRO		MACRO		MACRO	
Oil seed rape winter	Chateaudun	0.025		0.301		<0.001			

Table 8.8-17: PECgw for flupyradifurone and metabolites on oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 50-59) (with FOCUS PEARL 4.4.4/PELMO 5.5.3)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)							
		Flupyradifurone		Difluoroacetic acid		6-chloronicotinic acid			
		PEARL	PELMO	PEARL	PELMO	PEARL	PELMO	PEARL	PELMO
Oil seed rape summer	Jokioinen	0.037	0.032	0.624	0.570	0.001	0.001		
	Okehampton	0.124	0.111	0.410	0.377	0.003	0.003		
	Porto	0.052	0.064	0.252	0.258	0.002	0.002		
		MACRO		MACRO		MACRO		MACRO	
Oil seed rape summer	Chateaudun	not relevant		not relevant		not relevant			

Table 8.8-18: PECgw for flupyradifurone and metabolites on oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 50-59) (with FOCUS PEARL 4.4.4/PELMO 5.5.3/MACRO 5.5.4)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)							
		Flupyradifurone		Difluoroacetic acid		6-chloronicotinic acid			
		PEARL	PELMO	PEARL	PELMO	PEARL	PELMO	PEARL	PELMO
Oil seed rape winter	Chateaudun	0.028	0.016	0.377	0.310	<0.001	0.001		
	Hamburg	0.139	0.110	0.697	0.605	0.003	0.003		
	Kremsmuenster	0.099	0.085	0.409	0.406	0.002	0.002		
	Okehampton	0.141	0.136	0.409	0.398	0.003	0.003		
	Piacenza	0.062	0.056	0.242	0.273	0.001	0.002		
	Porto	0.054	0.083	0.282	0.302	0.002	0.003		
		MACRO		MACRO		MACRO		MACRO	
Oil seed rape winter	Chateaudun	0.022		0.296		<0.001			

Table 8.8-19: PECgw for flupyradifurone and metabolites on oil seed rape (spring) (2×37.5 g a.s./ha, BBCH 65-79) (with FOCUS PEARL 4.4.4/PELMO 5.5.3)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)							
		Flupyradifurone		Difluoroacetic acid		6-chloronicotinic acid			
		PEARL	PELMO	PEARL	PELMO	PEARL	PELMO	PEARL	PELMO
Oil seed rape summer	Jokioinen	0.019	0.017	0.395	0.357	<0.001	0.001		
	Okehampton	0.071	0.063	0.273	0.247	0.002	0.002		
	Porto	0.032	0.037	0.175	0.173	0.001	0.001		
		MACRO		MACRO		MACRO		MACRO	
Oil seed rape summer	Chateaudun	not relevant		not relevant		not relevant			

Table 8.8-20: PECgw for flupyradifurone and metabolites on oil seed rape (winter) (2×37.5 g a.s./ha, BBCH 65-79) (with FOCUS PEARL 4.4.4/PELMO 5.5.3/MACRO 5.5.4)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)							
		Flupyradifurone		Difluoroacetic acid		6-chloronicotinic acid			
		PEARL	PELMO	PEARL	PELMO	PEARL	PELMO	PEARL	PELMO
Oil seed rape winter	Chateaudun	0.013	0.008	0.242	0.198	<0.001	<0.001		
	Hamburg	0.080	0.064	0.449	0.399	0.002	0.002		
	Kremsmuenster	0.056	0.049	0.261	0.257	0.001	0.001		
	Okehampton	0.077	0.076	0.267	0.263	0.002	0.002		
	Piacenza	0.032	0.029	0.158	0.178	<0.001	0.001		
	Porto	0.029	0.040	0.198	0.206	<0.001	0.001		
		MACRO		MACRO		MACRO		MACRO	
Oil seed rape winter	Chateaudun	0.010		0.189		<0.001			

Tier 1 (PUF = 0), for this assessment the ~~plant uptake factor~~ for the parent flupyradifurone was set to 0.

Table 8.8-20A: PECgw for flupyradifurone and metabolites on oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 30-49) (with FOCUS PEARL 4.4.4/PELMO 5.5.3)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)					
		Flupyradifurone		Difluoroacetic acid		6-chloronicotinic acid	
		PEARL	PELMO	PEARL	PELMO	PEARL	PELMO
Oil seed rape summer	Jokioinen Okehampton Porto	0.044	0.061 0.043	0.639	0.685 0.648	0.001	0.001
		0.153	0.189 0.158	0.429	0.449 0.439	0.004	0.004
		0.061	0.102 0.095	0.262	0.319 0.313	0.002	0.003
		MACRO		MACRO		MACRO	
Oil seed rape summer	Chateaudun	not relevant		not relevant		not relevant	

Values in **bold** exceed 0.1 µg/L

Table 8.8-20B: PECgw for flupyradifurone and metabolites on oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 30-49) (with FOCUS PEARL 4.4.4/PELMO 5.5.3/MACRO 5.5.4)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)					
		Flupyradifurone		Difluoroacetic acid		6-chloronicotinic acid	
		PEARL	PELMO	PEARL	PELMO	PEARL	PELMO
Oil seed rape winter	Chateaudun	0.041	0.039 0.033	0.400	0.397 0.380	0.001	0.001
	Hamburg	0.182 0.177	0.196 0.170	0.734 0.728	0.478 0.726	0.004	0.004
	Kremsmuenster	0.125	0.152 0.128	0.425	0.499 0.474	0.003	0.003
	Okehampton	0.168	0.227 0.196	0.425	0.480 0.468	0.004	0.005
	Piacenza	0.073	0.099 0.085	0.255	0.373 0.335	0.002	0.002
	Porto	0.098	0.188 0.001	0.336	0.411 <0.001	0.003	0.005 <0.001
		MACRO		MACRO		MACRO	
Oil seed rape winter	Chateaudun	0.033		0.323		<0.001	

Values in **bold** exceed 0.1 µg/L

Table 8.8-20C: PECgw for flupyradifurone and metabolites on oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 50-59) (with FOCUS PEARL 4.4.4/PELMO 5.5.3)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)					
		Flupyradifurone		Difluoroacetic acid		6-chloronicotinic acid	
		PEARL	PELMO	PEARL	PELMO	PEARL	PELMO
Oil seed rape summer	Jokioinen Okehampton Porto	0.045	0.062 0.044	0.644	0.690 0.654	0.001	0.001
		0.150	0.187 0.156	0.432	0.453 0.441	0.003	0.004
		0.063	0.102 0.092	0.268	0.324 0.314	0.002	0.003
		MACRO		MACRO		MACRO	
Oil seed rape summer	Chateaudun	not relevant		not relevant		not relevant	

Values in **bold** exceed 0.1 µg/L

Table 8.8-20D: PECgw for flupyradifurone and metabolites on oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 50-59) (with FOCUS PEARL 4.4.4/PELMO 5.5.3/MACRO 5.5.4)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)					
		Flupyradifurone		Difluoroacetic acid		6-chloronicotinic acid	
		PEARL	PELMO	PEARL	PELMO	PEARL	PELMO
Oil seed rape winter	Chateaudun	0.038	0.038 0.031	0.399	0.400 0.375	0.001	0.001
	Hamburg	0.179	0.198 0.172	0.731	0.754 0.732	0.004	0.004
	Kremsmuenster	0.124	0.125 0.125	0.423	0.499 0.475	0.003	0.003
	Okehampton	0.167	0.227 0.195	0.425	0.481 0.470	0.004	0.005
	Piacenza	0.071	0.102 0.084	0.257	0.380 0.342	0.002	0.002
	Porto	0.068	0.125 0.120	0.311	0.391 0.367	0.002	0.004
		MACRO		MACRO		MACRO	
Oil seed rape winter	Chateaudun	0.028		0.319		<0.001	

Values in **bold** exceed 0.1 µg/L

Table 8.8-20E: PECgw for flupyradifurone and metabolites on oil seed rape (spring) (2×37.5 g a.s./ha, BBCH 65-79) (with FOCUS PEARL 4.4.4/PELMO 5.5.3)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)					
		Flupyradifurone		Difluoroacetic acid		6-chloronicotinic acid	
		PEARL	PELMO	PEARL	PELMO	PEARL	PELMO
Oil seed rape summer	Jokioinen	0.023	0.033 0.023	0.405	0.429 0.403	<0.001	0.001
	Okehampton	0.086	0.105 0.088	0.284	0.297 0.290	0.002	0.002
	Porto	0.039	0.057 0.053	0.185	0.203 0.200	0.001	0.002
		MACRO		MACRO		MACRO	
Oil seed rape summer	Chateaudun	not relevant		not relevant		not relevant	

Values in **bold** exceed 0.1 µg/L

Table 8.8-20F: PECgw for flupyradifurone and metabolites on oil seed rape (winter) (2×37.5 g a.s./ha, BBCH 65-79) (with FOCUS PEARL 4.4.4/PELMO 5.5.3/MACRO 5.5.4)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)					
		Flupyradifurone		Difluoroacetic acid		6-chloronicotinic acid	
		PEARL	PELMO	PEARL	PELMO	PEARL	PELMO
Oil seed rape winter	Chateaudun	0.019	0.019 0.014	0.252	0.251 0.238	<0.001	<0.001
	Hamburg	0.106	0.111 0.100	0.467	0.483 0.480	0.002	0.002
	Kremsmuenster	0.068	0.083 0.072	0.269	0.314 0.298	0.002	0.002
	Okehampton	0.091	0.131 0.111	0.276	0.311 0.307	0.002	0.003
	Piacenza	0.036	0.056 0.044	0.165	0.244 0.221	<0.001	0.001
	Porto	0.037	0.069 0.061	0.213	0.251 0.244	0.001	0.002
		MACRO		MACRO		MACRO	
Oil seed rape winter	Chateaudun	0.014		0.201		<0.001	

Values in **bold** exceed 0.1 µg/L

Tier 2 (PUF = 0.5), retained for information of the concerned Member States that do accept consideration of Briggs equation for TSCF refinement. Please note that below results were not validated by the zRMS in additional modelling and for this reason they are given in grey letters, in order to distinguish fully validated from non-validated information.

Table 8.8-21: PECgw for flupyradifurone and metabolites on oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 30-49) (with FOCUS PEARL 4.4.4/PELMO 5.5.3) (Tier 2)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)							
		Flupyradifurone		Difluoroacetic acid		6-chloronicotinic acid			
		PEARL	PELMO	PEARL	PELMO	PEARL	PELMO	PEARL	PELMO
Oil seed rape summer	Jokioinen	<0.001	<0.001	0.572	0.534	<0.001	<0.001		
	Okehampton	0.005	0.005	0.382	0.368	<0.001	<0.001		
	Porto	0.001	0.002	0.213	0.228	<0.001	<0.001		
		MACRO		MACRO		MACRO		MACRO	
Oil seed rape summer	Chateaudun	not relevant		not relevant		not relevant			

Table 8.8-22: PECgw for flupyradifurone and metabolites on oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 30-49) (with FOCUS PEARL 4.4.4/PELMO 5.5.3/MACRO 5.5.4) (Tier 2)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)							
		Flupyradifurone		Difluoroacetic acid		6-chloronicotinic acid			
		PEARL	PELMO	PEARL	PELMO	PEARL	PELMO	PEARL	PELMO
Oil seed rape winter	Chateaudun	<0.001	<0.001	0.312	0.277	<0.001	<0.001		
	Hamburg	0.006	0.004	0.631	0.572	<0.001	<0.001		
	Kremsmuenster	0.003	0.003	0.380	0.386	<0.001	<0.001		
	Okehampton	0.006	0.007	0.375	0.385	<0.001	0.001		
	Piacenza	0.002	0.002	0.208	0.252	<0.001	<0.001		
	Porto	0.003	<0.001	0.252	<0.001	<0.001	<0.001		
		MACRO		MACRO		MACRO		MACRO	
Oil seed rape winter	Chateaudun	<0.001		0.249		<0.001			

Table 8.8-23: PECgw for flupyradifurone and metabolites on oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 50-59) (with FOCUS PEARL 4.4.4/PELMO 5.5.3) (Tier 2)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)							
		Flupyradifurone		Difluoroacetic acid		6-chloronicotinic acid			
		PEARL	PELMO	PEARL	PELMO	PEARL	PELMO	PEARL	PELMO
Oil seed rape summer	Jokioinen	<0.001	<0.001	0.581	0.545	<0.001	<0.001		
	Okehampton	0.005	0.005	0.388	0.366	<0.001	<0.001		
	Porto	0.001	0.002	0.220	0.233	<0.001	<0.001		
		MACRO		MACRO		MACRO		MACRO	
Oil seed rape summer	Chateaudun	not relevant		not relevant		not relevant			

Table 8.8-24: PECgw for flupyradifurone and metabolites on oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 50-59) (with FOCUS PEARL 4.4.4/PELMO 5.5.3/MACRO 5.5.4) (Tier 2)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)							
		Flupyradifurone		Difluoroacetic acid		6-chloronicotinic acid			
		PEARL	PELMO	PEARL	PELMO	PEARL	PELMO	PEARL	PELMO
Oil seed rape winter	Chateaudun	<0.001	<0.001	0.316	0.280	<0.001	<0.001		
	Hamburg	0.007	0.004	0.633	0.576	<0.001	<0.001		
	Kremsmuenster	0.003	0.003	0.378	0.386	<0.001	<0.001		
	Okehampton	0.006	0.007	0.378	0.385	<0.001	0.001		
	Piacenza	0.002	0.002	0.213	0.257	<0.001	<0.001		
	Porto	0.001	0.003	0.246	0.272	<0.001	<0.001		
		MACRO		MACRO		MACRO		MACRO	
Oil seed rape winter	Chateaudun	<0.001		0.246		<0.001			

Tier 2 (PUF = 0) For this assessment the ~~plant uptake factor~~ for the parent flupyradifurone was set to ~~0~~.

Table 8.8-24A: PECgw for flupyradifurone and metabolites on oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 30-49) (with FOCUS PEARL 4.4.4/PELMO 5.5.3) (Tier 2)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)					
		Flupyradifurone		Difluoroacetic acid		6-chloronicotinic acid	
		PEARL	PELMO	PEARL	PELMO	PEARL	PELMO
Oil seed rape summer	Jokioinen	<0.001	<0.001	0.581	0.580	<0.001	<0.001
	Okehampton	0.006	0.006	0.394	0.406	<0.001	0.001
	Porto	0.001	0.003	0.222	0.257	<0.001	<0.001
		MACRO		MACRO		MACRO	
Oil seed rape summer	Chateaudun	not relevant		not relevant		not relevant	

Values in **bold** exceed 0.1 µg/L

Table 8.8-24B: PECgw for flupyradifurone and metabolites on oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 30-49) (with FOCUS PEARL 4.4.4/PELMO 5.5.3/MACRO 5.5.4) (Tier 2)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)					
		Flupyradifurone		Difluoroacetic acid		6-chloronicotinic acid	
		PEARL	PELMO	PEARL	PELMO	PEARL	PELMO
Oil seed rape winter	Chateaudun	<0.001	<0.001	0.320	0.317 0.308	<0.001	<0.001
	Hamburg	0.008	0.006	0.647	0.654 0.640	<0.001	<0.001
	Kremsmuenster	0.004	0.004	0.386	0.432 0.416	<0.001	<0.001
	Okehampton	0.007	0.010	0.383	0.422	<0.001	0.001
	Piacenza	0.002	0.003	0.215	0.318 0.290	<0.001	<0.001
	Porto	0.003	<0.001	0.262	0.316 <0.001	<0.001	<0.001
		MACRO		MACRO		MACRO	
Oil seed rape winter	Chateaudun	<0.001		0.259		<0.001	

Values in **bold** exceed 0.1 µg/L

Table 8.8-24C: PECgw for flupyradifurone and metabolites on oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 50-59) (with FOCUS PEARL 4.4.4/PELMO 5.5.3) (Tier 2)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)					
		Flupyradifurone		Difluoroacetic acid		6-chloronicotinic acid	
		PEARL	PELMO	PEARL	PELMO	PEARL	PELMO
Oil seed rape summer	Jokioinen	<0.001	<0.001	0.590	0.632 0.590	<0.001	<0.001
	Okehampton	0.006	0.006	0.399	0.415 0.406	<0.001	0.001
	Porto	0.001	0.003	0.227	0.257	<0.001	<0.001
		MACRO		MACRO		MACRO	
Oil seed rape summer	Chateaudun	not relevant		not relevant		not relevant	

Values in **bold** exceed 0.1 µg/L

Table 8.8-24D: PECgw for flupyradifurone and metabolites on oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 50-59) (with FOCUS PEARL 4.4.4/PELMO 5.5.3/MACRO 5.5.4) (Tier 2)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)					
		Flupyradifurone		Difluoroacetic acid		6-chloronicotinic acid	
		PEARL	PELMO	PEARL	PELMO	PEARL	PELMO
Oil seed rape winter	Chateaudun	<0.001	<0.001	0.324	0.317 0.311	<0.001	<0.001
	Hamburg	0.008	0.006	0.649	0.654 0.646	<0.001	<0.001
	Kremsmuenster	0.004	0.004	0.385	0.432 0.417	<0.001	<0.001
	Okehampton	0.007	0.010	0.386	0.424	<0.001	0.001
	Piacenza	0.002	0.003	0.220	0.318 0.296	<0.001	<0.001
	Porto	0.002	0.004	0.256	0.318 0.306	<0.001	<0.001
		MACRO		MACRO		MACRO	
Oil seed rape winter	Chateaudun	<0.001		0.257		<0.001	

Values in **bold** exceed 0.1 µg/L

Table 8.8-24E: PECgw for flupyradifurone and metabolites on oil seed rape (spring) (2×37.5 g a.s./ha, BBCH 65-79) (with FOCUS PEARL 4.4.4/PELMO 5.5.3) (Tier 2)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)					
		Flupyradifurone		Difluoroacetic acid		6-chloronicotinic acid	
		PEARL	PELMO	PEARL	PELMO	PEARL	PELMO
Oil seed rape summer	Jokioinen	<0.001	<0.001	0.374	0.374	<0.001	<0.001
	Okehampton	0.003	0.003	0.261	0.266	<0.001	<0.001
	Porto	<0.001	0.002	0.157	0.180	<0.001	<0.001
		MACRO		MACRO		MACRO	
Oil seed rape summer	Chateaudun	not relevant		not relevant		not relevant	

Values in **bold** exceed 0.1 µg/L

Table 8.8-24F: PECgw for flupyradifurone and metabolites on oil seed rape (winter) (2×37.5 g a.s./ha, BBCH 65-79) (with FOCUS PEARL 4.4.4/PELMO 5.5.3/MACRO 5.5.4) (Tier 2)

Crop	Scenario	80 th percentile PECgw at 1 m soil depth (µg/L)					
		Flupyradifurone		Difluoroacetic acid		6-chloronicotinic acid	
		PEARL	PELMO	PEARL	PELMO	PEARL	PELMO
Oil seed rape winter	Chateaudun	<0.001	<0.001	0.208	0.198	<0.001	<0.001
	Hamburg	0.004	0.003	0.416	0.424	<0.001	<0.001
	Kremsmuenster	0.002	0.002	0.242	0.268	<0.001	<0.001
	Okehampton	0.003	0.005	0.252	0.278	<0.001	<0.001
	Piacenza	<0.001	0.001	0.141	0.190	<0.001	<0.001
	Porto	<0.001	0.002	0.174	0.214	<0.001	<0.001
		MACRO		MACRO		MACRO	
Oil seed rape winter	Chateaudun	<0.001		0.165		<0.001	

Values in **bold** exceed 0.1 µg/L

zRMS comments:

Tier 1

All input parameters for flupyradifurone and its metabolites considered by the Applicant at the Tier 1 groundwater modelling were in line with the EU agreed endpoints reported in EFSA Journal 2015;13(2):4020.

Initially, TSCF of 0.5 was used in simulations for the parent, in line with decision taken during the EU review. This has been questioned by the zRMS since according to the most up-to-date versions of the FOCUS guidance documents, in Tier 1 simulations the TSCF value must be set to 0 for all compounds, regardless if they are systemic or not. The Applicant provided the position paper by Hammel (2020, M-755019-01-1) where it is indicated that zRMS PL have not considered the following information available in EFSA Journal 2015;13(2):4020:

Furthermore the experts also discussed the use of a plant uptake factor of 0.5 for the parent and the relevant metabolites. They concluded that a plant uptake factor of 0.5 was acceptable for the parent since uptake from soil via the root has been proven

In the position paper it was further noted that *the justification given is not mere systemicity, but proven uptake from soil.*

Furthermore, the following indications of the Working Document of the Central Zone in area of Section 8⁴ are referenced:

The risk assessment should be based on the agreed List of Endpoints resulting from the EU approval procedure. Generally, revision of active substance and metabolite data endpoints should be dealt with in the process of the Renewal of the active substance and not during post-approval Plant Protection Product authorisation submissions

In conclusion it is stated that *from a procedural point of view clearly a plant uptake factor of 0.5 should be used.*

The zRMS would like to emphasise that all aspects of selection of TSCF at the EU level were considered before the Applicant was requested to provide groundwater modelling with TSCF value set to 0.

On the basis of the data available in the DAR (December 2014), Reporting Table (June 2014), Discussion Table from the Pesticides Peer Review Meeting 121 (November 2014) and EFSA Journal 2015;13(2):4020 it is evident that no actual data for flupyradifurone were submitted in order to derive the substance specific TSCF value and decision of consideration of TSCF of 0.5 was taken based on the results of the next crop metabolism studies which showed that flupyradifurone may be taken up by plant roots. These studies were sufficient evidence for systemicity of flupyradifurone and based on that it was concluded that the default TSCF of 0.5 as recommended by FOCUS guidance for systemic substances may be used in groundwater modelling for the parent compound. It should be, however, noted that the concluded TSCF was not substance specific, but resulted from indications of the previous

⁴ Working Document of the Central Zone in the Authorisation of Plant Protection Products, Section 8, Environmental Fate and Behaviour, Version 1, rev. 1, June 2018

versions of the FOCUS guidance documents. Taking this into account, TSCF of 0.5 listed in the LoEP cannot be considered as agreed active substance endpoint, but default value taken from the guidance in force at the time of evaluation (similarly as Q10, diffusion coefficients, reference temperature, moisture exponent etc.).

However, since 1st of May 2015 new version of the FOCUS groundwater guidance (2014) is applicable which clearly states that at Tier 1 the TSCF value must be set to 0 for all compounds, regardless if they are systemic or not. Since TSCF of 0.5 considered in the course of the EU review of flupyradifurone was a default FOCUS value, it should be replaced with the new default value indicated by the more recent version of the guidance valid at the time of the product evaluation. Based on that, request for groundwater modelling performed with consideration of the current default TSCF of 0 is fully justified from the procedural point of view.

In the position paper by Hammel (2020) further discussion on validity of the TSCF refined using Briggs equation is also provided which is based on results of several literature studies in which measured TSCF has been compared with value calculated using the above mentioned equation. It should be, however, pointed out that neither of the referenced publications has been submitted and the methods used by the authors of the studies to derive experimental TSCF are not known. It should be noted that currently no validated and agreed methods to investigate this parameter exist and majority of the studies is performed in hydroponic test systems. It is, however, not known how their results may be translated to the field situation where multiple factors may have impact on the uptake of the substance by plants (e.g. soil type, particle size distribution, pH, nutrients availability, temperature, moisture, air humidity, etc.). Taking this into account it cannot be excluded that uptake of the investigated substances from hydroponic test systems is higher comparing to uptake from soil under field conditions and for this reason more data are required to validate the studies performed in order to determine TSCF value. The zRMS would also like to point out that consideration of the Briggs equation to refine TSCF is not accepted in Poland.

During the commenting period the 2 publications referenced in the position paper by Hammel (2020) were linked by the Applicant in the Reporting Table. Review of both publications demonstrated that zRMS concerns raised in the discussion above are addressed by neither of the papers.

All plant uptake experiments considered in the paper by Schriever & Lamshoeft (2020)⁵ were carried out in hydroponic systems or in a pressure chambers after removal of the shoot tissue and conditions during these experiments were favourable for uptake of the tested substances via roots. It is not known how conditions of these experiments are representative for the field situation and if derived TSCF/PUF are not overestimated comparing to these that would be observed for the same compound under field conditions.

The data presented in Schriever & Lamshoeft (2020) indicate also clear differences in TSCF values depending on the plant (for example, for heptachlor TSCF of 0.05 was derived in Chinese cabbage, while in zucchini TSCF of 0.49 was obtained). This confirms that determination of the “universal” TSCF value for the given compound used for all crops under evaluation is not appropriate, since differences in TSCF values between crops would have significant impact on results of groundwater modelling performed for weakly sorbed substances.

Although information presented in the publication (and also in Lamshoeft et al., 2018⁶) suggest that Briggs equation gives more conservative TSCF values comparing to the experimental data, this cannot be used as support of applicability of Briggs equation, since consideration of the Briggs equation for all crops and conditions is itself questionable.

The publication by Lamshoeft et al. (2018) presents the proposal for the experimental design of the study for determination of the plant uptake. The study was carried out in a hydroponic set-up and as already indicated above, it is not clear how obtained results are representative for the field conditions or for plant uptake observed in plants cultivated in soil. The zRMS is thus of the opinion that before the hydroponic test design for TSCF/PUF determination is agreed and implemented in the regulatory testing, the results should be validated against results obtained in plants grown in soil, as only such comparison will give the answer if the results of studies performed in hydroponic systems may be used for exposure assessment for compounds applied in the field.

Overall, based on the above discussion the zRMS is of the opinion that at the current stage TSCF of 0 is relevant for purposes of the exposure assessment for flupyradifurone. Nevertheless, despite the above concerns, the zRMS decided to retain the results of groundwater modelling performed with consideration of TSCF of 0.5 for information of concerned Member States that do accept consideration of the Briggs equation. Since according to Hammel (2020) the TSCF of 0.683 may be calculated for flupyradifurone using Briggs equation, results based on TSCF of 0.5 (see Tables 8.8-15 to 8.8-20 and 8.8-21 to 8.8-24) represent worst case. Results for TSCF of 0.5 are given in Tables 8.8-

⁵ Schriever C., Lamshoeft M., 2020: Lipophilicity matters - a new look at experimental plant uptake data from literature. Science of the Total Environment 713 (2020) 136667

⁶ Lamshoeft M., Gao Z., Ressler H., Schriever C., Sur R., Sweeney P., Webb S., Zillgens B., Reitz M.U., 2018: Evaluation of the novel test design to determine uptake of chemicals by plant roots. Science of the Total Environment 613-614 (2018) 10-19

15 to 8.8-20 and 8.8-21 to 8.8-24. Please note that they were not independently validated by the zRMS in additional groundwater modelling and for this reason information reported in tables mentioned is given in grey letters.

The Applicants' calculations performed with consideration of TSCF of 0 were independently validated by the zRMS using the same input parameters. Results obtained with FOCUS PEARL were the same or slightly lower comparing to Applicants' values, while PEC_{GW} calculated with FOCUS PELMO were higher comparing to Applicants' calculations. However, due to the comments received from the Applicant during the commenting period, the PELMO input files were re-checked by the zRMS and it turned out that due to the typing error PELMO simulations were performed with consideration of application depth of 10 instead of 0 cm. When groundwater modelling was re-run using PELMO for the correct application depth of 0 cm, PEC_{GW} values were the same as these obtained by the Applicant. Taking this into account, original Applicants' results were restored in Tables 8.8-20A to 8.8-20F (currently highlighted in yellow), while values introduced by the zRMS were struck through and shaded as being not correct. All these corrections had no impact on the derived conclusions. As zRMS results represented worst case, respective corrections were made in Tables 8.8-20A to 8.8-20F.

Based on Applicants' and zRMS calculations unacceptable leaching of flupyradifuron at >0.1 µg/L was demonstrated at Tier 1 for TSCF of 0 in majority of scenarios for both crops. Predicted concentrations of metabolite DFA were above 0.1 µg/L, but <0.75 µg/L (threshold relevant for non-relevant metabolites) in most of scenarios and application patterns with exception of calculations with FOCUS PELMO in Hamburg scenario following application to winter OSR at 2x56.25 g a.s./ha at BBCH 50-59, where PEC_{GW} of 0.754 µg/L was obtained. For these two compounds conclusion will be derived based on Tier 2 modelling (see below). No unacceptable leaching of metabolite 6-CA following application according to the intended use pattern is expected based on Tier 1 simulations.

Tier 2

All input parameters for metabolites DFA and 6-CA considered by the Applicant at the Tier 2 groundwater modelling were in line with the EU agreed endpoints reported in EFSA Journal 2015;13(2):4020.

For flupyradifurone time dependent sorption parameters were used, which were validated by the PPR-panel during preparation of the *Scientific Opinion about the Guidance of the Chemical Regulation Directorate (UK) on how aged sorption studies for pesticides should be conducted, analysed and used in regulatory assessments* (EFSA Journal 2018;16(8):5382. Dataset for flupyradifurone (denoted as ECPA-07) has been evaluated as a part of the EFSA exercise and the above presented modelling has been performed with consideration of parameters fully in line with these reported in EFSA Journal 2018;16(8):5382. It is also noted that consideration of the time dependent sorption in higher tier groundwater modelling was already agreed for one of the formulations of the same Applicant (Flupyradifurone FS 480) during the interzonal evaluation performed by Finland as the izRMS (for details, see final Core Assessment, Part B, Section 8 of September 2019). The same approach is fully applicable for evaluation of DLT+FPF EC 85.

As in case of the Tier 1 modelling, the Applicant initially provided calculations performed with consideration of PUF value of 0.5, which was, however, not agreed by the zRMS. For detailed discussion regarding this parameter, please refer to part of the zRMS comment on Tier 1 simulations. Nevertheless, results of calculations performed with TSCF of 0.5 were retained for information of the concerned Member States that do accept refinement of TSCF using Briggs equation. More detailed explanations are provided above in discussion on Tier 1 input parameters.

The Applicants' calculations performed with consideration of TSCF of 0 were independently validated by the zRMS using the same input parameters. Results obtained with FOCUS PEARL were in majority of scenarios the same or slightly lower comparing to Applicants' values, while PEC_{GW} calculated with FOCUS PELMO were higher comparing to Applicants' calculations. However, due to the comments received from the Applicant during the commenting period, the PELMO input files were re-checked by the zRMS and it turned out that due to the typing error PELMO simulations were performed with consideration of application depth of 10 instead of 0 cm. When groundwater modelling was re-run using PELMO for the correct application depth of 0 cm, PEC_{GW} values were the same as these obtained by the Applicant. Taking this into account, original Applicants' results were restored in Tables 8.8-24A to 8.8-24F (currently highlighted in yellow), while values introduced by the zRMS were struck through and shaded as being not correct. All these corrections had no impact on the derived conclusions. As zRMS results represented worst case, respective corrections were made in Tables 8.8-24A to 8.8-24F.

All PEC_{GW} values calculated by the Applicant and zRMS for flupyradifurone at Tier 2 for TSCF of 0 were far below the threshold concentration of 0.1 µg/L indicating acceptable groundwater exposure.

For metabolite DFA all PEC_{GW} were <0.75 µg/L (with maximum of 0.654 µg/L) indicating acceptable exposure of groundwater to this compound, which is toxicologically non-relevant. PEC_{GW} values for metabolite 6-CA were <0.1 µg/L already at Tier 1.

Overall no unacceptable leaching of flupyradifurone or its metabolites is expected following application of DLT+FPF EC 85 according to the intended Central Zone use pattern.

Simulations performed for applications in winter oilseed rape are considered protective for application of the product in spring OSR in Central Zone scenarios not defined for this crop.

Since acceptable groundwater exposure was demonstrated in simulations performed with procedurally required PUF of 0, results of modelling performed with TSCF PUF of 0.5 were deemed not necessary, but were retained above for information of the concerned Member States. Please note, however that results obtained with TSCF of 0.5 were not validated by the zRMS in additional modelling. ~~are struck through in tables above as being not necessary.~~

Please note that additional groundwater modelling may be required by the concerned Member States that do not accept simulations performed according to FOCUS recommendations.

8.9 Predicted Environmental Concentrations in surface water (PEC_{sw}) (KCP 9.2.5)

8.9.1 Justification for new endpoints

Table 8.9-1: Justification for new endpoints

Compound	Parameter	EU Endpoint	Used endpoint	Justification
Deltamethrin	Water solubility (mg/L)	0.0002 at 25°C	Step 3+4: 0.001	Minimum limited to 0.001 mg/L in SWASH
Deltamethrin	K _{foc} (mL/g)	10240000.0 (arithmetic mean, n = 4)	460000 (minimum, n = 4) (used for FOCUS Step 3+4 calculations)	For the FOCUS STEP 3+4 calculations the minimum Koc value 460000 mL/g was used, as SWASH cannot handle Koc values above approximately 1000000 mL/g. Using this reduced Koc value guarantees conservative predictions with regard to run-off exposure (as well as drainflow exposure).
Deltamethrin	Freundlich Exponent 1/n	0.74 - 1.2	0.93	Arithmetic mean
Deltamethrin	DT _{50,water} (d)	Worst-case DT ₅₀ = 17 hours, obtained from higher tier studies (since no reliable DT ₅₀ for the water phase alone was obtained from water/sed. study)	Step 1+2: 90 days Step 3+4: 1000 days	Focus default for compounds with Koc > 2000 mL/g
Deltamethrin	DT _{50,sed} (d)	Not stated	Step 1+2: 90 days	Focus default for compounds with Koc > 2000 mL/g
Deltamethrin	DT _{50,whole system} (d)	40 - 90	90	Highest DT ₅₀ in total system (please refer to Schad & Zerbe (2016, M-553324-02-1), Appendix 3)
Br ₂ CA	Saturated vapour pressure (Pa)	Not stated	2.30 × 10 ⁻³ at 20°C	Dornhagen, J.; 2012; M-438493-01-1 Submitted in 2013 to RMS in AIR3 dossier (Appendix 2)
Br ₂ CA	Water solubility (mg/L)	Not stated	9000 at 20°C	Wiche, A.; Bogdoll, B.; 2012; M-435779-01-1 Submitted in 2013 to RMS in AIR3 dossier (Appendix 2)
Br ₂ CA	K _{foc} (mL/g)	26 (mean, n = 3)	25.6	Rounded value in list of endpoints, an unrounded value was used for calculations.
Br ₂ CA	DT _{50,soil lab} (d)	2.3 (mean, n = 7)	12.3	Maximum laboratory DT ₅₀
Br ₂ CA	Maximum occurrence observed (% molar basis with respect to the parent)	Not stated	Water/sediment: 13.3	Maximum formed in the outdoor microcosm study (please refer to Schad & Zerbe (2016, M-553324-02-1), Appendix 3)

No deviations from EU agreed endpoints for flupyradifurone.

zRMS comments:

Deltamethrin

Adjustment of the endpoints due to limitations of the respective FOCUS models is agreed by the zRMS.

It is noted that Koc of 460000 mL/g used in simulations is in good agreement with Koc of 408 250 mL/g derived by the RMS (SE) post-Annex I inclusion and indicated in the letter of KEMI to the European Commission of March 2008 as being more relevant for the exposure assessment purposes. Although it is not known if the new value proposed by the RMS was agreed, in opinion of the zRMS consideration of Koc of 460 000 mL/g is acceptable, especially FOCUS SWASH cannot handle Koc values >1000000 mL/g. The considered value is still high and assures sufficiently conservative assessment of exposure resulting from run-off and drain flow events.

With regard to 1/n considered for deltamethrin it is noted that neither in the LoEP nor in the DAR information on 1/n value may be found. Nevertheless, arithmetic mean 1/n of 0.93 has been already agreed in the course of the zonal evaluations of at least two formulations of the same Applicant (Multirose, evaluated by AT as zRMS in 2016 and Decis 15 EW evaluated by BE as the zRMS in 2018) and for this reason it is also agreed for purposes of evaluation of DLT+FPF EC 85 for consistency.

Although no reliable DT₅₀ in water column could be derived based on the EU agreed water/sediment studies, the DT₅₀ of 17 hours is an EU agreed endpoint and should be used in the exposure assessment. Nevertheless, consideration of DT₅₀ of 90 days at Steps 1+2 represents worst case and is thus agreed by the zRMS.

For simulations performed at Step 3+4 the water DT₅₀ was set to 1000 days and the whole system DT₅₀ was ascribed to the sediment compartment, in line with indications of FOCUS surface water guidance (2015) for substances with Koc >2000 mL/g. It is noted that for sediment phase the whole system median value of 65 days should have been used, however value considered by the Applicant represents worst case and is thus agreed by the zRMS

For the whole system the maximum DT₅₀ of 90 days was used instead of the EU agreed median DT₅₀ of 65 days. Nevertheless, value considered by the Applicant represents worst case and is thus agreed by the zRMS.

Metabolite Br₂CA

No endpoints for water solubility and vapour pressure of deltamethrin metabolite Br₂CA are available in the Review Report (6504/VI/99-final of 2002) and for this reason consideration of values reported in Table 8.9-1 is agreed by the zRMS, especially provided values have been already agreed in the course of the zonal evaluation of another deltamethrin formulation of the same Applicant (Decis 15 EW evaluated by BE as the zRMS in 2018). Furthermore, both these values were also agreed by the RMS in the course of the ongoing EU renewal process of deltamethrin (LoEP amended in 2019 is available on EFSA DMS).

The unrounded Koc of 25.6 mL/g is confirmed to be correct and relevant for the exposure assessment.

According to information provided by the Applicant in point 8.3.1.1 of this document, the maximum soil DT₅₀ of 12.3 days was obtained by calculation of the geometric mean from the multiple values for the same soil available from the EU review. However, values obtained by the Applicant could not be reproduced by the zRMS based on the information available in the DAR (1998) or Addendum (2002). Furthermore, the maximum laboratory soil DT₅₀ of 21 days is reported in the Review Report (6504/VI/99-final of 2002). It is also noted that for purposes of the surface water exposure assessment, the mean soil DT₅₀ of 2.3 days as reported in the current LoEP should have been used in the surface water modelling as being the EU agreed value. Nevertheless, as the value considered by the Applicant represents worst case comparing to the endpoint reported in the LoEP and is thus agreed by the zRMS.

With regard to the maximum occurrence of metabolite Br₂CA in water it is noted that according to the LoEP its maximum formation in aquatic systems could not be determined due to position of ¹⁴C-labelling. No clear information may be also obtained from the DAR of 1998 or Addendum of 2002, since residues of metabolite Br₂CA are not expressed in terms of %AR, but as concentrations in water or sediment. In summary of the outdoor microcosm study by Schanné & van der Kolk (2001) and Schanné (2001a and 2001b) available in Addendum of 2002, the maximum occurrence of Br₂CA is reported as 20% AR, while in the LoEP prepared by the RMS (working document of 2002) it is indicated that in higher-tier studies (micro-mesocosms and natural ponds) metabolite Br₂CA was found at 23 and 53%. It should be, however, noted that none of these values was eventually reported in the Review Report of 2002 and metabolite was considered neither in exposure nor risk assessment.

It is noted that maximum occurrence of Br₂CA at 13.3% AR has been already agreed in the course of the zonal evaluations of at least two formulations of the same Applicant (Multirose, evaluated by AT as zRMS in 2016 and

Decis 15 EW evaluated by BE as the zRMS in 2018) and for this reason this value is also agreed for DLT+FPF EC 85 for consistency.

8.9.2 Active substance(s), relevant metabolite(s) and the formulation (KCP 9.2.5)

PEC_{sw} reports provided by the applicant are listed in Appendix 3.3.

Table 8.9-2: Input parameters related to application for PEC_{SW/SED} calculations (OSR, BBCH 30-50)

Plant protection product	DLT+FPF EC 85	DLT+FPF EC 85
Use No.	12	11
Crop	Oil seed rape (spring) (BBCH 30-49)	Oil seed rape (winter) (BBCH 30-49)
Application rate (kg as/ha)	Deltamethrin: 0.0075 Flupyradifurone: 0.05625	Deltamethrin: 0.0075 Flupyradifurone: 0.05625
Number of applications/interval (d)	2/14	2/14
Application window (STEP 1-2)	Spring N-EU, S-EU (Mar. - May) Summer N-EU, S-EU (Jun. - Sep.)	Autumn N-EU, S-EU (Oct. - Feb.) Spring N-EU, S-EU (Mar. - May)
Crop interception (STEP 1-2)	Intermediate crop cover	Intermediate crop cover
Application method	Ground spray	Ground spray
CAM (Chemical application method)	2 - appln foliar linear	2 - appln foliar linear
Soil depth (cm)	4	4
Models used for calculation	FOCUS STEPS 1-2 v3.2 FOCUS SWASH v5.3, FOCUS PRZM v4.3.1, FOCUS MACRO v5.5.4, FOCUS TOXSWA v4.4.3	FOCUS STEPS 1-2 v3.2 FOCUS SWASH v5.3, FOCUS PRZM v4.3.1, FOCUS MACRO v5.5.4, FOCUS TOXSWA v4.4.3

Table 8.9-3: Input parameters related to application for PEC_{SW/SED} calculations (OSR, BBCH 50-59)

Plant protection product	DLT+FPF EC 85	DLT+FPF EC 85
Use No.	14	13
Crop	Oil seed rape (spring) (BBCH 50-59)	Oil seed rape (winter) (BBCH 50-59)
Application rate (kg as/ha)	Deltamethrin: 0.0075 Flupyradifurone: 0.05625	Deltamethrin: 0.0075 Flupyradifurone: 0.05625
Number of applications/interval (d)	2/14	2/14
Application window (STEP 1-2)	Spring N-EU, S-EU (Mar. - May) Summer N-EU, S-EU (Jun. - Sep.)	Autumn N-EU, S-EU (Oct. - Feb.) Spring N-EU, S-EU (Mar. - May)
Crop interception (STEP 1-2)	Full canopy	Full canopy
Application method	Ground spray	Ground spray
CAM (Chemical application method)	2 - appln foliar linear	2 - appln foliar linear
Soil depth (cm)	4	4
Models used for calculation	FOCUS STEPS 1-2 v3.2 FOCUS SWASH v5.3, FOCUS PRZM v4.3.1, FOCUS MACRO v5.5.4, FOCUS TOXSWA v4.4.3	FOCUS STEPS 1-2 v3.2 FOCUS SWASH v5.3, FOCUS PRZM v4.3.1, FOCUS MACRO v5.5.4, FOCUS TOXSWA v4.4.3

Table 8.9-4: Input parameters related to application for PEC_{SW/SED} calculations (OSR, BBCH 65-79)

Plant protection product	DLT+FPF EC 85	DLT+FPF EC 85
Use No.	16	15
Crop	Oil seed rape (spring) (BBCH 65-79)	Oil seed rape (winter) (BBCH 65-79)
Application rate (kg as/ha)	Deltamethrin: 0.0050 Flupyradifurone: 0.0375	Deltamethrin: 0.0050 Flupyradifurone: 0.0375
Number of applications/interval (d)	2/14	2/14
Application window (STEP 1-2)	Spring N-EU, S-EU (Mar. - May) Summer N-EU, S-EU (Jun. - Sep.)	Autumn N-EU, S-EU (Jun. - Sep.) (Oct. - Feb.) Spring N-EU, S-EU (Mar. - May)
Crop interception (STEP 1-2)	Full canopy	Full canopy
Application method	Ground spray	Ground spray
CAM (Chemical application method)	2 - appln foliar linear	2 - appln foliar linear
Soil depth (cm)	4	4
Models used for calculation	FOCUS STEPS 1-2 v3.2 FOCUS SWASH v5.3, FOCUS PRZM v4.3.1, FOCUS MACRO v5.5.4, FOCUS TOXSWA v4.4.3	FOCUS STEPS 1-2 v3.2 FOCUS SWASH v5.3, FOCUS PRZM v4.3.1, FOCUS MACRO v5.5.4, FOCUS TOXSWA v4.4.3

Table 8.9-5: FOCUS Step 3 Scenario related input parameters for PEC_{sw/sed} calculations for the application of DLT+FPF EC 85

Crop	Scenario	Application window used in modelling
OSR (spring) (BBCH 30-49)	D1 Ditch/Stream	12-Jun - 26-Jul
	D3 Ditch	14-May - 27-Jun
	D4 Pond/Stream	25-May - 08-Jul
	D5 Pond/Stream	20-Apr - 03-Jun
	R1 Pond/Stream*	10-May - 23-Jun
OSR (winter) (BBCH 30-49)	D2 Ditch/Stream	10-Mar - 23-Apr
	D3 Ditch	21-Feb - 06-Apr
	D4 Pond/Stream	01-Mar - 14-Apr
	D5 Pond/Stream	01-Mar - 14-Apr
	R1 Pond/Stream*	15-Apr - 29-May 18-Apr - 01-Jun
OSR (spring) (BBCH 50-59)	R3 Stream*	07-Mar - 20-Apr
	D1 Ditch/Stream	23-Jun - 06-Aug
	D3 Ditch	30-May - 13-Jul
	D4 Pond/Stream	06-Jun - 20-Jul
	D5 Pond/Stream	08-May - 21-Jun
OSR (winter) (BBCH 50-59)	R1 Pond/Stream*	24-May - 07-Jul
	D2 Ditch/Stream	28-Apr - 11-Jun
	D3 Ditch	09-Apr - 23-May
	D4 Pond/Stream	18-Apr - 01-Jun
	D5 Pond/Stream	05-Apr - 19-May
OSR (spring) (BBCH 65-79)	R1 Pond/Stream*	05-May-18-Jun 07-May - 20-Jun
	R3 Stream*	29-Mar - 12-May
	D1 Ditch/Stream	15-Jul - 28-Aug
	D3 Ditch	27-Jun - 10-Aug
	D4 Pond/Stream	30-Jun - 13-Aug
OSR (winter) (BBCH 65-79)	D5 Pond/Stream	05-Jun - 19-Jul
	R1 Pond/Stream*	19-Jun - 02-Aug
	D2 Ditch/Stream	20-Jun - 03-Aug
	D3 Ditch	03-Jun - 17-Jul
	D4 Pond/Stream	16-Jun - 30-Jul
OSR (spring) (BBCH 65-79)	D5 Pond/Stream	19-May - 02-Jul
	R1 Pond/Stream*	02-Jun - 16-Jul

Crop	Scenario	Application window used in modelling
	R3 Stream*	28-Apr - 11-Jun

* Considered at Tier 1 only

zRMS comments:

The application pattern assumed in simulations is in line with the Central Zone GAP presented in Table 8.1-1.

Tables 8.9-2 to 8.9-5 above were amended in order to comply with information provided in the modelling reports. Furthermore, information on assumptions made in calculations at Steps 1 and 2 were provided by the zRMS.

It is noted that for application to winter OSR at BBCH 30-50 the application window October-February was considered by the Applicant, although the application dates assumed in groundwater as well as surface water modelling (Step 3) clearly indicate that only application during spring and summer is relevant for DLT+FPF EC 85. Taking this into account, for applications at BBCH 30-50 application window March-May would be more relevant. Nevertheless, assumed window represents worst case in terms of migration of the substance to surface water bodies and is thus accepted.

Application dates used for Step 3 and 4 simulations were checked by the zRMS using AppDate ver. 3.06 tool and are considered acceptable. It was noted that the application dates in R1 scenario (application to winter OSR at BBCH 30-49 and 50-59) were incorrectly reported in Table 8.9-5 and respective corrections were introduced by the zRMS, in line with the modelling report.

8.9.2.1 Deltamethrin and its metabolites

Table 8.9-6: Input parameters related to active substance deltamethrin and metabolite for PECsw/sed calculations STEP 1/2 and 3/(4) (if necessary)

Compound	Deltamethrin	Br ₂ CA	Value in accordance to EU endpoint y/n/ Reference
Molecular weight (g/mol)	505.2	298.0	Y/ EU review report 6504/VI/99-final (2002)
Saturated vapour pressure (Pa)	1.24 × 10 ⁻⁸ at 25°C	2.30 × 10 ⁻³ at 20°C	N/ See justification
Water solubility (mg/L)	Step 1+2: 0.0002 at 25°C Step 3+4: 0.001	9000 at 20°C	N/ See justification
Diffusion coefficient in water (m ² /d)	4.3 × 10 ⁻⁵	not required for Step 1+2	default
Diffusion coefficient in air (m ² /d)	0.43	not required for Step 1+2	default
K _{foc} (mL/g)	Step 1+2: 10240000.0 (arithmetic mean, n = 4) Step 3+4: 460000	25.6 (arithmetic mean, n = 3)	N/ See justification
Freundlich Exponent 1/n	0.93	not required for Step 1+2 0.84 – 0.96	N/ See justification
Plant Uptake	0.0	not required for Step 1+2	default
Wash-Off factor from Crop (1/mm)	0.05 (MACRO) 0.50 (PRZM)	not required for Step 1+2	-
DT _{50,soil} (d)	Step 1+2: 28 Step 3+4: 26	21	Y/ EU review report 6504/VI/99-final (2002)
DT _{50,water} (d)	1000 90	1000 (default)	N/ See justification
DT _{50,sed} (d)	Step 1+2: 90 Step 3+4: 90 1000 (default)	1000 (default)	N/ See justification
DT _{50,whole system} (d)	90	1000 (default)	N/ See justification
Maximum occurrence observed (% molar basis with respect to the parent)	-	Soil: 23 Water/sediment: 13.3 Total system: -	N/ See justification
Formation fraction in soil:	-	-	

PEC_{sw}/sed

FOCUS Step 3/4 PEC_{sw} values were calculated including the amount of deltamethrin sorbed to suspended solids and not including the amount of deltamethrin sorbed to suspended solids, i.e. the concentration of dissolved deltamethrin only, and are available in the PEC reports. The tables with FOCUS Step 3 PEC_{sw} values represent the worst case resulting from calculations inclusive suspended material. In the section with FOCUS Step 4 PEC_{sw} values, results of both calculations are presented as PEC_{sw} values considering the concentration of dissolved deltamethrin only is higher in some scenarios than PEC_{sw} values including the amount of deltamethrin sorbed to suspended solids.

Table 8.9-7: FOCUS Step 1,2 (spring) and 3 PEC_{sw} and PEC_{sed} for deltamethrin following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×7.5 g a.s./ha, BBCH 30-49)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)* A	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	0.138 -	RunOff/Drain.	0.010	0.003	38.18 -
Step 2						
N-Europe	Mar. - May	0.069 *	RunOff/Drain.	0.009	0.003	2.58
S-Europe	(Spring)	0.069 *	RunOff/Drain.	0.009	0.003	4.31
Step 3						
D1	Ditch	0.048 *	Spray drift	0.007	0.005	0.522
D1	Stream	0.042 *	Spray drift	0.002	0.001	0.219
D3	Ditch	0.048 *	Spray drift	0.003	0.001	0.258
D4	Pond	0.002 *	Spray drift	<0.001	<0.001	0.044
D4	Stream	0.039 *	Spray drift	<0.001	<0.001	0.098
D5	Pond	0.002	Spray drift	<0.001	<0.001	0.047
D5	Stream	0.041 *	Spray drift	<0.001	<0.001	0.043
R1	Pond	0.002	Spray drift	<0.001	<0.001	0.058
R1	Stream	0.031 *	Spray drift	<0.001	<0.001	0.956

* Single applications marked

** TWA-interval as required by ecotox

A Maximum PEC_{sw} values result from calculation including the amount of deltamethrin sorbed to suspended solids

Table 8.9-8: FOCUS Step 1,2 (summer) PEC_{sw} and PEC_{sed} for deltamethrin following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×7.5 g a.s./ha, BBCH 30-49)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	0.138 -	RunOff/Drain.	0.010	0.003	38.18 -
Step 2						
N-Europe	Jun. - Sep.	0.069 *	RunOff/Drain.	0.009	0.003	2.58
S-Europe	(Summer)	0.069 *	RunOff/Drain.	0.009	0.003	3.44

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-9: FOCUS Step 1,2 (autumn) and 3 PEC_{sw} and PEC_{sed} for deltamethrin following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×7.5 g a.s./ha, BBCH 30-49)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)* A	Dominant entry route	7d-PEC _{sw,twa} (µg/L)**	21d-PEC _{sw,twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	0.138 -	RunOff/Drain.	0.010	0.004	38.18 -
Step 2						
N-Europe	Oct. - Feb.	0.069 *	RunOff/Drain.	0.009	0.003	5.18
S-Europe	(Autumn)	0.069 *	RunOff/Drain.	0.009	0.003	4.31
Step 3						
D2	Ditch	0.048 *	Spray drift	0.005	0.003	0.399
D2	Stream	0.043 *	Spray drift	0.004	0.002	0.232
D3	Ditch	0.047 *	Spray drift	0.002	0.002	0.236
D4	Pond	0.002 *	Spray drift	<0.001	<0.001	0.048 *
D4	Stream	0.038 *	Spray drift	<0.001	<0.001	0.027
D5	Pond	0.002 *	Spray drift	<0.001	<0.001	0.047
D5	Stream	0.038 *	Spray drift	<0.001	<0.001	0.020 *
R1	Pond	0.002	Spray drift	<0.001	<0.001	0.058
R1	Stream	0.031 *	Spray drift	<0.001	<0.001	0.416
R3	Stream	0.044 *	Spray drift	<0.001	<0.001	0.186

* Single applications marked

** TWA-interval as required by ecotox

A Maximum PEC_{sw} values result from calculation including the amount of deltamethrin sorbed to suspended solids

Table 8.9-10: FOCUS Step 1,2 (spring) PEC_{sw} and PEC_{sed} for deltamethrin following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×7.5 g a.s./ha, BBCH 30-49)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw,twa} (µg/L)**	21d-PEC _{sw,twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	0.138 -	RunOff/Drain.	0.010	0.004	38.18 -
Step 2						
N-Europe	Mar. - May	0.069 *	RunOff/Drain.	0.009	0.003	2.58
S-Europe	(Spring)	0.069 *	RunOff/Drain.	0.009	0.003	4.31

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-11: FOCUS Step 1,2 (spring) and 3 PEC_{sw} and PEC_{sed} for deltamethrin following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×7.5 g a.s./ha, BBCH 50-59)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)* A	Dominant entry route	7d-PEC _{sw,twa} (µg/L)**	21d-PEC _{sw,twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	0.138 -	RunOff/Drain.	0.010	0.004	38.18 -
Step 2						
N-Europe	Mar. - May	0.069 *	RunOff/Drain.	0.009	0.003	2.29
S-Europe	(Spring)	0.069 *	RunOff/Drain.	0.009	0.003	3.73
Step 3						
D1	Ditch	0.048 *	Spray drift	0.006	0.004	0.491
D1	Stream	0.042 *	Spray drift	0.002	<0.001	0.194
D3	Ditch	0.048 *	Spray drift	0.004	0.001	0.269
D4	Pond	0.002 *	Spray drift	<0.001	<0.001	0.045
D4	Stream	0.041 *	Spray drift	<0.001	<0.001	0.113
D5	Pond	0.002 *	Spray drift	<0.001	<0.001	0.046
D5	Stream	0.042 *	Spray drift	0.001	<0.001	0.122
R1	Pond	0.002 *	Spray drift	<0.001	<0.001	0.059
R1	Stream	0.031 *	Spray drift	<0.001	<0.001	0.981

* Single applications marked

** TWA-interval as required by ecotox

A Maximum PEC_{sw} values result from calculation including the amount of deltamethrin sorbed to suspended solids

Table 8.9-12: FOCUS Step 1,2 (summer) PEC_{sw} and PEC_{sed} for deltamethrin following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×7.5 g a.s./ha, BBCH 50-59)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	0.138 -	RunOff/Drain.	0.010	0.004	38.18 -
Step 2						
N-Europe	Jun. - Sep.	0.069 *	RunOff/Drain.	0.009	0.003	2.29
S-Europe	(Summer)	0.069 *	RunOff/Drain.	0.009	0.003	3.01

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-13: FOCUS Step 1,2 (autumn) and 3 PEC_{sw} and PEC_{sed} for deltamethrin following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×7.5 g a.s./ha, BBCH 50-59)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)* A	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	0.138 -	RunOff/Drain.	0.010	0.004	38.18 -
Step 2						
N-Europe	Oct. - Feb.	0.069 *	RunOff/Drain.	0.009	0.003	4.46
S-Europe	(Autumn)	0.069 *	RunOff/Drain.	0.009	0.003	3.73
Step 3						
D2	Ditch	0.048 *	Spray drift	0.006	0.004	0.426
D2	Stream	0.043 *	Spray drift	0.004	0.002	0.269
D3	Ditch	0.048 *	Spray drift	0.003	0.002	0.263
D4	Pond	0.002 *	Spray drift	<0.001	<0.001	0.046
D4	Stream	0.037 *	Spray drift	<0.001	<0.001	0.059
D5	Pond	0.002 *	Spray drift	<0.001	<0.001	0.048
D5	Stream	0.039 *	Spray drift	<0.001	<0.001	0.051
R1	Pond	0.002 *	Spray drift	<0.001	<0.001	0.057
R1	Stream	0.031 *	Spray drift	<0.001	<0.001	0.422
R3	Stream	0.044 *	Spray drift	<0.001	<0.001	0.199

* Single applications marked

** TWA-interval as required by ecotox

A Maximum PEC_{sw} values result from calculation including the amount of deltamethrin sorbed to suspended solids

Table 8.9-14: FOCUS Step 1,2 (spring) PEC_{sw} and PEC_{sed} for deltamethrin following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×7.5 g a.s./ha, BBCH 50-59)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	0.138 -	RunOff/Drain.	0.010	0.004	38.18 -
Step 2						
N-Europe	Mar. - May	0.069 *	RunOff/Drain.	0.009	0.003	2.29
S-Europe	(Spring)	0.069 *	RunOff/Drain.	0.009	0.003	3.73

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-15: FOCUS Step 1,2 (spring) and 3 PEC_{sw} and PEC_{sed} for deltamethrin following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×5 g a.s./ha, BBCH 65-79)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)* A	Dominant entry route	7d-PEC _{sw,twa} (µg/L)**	21d-PEC _{sw,twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	0.092 -	RunOff/Drain.	0.007	0.002	25.5 -
Step 2						
N-Europe	Mar. - May	0.046 *	RunOff/Drain.	0.006	0.002	1.52
S-Europe	(Spring)	0.046 *	RunOff/Drain.	0.006	0.002	2.49
Step 3						
D1	Ditch	0.032 *	Spray drift	0.004	0.003	0.343
D1	Stream	0.028 *	Spray drift	0.001	<0.001	0.137
D3	Ditch	0.032 *	Spray drift	0.003	0.001	0.188
D4	Pond	0.001	Spray drift	<0.001	<0.001	0.030
D4	Stream	0.027 *	Spray drift	<0.001	<0.001	0.075
D5	Pond	0.001 *	Spray drift	<0.001	<0.001	0.029
D5	Stream	0.030 *	Spray drift	<0.001	<0.001	0.090 *
R1	Pond	0.001	Spray drift	<0.001	<0.001	0.058
R1	Stream	0.021 *	Spray drift	<0.001	<0.001	1.11

* Single applications marked

** TWA-interval as required by ecotox

A Maximum PEC_{sw} values result from calculation including the amount of deltamethrin sorbed to suspended solids

Table 8.9-16: FOCUS Step 1,2 (summer) PEC_{sw} and PEC_{sed} for deltamethrin following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×5 g a.s./ha, BBCH 65-79)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw,twa} (µg/L)**	21d-PEC _{sw,twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	0.092 -	RunOff/Drain.	0.007	0.002	25.5 -
Step 2						
N-Europe	Jun. - Sep.	0.046 *	RunOff/Drain.	0.006	0.002	1.52
S-Europe	(Summer)	0.046 *	RunOff/Drain.	0.006	0.002	2.01

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-17: FOCUS Step 1,2 (spring) and 3 PEC_{sw} and PEC_{sed} for deltamethrin following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×5 g a.s./ha, BBCH 65-79)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)* A	Dominant entry route	7d-PEC _{sw,twa} (µg/L)**	21d-PEC _{sw,twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	0.092 -	RunOff/Drain.	0.007	0.002	25.5 -
Step 2						
N-Europe	Mar. - May	0.046 *	RunOff/Drain.	0.006	0.002	1.52
S-Europe	(Spring)	0.046 *	RunOff/Drain.	0.006	0.002	2.49
Step 3						
D2	Ditch	0.032 *	Spray drift	0.004	0.003	0.337
D2	Stream	0.029 *	Spray drift	0.004	0.002	0.297
D3	Ditch	0.032 *	Spray drift	0.003	0.002	0.225
D4	Pond	0.001	Spray drift	<0.001	<0.001	0.030
D4	Stream	0.027 *	Spray drift	<0.001	<0.001	0.075
D5	Pond	0.001	Spray drift	<0.001	<0.001	0.031
D5	Stream	0.030 *	Spray drift	<0.001	<0.001	0.095
R1	Pond	0.001 *	Spray drift	<0.001	<0.001	0.054
R1	Stream	0.021 *	Spray drift	<0.001	<0.001	0.717
R3	Stream	0.029 *	Spray drift	<0.001	<0.001	0.097

* Single applications marked

** TWA-interval as required by ecotox

A Maximum PEC_{sw} values result from calculation including the amount of deltamethrin sorbed to suspended solids

Table 8.9-18: FOCUS Step 1,2 (summer) PEC_{sw} and PEC_{sed} for deltamethrin following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×5 g a.s./ha, BBCH 65-79)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	0.092 -	RunOff/Drain.	0.007	0.002	25.5 -
Step 2						
N-Europe	Jun. - Sep.	0.046 *	RunOff/Drain.	0.006	0.002	1.52
S-Europe	(Summer)	0.046 *	RunOff/Drain.	0.006	0.002	2.01

* Single applications marked

** TWA-interval as required by ecotox

FOCUS Step 4

OSR (BBCH 30-49)

PEC_{sw}: Deltamethrin sorbed to suspended solids

Table 8.9-19: Global maximum PEC_{sw} values for deltamethrin, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (winter) (BBCH 30-49) according to the Central EU zone GAP according to surface water Step 4 (simulated use PMT00, use group C according to ecotox)

PEC _{sw} ^o (µg/L)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D2 Ditch	0.0481	0.0131	0.0069	0.0036	0.0069	0.0036		
50 %		0.0241	0.0065	0.0035	0.0018	0.0035	0.0018		
75 %		0.0120	0.0033	0.0017	0.0009	0.0017	0.0009		
90 %		0.0048	0.0013	0.0007	0.0004	0.0007	0.0004		
None	D2 Stream Ditch	0.0428	0.0157	0.0083	0.0043	0.0083	0.0043		
50 %		0.0214	0.0078	0.0042	0.0022	0.0042	0.0022		
75 %		0.0107	0.0039	0.0021	0.0011	0.0021	0.0011		
90 %		0.0043	0.0016	0.0008	0.0004	0.0008	0.0004		
None	D3 Ditch D2 Stream	0.0474	0.0129	0.0068	0.0035	0.0068	0.0035		
50 %		0.0237	0.0064	0.0034	0.0018	0.0034	0.0018		
75 %		0.0118	0.0032	0.0017	0.0009	0.0017	0.0009		
90 %		0.0048	0.0013	0.0007	0.0004	0.0007	0.0004		
None	D4 Pond D3 Ditch	0.0017	0.0014	0.0010	0.0007	0.0010	0.0007		
50 %		0.0008	0.0007	0.0005	0.0003	0.0005	0.0003		
75 %		0.0004	0.0004	0.0003	0.0002	0.0003	0.0002		
90 %		0.0002	0.0001	0.0001	<0.0010	0.0001	<0.0010		
None	D4 Stream D4 Pond	0.0377	0.0138	0.0073	0.0038	0.0073	0.0038		
50 %		0.0189	0.0069	0.0037	0.0019	0.0037	0.0019		
75 %		0.0094	0.0035	0.0018	0.0009	0.0018	0.0009		
90 %		0.0038	0.0014	0.0007	0.0004	0.0007	0.0004		
None	D5 Pond D4 Stream	0.0016	0.0014	0.0010	0.0007	0.0010	0.0007		
50 %		0.0008	0.0007	0.0005	0.0003	0.0005	0.0003		

PEC _{sw} [°] (µg/L)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
75 %		0.0004	0.0004	0.0003	0.0002	0.0003	0.0002		
90 %		0.0002	<i>0.0001</i>	0.0001	<0.0010	0.0001	<0.0010		
None	D5 Stream	0.0379	0.0138	0.0073	0.0038	0.0073	0.0038		
50 %		0.0190	0.0069	0.0037	0.0019	0.0037	0.0019		
75 %	D5 Pond	0.0095	0.0035	0.0018	0.0009	0.0018	0.0009		
90 %		0.0038	0.0014	0.0007	0.0004	0.0007	0.0004		
None	R1 Pond	<i>0.0017</i>	<i>0.0015</i>	<i>0.0010</i>	<i>0.0007</i>	<i>0.0010</i>	<i>0.0007</i>		
50 %		<i>0.0008</i>	<i>0.0007</i>	<i>0.0005</i>	<i>0.0003</i>	<i>0.0005</i>	<i>0.0003</i>		
75 %	D5 Stream	<i>0.0004</i>	<i>0.0004</i>	0.0003	0.0002	0.0003	0.0002		
90 %		<i>0.0002</i>	<i>0.0002</i>	<i>0.0001</i>	<0.0010	<i>0.0001</i>	<0.0010		
None	R1 Stream	0.0313	0.0114	0.0060	0.0032	0.0060	0.0032		
50 %		0.0156	0.0057	0.0030	0.0016	0.0030	0.0016		
75 %	R1 Pond	0.0078	0.0029	0.0015	0.0008	0.0015	0.0008		
90 %		0.0031	0.0011	0.0006	0.0003	0.0006	0.0003		
None	R3 Stream	0.0439	0.0160	0.0085	0.0044	0.0085	0.0044		
50 %		0.0220	0.0080	0.0043	0.0022	0.0043	0.0022		
75 %	R1 Stream	0.0110	0.0040	0.0021	0.0011	0.0021	0.0011		
90 %		0.0044	0.0016	0.0009	0.0004	0.0009	0.0004		
None	R3 Stream	<i>0.0428</i>	<i>0.0157</i>	<i>0.0083</i>	<i>0.0043</i>	<i>0.0083</i>	<i>0.0043</i>		
50 %		<i>0.0214</i>	<i>0.0078</i>	<i>0.0042</i>	<i>0.0022</i>	<i>0.0042</i>	<i>0.0022</i>		
75 %	R3 Stream	<i>0.0107</i>	<i>0.0039</i>	<i>0.0021</i>	<i>0.0011</i>	<i>0.0021</i>	<i>0.0011</i>		
90 %		<i>0.0043</i>	<i>0.0016</i>	<i>0.0008</i>	<i>0.0004</i>	<i>0.0008</i>	<i>0.0004</i>		

* Maximum values coming from multiple applications are marked in italics

° PEC_{sw} values including suspended solids are reported

Table 8.9-20: Global maximum PEC_{sw} values for deltamethrin, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (spring) (BBCH 30-49) according to the Central EU zone GAP according to surface water Step 4 (simulated use PMT01, use group C according to ecotox)

PEC _{sw} [°] (µg/L)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D1 Ditch	0.0481	0.0131	0.0069	0.0036	0.0069	0.0036		
50 %		0.0241	0.0065	0.0035	0.0018	0.0035	0.0018		
75 %		0.0120	0.0033	0.0017	0.0009	0.0017	0.0009		
90 %		0.0048	0.0013	0.0007	0.0004	0.0007	0.0004		
None	D1 Stream	0.0421	0.0154	0.0081	0.0043	0.0081	0.0043		
50 %		0.0211	0.0077	0.0041	0.0021	0.0041	0.0021		
75 %		0.0105	0.0039	0.0020	0.0010	0.0020	0.0010		
90 %		0.0042	0.0015	0.0008	0.0004	0.0008	0.0004		

PEC _{sw} ^o (µg/L)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D3 Ditch	0.0476	0.0129	0.0069	0.0036	0.0069	0.0036		
50 %		0.0238	0.0065	0.0034	0.0018	0.0034	0.0018		
75 %		0.0119	0.0032	0.0017	0.0009	0.0017	0.0009		
90 %		0.0048	0.0013	0.0007	0.0004	0.0007	0.0004		
None	D4 Pond	0.0016	0.0014	0.0010	0.0007	0.0010	0.0007		
50 %		0.0008	0.0007	0.0005	0.0003	0.0005	0.0003		
75 %		0.0004	0.0004	0.0003	0.0002	0.0003	0.0002		
90 %		0.0002	0.0001	0.0001	<0.0010	0.0001	<0.0010		
None	D4 Stream	0.0390	0.0142	0.0075	0.0039	0.0075	0.0039		
50 %		0.0195	0.0071	0.0038	0.0020	0.0038	0.0020		
75 %		0.0097	0.0036	0.0019	0.0010	0.0019	0.0010		
90 %		0.0039	0.0014	0.0008	0.0004	0.0008	0.0004		
None	D5 Pond	0.0016	0.0014	0.0010	0.0007	0.0010	0.0007		
50 %		0.0008	0.0007	0.0005	0.0003	0.0005	0.0003		
75 %		0.0004	0.0004	0.0003	0.0002	0.0003	0.0002		
90 %		0.0002	0.0001	0.0001	<0.0010	0.0001	<0.0010		
None	D5 Stream	0.0414	0.0151	0.0080	0.0042	0.0080	0.0042		
50 %		0.0207	0.0076	0.0040	0.0021	0.0040	0.0021		
75 %		0.0104	0.0038	0.0020	0.0010	0.0020	0.0010		
90 %		0.0041	0.0015	0.0008	0.0004	0.0008	0.0004		
None	R1 Pond	0.0016	0.0014	0.0010	0.0007	0.0010	0.0007		
50 %		0.0008	0.0007	0.0005	0.0003	0.0005	0.0003		
75 %		0.0004	0.0004	0.0003	0.0002	0.0003	0.0002		
90 %		0.0002	0.0001	0.0001	<0.0010	0.0001	<0.0010		
None	R1 Stream	0.0313	0.0114	0.0060	0.0032	0.0060	0.0032		
50 %		0.0156	0.0057	0.0030	0.0016	0.0030	0.0016		
75 %		0.0078	0.0029	0.0015	0.0008	0.0015	0.0008		
90 %		0.0031	0.0011	0.0006	0.0003	0.0006	0.0003		

* Maximum values coming from multiple applications are marked in *italics*

^o PEC_{sw} values including suspended solids are reported

PEC_{sw}: Dissolved deltamethrin only

Table 8.9-21: Global maximum PEC_{sw} values for deltamethrin, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (winter) (BBCH 30-49) according to the Central EU zone GAP according to surface water Step 4 (simulated use PMT00, **use group C according to ecotox**)

PEC _{sw} (µg/L)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D2 Ditch	0.0275	0.0072	0.0037	0.0019	0.0037	0.0019		
50 %		0.0135	0.0035	0.0018	0.0009	0.0018	0.0009		
75 %		0.0066	0.0017	0.0009	0.0004	0.0009	0.0004		
90 %		0.0026	0.0007	0.0003	0.0002	0.0003	0.0002		
None	D2 Stream	0.0244	0.0086	0.0045	0.0023	0.0045	0.0023		
50 %		0.0119	0.0042	0.0022	0.0011	0.0022	0.0011		
75 %		0.0058	0.0021	0.0011	0.0005	0.0011	0.0005		
90 %		0.0023	0.0008	0.0004	0.0002	0.0004	0.0002		
None	D3 Ditch	0.0271	0.0070	0.0037	0.0019	0.0037	0.0019		
50 %		0.0133	0.0034	0.0018	0.0009	0.0018	0.0009		
75 %		0.0065	0.0017	0.0009	0.0004	0.0009	0.0004		
90 %		0.0025	0.0006	0.0003	0.0002	0.0003	0.0002		
None	D4 Pond	0.0008	0.0007	0.0005	0.0003	0.0005	0.0003		
50 %		0.0004	0.0004	0.0002	0.0002	0.0002	0.0002		
75 %		0.0002	0.0002	0.0001	<0.0010	0.0001	<0.0010		
90 %		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
None	D4 Stream	0.0213	0.0075	0.0039	0.0020	0.0039	0.0020		
50 %		0.0105	0.0037	0.0019	0.0010	0.0019	0.0010		
75 %		0.0051	0.0018	0.0009	0.0005	0.0009	0.0005		
90 %		0.0020	0.0007	0.0004	0.0002	0.0004	0.0002		
None	D5 Pond	0.0008	0.0007	0.0005	0.0003	0.0005	0.0003		
50 %		0.0004	0.0004	0.0002	0.0002	0.0002	0.0002		
75 %		0.0002	0.0002	0.0001	<0.0010	0.0001	<0.0010		
90 %		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
None	D5 Stream	0.0215	0.0076	0.0039	0.0020	0.0039	0.0020		
50 %		0.0105	0.0037	0.0019	0.0010	0.0019	0.0010		
75 %		0.0051	0.0018	0.0009	0.0005	0.0009	0.0005		
90 %		0.0020	0.0007	0.0004	0.0002	0.0004	0.0002		
None	R1 Pond	0.0009	0.0007	0.0005	0.0003	0.0005	0.0003		
50 %		0.0004	0.0004	0.0003	0.0002	0.0003	0.0002		
75 %		0.0002	0.0002	0.0001	<0.0010	0.0001	<0.0010		
90 %		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
None	R1 Stream	0.0176	0.0062	0.0032	0.0016	0.0032	0.0016		
50 %		0.0086	0.0030	0.0016	0.0008	0.0016	0.0008		
75 %		0.0042	0.0015	0.0008	0.0004	0.0008	0.0004		
90 %		0.0016	0.0006	0.0003	0.0002	0.0003	0.0002		

PEC _{sw} (µg/L)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	R3 Stream	0.0250	0.0088	0.0046	0.0023	0.0046	0.0023		
50 %		0.0123	0.0043	0.0023	0.0011	0.0023	0.0011		
75 %		0.0060	0.0021	0.0011	0.0006	0.0011	0.0006		
90 %		0.0023	0.0008	0.0004	0.0002	0.0004	0.0002		

* Maximum values coming from multiple applications are marked in italics

Table 8.9-22: Global maximum PEC_{sw} values for deltamethrin, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (spring) (BBCH 30-49) according to the Central EU zone GAP according to surface water Step 4 (simulated use PMT01, use group C according to ecotox)

PEC _{sw} (µg/L)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D1 Ditch	0.0275	0.0071	0.0037	0.0019	0.0037	0.0019		
50 %		0.0135	0.0035	0.0018	0.0009	0.0018	0.0009		
75 %		0.0066	0.0017	0.0009	0.0004	0.0009	0.0004		
90 %		0.0026	0.0007	0.0003	0.0002	0.0003	0.0002		
None	D1 Stream	0.0239	0.0085	0.0044	0.0022	0.0044	0.0022		
50 %		0.0117	0.0041	0.0022	0.0011	0.0022	0.0011		
75 %		0.0057	0.0020	0.0010	0.0005	0.0010	0.0005		
90 %		0.0022	0.0008	0.0004	0.0002	0.0004	0.0002		
None	D3 Ditch	0.0272	0.0071	0.0037	0.0019	0.0037	0.0019		
50 %		0.0133	0.0035	0.0018	0.0009	0.0018	0.0009		
75 %		0.0065	0.0017	0.0009	0.0004	0.0009	0.0004		
90 %		0.0025	0.0007	0.0003	0.0002	0.0003	0.0002		
None	D4 Pond	0.0008	0.0007	0.0005	0.0003	0.0005	0.0003		
50 %		0.0004	0.0004	0.0002	0.0002	0.0002	0.0002		
75 %		0.0002	0.0002	0.0001	<0.0010	0.0001	<0.0010		
90 %		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
None	D4 Stream	0.0221	0.0078	0.0041	0.0021	0.0041	0.0021		
50 %		0.0108	0.0038	0.0020	0.0010	0.0020	0.0010		
75 %		0.0053	0.0019	0.0010	0.0005	0.0010	0.0005		
90 %		0.0021	0.0007	0.0004	0.0002	0.0004	0.0002		
None	D5 Pond	0.0008	0.0007	0.0005	0.0003	0.0005	0.0003		
50 %		0.0004	0.0004	0.0002	0.0002	0.0002	0.0002		
75 %		0.0002	0.0002	0.0001	<0.0010	0.0001	<0.0010		
90 %		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
None	D5 Stream	0.0235	0.0083	0.0043	0.0022	0.0043	0.0022		
50 %		0.0115	0.0041	0.0021	0.0011	0.0021	0.0011		

PEC _{sw} (µg/L)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
75 %	R1 Pond	0.0056	0.0020	0.0010	0.0005	0.0010	0.0005		
90 %		0.0022	0.0008	0.0004	0.0002	0.0004	0.0002		
None		0.0008	0.0007	0.0005	0.0003	0.0005	0.0003		
50 %		0.0004	0.0004	0.0002	0.0002	0.0002	0.0002		
75 %	R1 Stream	0.0002	0.0002	0.0001	<0.0010	0.0001	<0.0010		
90 %		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
None		0.0176	0.0062	0.0032	0.0016	0.0032	0.0016		
50 %		0.0086	0.0030	0.0016	0.0008	0.0016	0.0008		
75 %		0.0042	0.0015	0.0008	0.0004	0.0008	0.0004		
90 %		0.0016	0.0006	0.0003	0.0002	0.0003	0.0002		

* Maximum values coming from multiple applications are marked in italics

PEC_{sed}

Table 8.9-23: Global maximum PEC_{sed} values for deltamethrin, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (winter) (BBCH 30-49) according to the Central EU zone GAP according to sediment Step 4 (simulated use PMT00, use group C according to ecotox)

PEC _{sed} (µg/kg)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D2 Ditch	<i>0.3987</i>	<i>0.1037</i>	<i>0.0538</i>	<i>0.0275</i>	<i>0.0538</i>	<i>0.0275</i>		
50 %		<i>0.1997</i>	<i>0.0519</i>	<i>0.0269</i>	<i>0.0136</i>	<i>0.0269</i>	<i>0.0136</i>		
75 %		<i>0.0999</i>	<i>0.0260</i>	<i>0.0136</i>	<i>0.0070</i>	<i>0.0136</i>	<i>0.0070</i>		
90 %		<i>0.0399</i>	<i>0.0105</i>	<i>0.0054</i>	<i>0.0029</i>	<i>0.0054</i>	<i>0.0029</i>		
None	D2 Stream	0.2683	0.0981	0.0520	0.0271	0.0520	0.0271		
50 %		0.1343	0.0491	0.0261	0.0136	0.0261	0.0136		
75 %		0.0672	0.0246	0.0130	0.0067	0.0130	0.0067		
90 %		0.0269	0.0098	0.0052	0.0027	0.0052	0.0027		
None	D3 Ditch	<i>0.2356</i>	<i>0.0611</i>	<i>0.0316</i>	<i>0.0161</i>	<i>0.0316</i>	<i>0.0161</i>		
50 %		<i>0.1178</i>	<i>0.0305</i>	<i>0.0158</i>	<i>0.0080</i>	<i>0.0158</i>	<i>0.0080</i>		
75 %		<i>0.0589</i>	<i>0.0152</i>	<i>0.0080</i>	<i>0.0041</i>	<i>0.0080</i>	<i>0.0041</i>		
90 %		<i>0.0234</i>	<i>0.0061</i>	<i>0.0031</i>	<i>0.0017</i>	<i>0.0031</i>	<i>0.0017</i>		
None	D4 Pond	<i>0.0480</i>	<i>0.0416</i>	<i>0.0294</i>	<i>0.0194</i>	<i>0.0294</i>	<i>0.0194</i>		
50 %		<i>0.0240</i>	<i>0.0208</i>	<i>0.0147</i>	<i>0.0097</i>	<i>0.0147</i>	<i>0.0097</i>		
75 %		<i>0.0122</i>	<i>0.0104</i>	<i>0.0072</i>	<i>0.0047</i>	<i>0.0072</i>	<i>0.0047</i>		
90 %		<i>0.0047</i>	<i>0.0043</i>	<i>0.0029</i>	<i>0.0018</i>	<i>0.0029</i>	<i>0.0018</i>		
None	D4 Stream	0.0308	0.0110	0.0057	0.0029	0.0057	0.0029		
50 %		0.0151	0.0054	0.0028	0.0014	0.0028	0.0014		
75 %		0.0074	0.0026	0.0014	0.0007	0.0014	0.0007		

PEC _{sed} (µg/kg)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
90 %		0.0029	0.0010	0.0005	0.0003	0.0005	0.0003		
None	D5 Pond	<i>0.0473</i>	<i>0.0409</i>	<i>0.0289</i>	<i>0.0191</i>	<i>0.0289</i>	<i>0.0191</i>		
50 %		<i>0.0236</i>	<i>0.0205</i>	<i>0.0145</i>	<i>0.0095</i>	<i>0.0145</i>	<i>0.0095</i>		
75 %		<i>0.0120</i>	<i>0.0102</i>	<i>0.0071</i>	<i>0.0046</i>	<i>0.0071</i>	<i>0.0046</i>		
90 %		<i>0.0046</i>	<i>0.0042</i>	<i>0.0028</i>	<i>0.0018</i>	<i>0.0028</i>	<i>0.0018</i>		
None	D5 Stream	<i>0.0201</i>	<i>0.0069</i>	0.0035	0.0018	0.0035	0.0018		
50 %		<i>0.0099</i>	<i>0.0034</i>	0.0017	0.0009	0.0017	0.0009		
75 %		<i>0.0049</i>	<i>0.0017</i>	0.0008	0.0004	0.0008	0.0004		
90 %		<i>0.0019</i>	0.0006	0.0003	0.0002	0.0003	0.0002		
None	R1 Pond	<i>0.0580</i>	<i>0.0522</i>	<i>0.0411</i>	<i>0.0320</i>	<i>0.0295</i>	<i>0.0190</i>		
50 %		<i>0.0362</i>	<i>0.0333</i>	<i>0.0278</i>	<i>0.0232</i>	<i>0.0156</i>	<i>0.0097</i>		
75 %		<i>0.0255</i>	<i>0.0238</i>	<i>0.0209</i>	<i>0.0186</i>	<i>0.0088</i>	<i>0.0050</i>		
90 %		<i>0.0186</i>	<i>0.0183</i>	<i>0.0170</i>	<i>0.0160</i>	<i>0.0048</i>	<i>0.0024</i>		
None	R1 Stream	<i>0.4157</i>	<i>0.4106</i>	<i>0.4093</i>	<i>0.4086</i>	<i>0.0629</i>	<i>0.0213</i>		
50 %		<i>0.4117</i>	<i>0.4092</i>	<i>0.4086</i>	<i>0.4082</i>	<i>0.0622</i>	<i>0.0209</i>		
75 %		<i>0.4098</i>	<i>0.4085</i>	<i>0.4082</i>	<i>0.4080</i>	<i>0.0618</i>	<i>0.0207</i>		
90 %		<i>0.4086</i>	<i>0.4081</i>	<i>0.4080</i>	<i>0.4079</i>	<i>0.0616</i>	<i>0.0206</i>		
None	R3 Stream	<i>0.1862</i>	<i>0.1699</i>	<i>0.1656</i>	<i>0.1633</i>	<i>0.0291</i>	<i>0.0107</i>		
50 %		<i>0.1736</i>	<i>0.1654</i>	<i>0.1633</i>	<i>0.1621</i>	<i>0.0267</i>	<i>0.0094</i>		
75 %		<i>0.1673</i>	<i>0.1632</i>	<i>0.1621</i>	<i>0.1615</i>	<i>0.0256</i>	<i>0.0088</i>		
90 %		<i>0.1635</i>	<i>0.1618</i>	<i>0.1614</i>	<i>0.1612</i>	<i>0.0249</i>	<i>0.0084</i>		

* Maximum values coming from multiple applications are marked in italics

Table 8.9-24: Global maximum PEC_{sed} values for deltamethrin, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (spring) (BBCH 30-49) according to the Central EU zone GAP according to sediment Step 4 (simulated use PMT01, use group C according to ecotox)

PEC _{sed} (µg/kg)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D1 Ditch	<i>0.5218</i>	<i>0.1356</i>	<i>0.0703</i>	<i>0.0360</i>	<i>0.0703</i>	<i>0.0360</i>		
50 %		<i>0.2612</i>	<i>0.0678</i>	<i>0.0352</i>	<i>0.0178</i>	<i>0.0352</i>	<i>0.0178</i>		
75 %		<i>0.1306</i>	<i>0.0339</i>	<i>0.0178</i>	<i>0.0091</i>	<i>0.0178</i>	<i>0.0091</i>		
90 %		<i>0.0521</i>	<i>0.0137</i>	<i>0.0070</i>	<i>0.0037</i>	<i>0.0070</i>	<i>0.0037</i>		
None	D1 Stream	<i>0.2193</i>	<i>0.0773</i>	<i>0.0400</i>	<i>0.0204</i>	<i>0.0400</i>	<i>0.0204</i>		
50 %		<i>0.1096</i>	<i>0.0387</i>	<i>0.0200</i>	<i>0.0102</i>	<i>0.0200</i>	<i>0.0102</i>		
75 %		<i>0.0546</i>	<i>0.0192</i>	<i>0.0100</i>	<i>0.0051</i>	<i>0.0100</i>	<i>0.0051</i>		
90 %		<i>0.0217</i>	<i>0.0076</i>	<i>0.0039</i>	<i>0.0019</i>	<i>0.0039</i>	<i>0.0019</i>		
None	D3 Ditch	<i>0.2576</i>	<i>0.0670</i>	<i>0.0347</i>	<i>0.0178</i>	<i>0.0347</i>	<i>0.0178</i>		

PEC _{sed} (µg/kg)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
50 %		<i>0.1290</i>	<i>0.0335</i>	<i>0.0174</i>	<i>0.0088</i>	<i>0.0174</i>	<i>0.0088</i>		
75 %		<i>0.0645</i>	<i>0.0167</i>	<i>0.0088</i>	<i>0.0045</i>	<i>0.0088</i>	<i>0.0045</i>		
90 %		<i>0.0257</i>	<i>0.0067</i>	<i>0.0035</i>	<i>0.0018</i>	<i>0.0035</i>	<i>0.0018</i>		
None	D4 Pond	<i>0.0443</i>	<i>0.0383</i>	<i>0.0271</i>	<i>0.0178</i>	<i>0.0271</i>	<i>0.0178</i>		
50 %		<i>0.0221</i>	<i>0.0192</i>	<i>0.0135</i>	<i>0.0089</i>	<i>0.0135</i>	<i>0.0089</i>		
75 %		<i>0.0112</i>	<i>0.0096</i>	<i>0.0066</i>	<i>0.0043</i>	<i>0.0066</i>	<i>0.0043</i>		
90 %		<i>0.0043</i>	<i>0.0040</i>	<i>0.0026</i>	<i>0.0016</i>	<i>0.0026</i>	<i>0.0016</i>		
None	D4 Stream	<i>0.0978</i>	<i>0.0340</i>	<i>0.0175</i>	<i>0.0088</i>	<i>0.0175</i>	<i>0.0088</i>		
50 %		<i>0.0485</i>	<i>0.0169</i>	<i>0.0086</i>	<i>0.0043</i>	<i>0.0086</i>	<i>0.0043</i>		
75 %		<i>0.0239</i>	<i>0.0083</i>	<i>0.0043</i>	<i>0.0021</i>	<i>0.0043</i>	<i>0.0021</i>		
90 %		<i>0.0094</i>	<i>0.0032</i>	<i>0.0016</i>	<i>0.0008</i>	<i>0.0016</i>	<i>0.0008</i>		
None	D5 Pond	<i>0.0465</i>	<i>0.0403</i>	<i>0.0285</i>	<i>0.0187</i>	<i>0.0285</i>	<i>0.0187</i>		
50 %		<i>0.0233</i>	<i>0.0201</i>	<i>0.0142</i>	<i>0.0094</i>	<i>0.0142</i>	<i>0.0094</i>		
75 %		<i>0.0118</i>	<i>0.0101</i>	<i>0.0069</i>	<i>0.0045</i>	<i>0.0069</i>	<i>0.0045</i>		
90 %		<i>0.0045</i>	<i>0.0042</i>	<i>0.0028</i>	<i>0.0017</i>	<i>0.0028</i>	<i>0.0017</i>		
None	D5 Stream	<i>0.0426</i>	<i>0.0149</i>	<i>0.0078</i>	<i>0.0040</i>	<i>0.0078</i>	<i>0.0040</i>		
50 %		<i>0.0210</i>	<i>0.0073</i>	<i>0.0038</i>	<i>0.0020</i>	<i>0.0038</i>	<i>0.0020</i>		
75 %		<i>0.0103</i>	<i>0.0036</i>	<i>0.0019</i>	<i>0.0009</i>	<i>0.0019</i>	<i>0.0009</i>		
90 %		<i>0.0040</i>	<i>0.0014</i>	<i>0.0007</i>	<i>0.0004</i>	<i>0.0007</i>	<i>0.0004</i>		
None	R1 Pond	<i>0.0573</i>	<i>0.0519</i>	<i>0.0466</i>	<i>0.0423</i>	<i>0.0293</i>	<i>0.0187</i>		
50 %		<i>0.0443</i>	<i>0.0429</i>	<i>0.0403</i>	<i>0.0382</i>	<i>0.0156</i>	<i>0.0097</i>		
75 %		<i>0.0392</i>	<i>0.0385</i>	<i>0.0371</i>	<i>0.0360</i>	<i>0.0086</i>	<i>0.0050</i>		
90 %		<i>0.0360</i>	<i>0.0359</i>	<i>0.0352</i>	<i>0.0348</i>	<i>0.0065</i>	<i>0.0026</i>		
None	R1 Stream	<i>0.9560</i>	<i>0.9549</i>	<i>0.9546</i>	<i>0.9545</i>	<i>0.1437</i>	<i>0.0480</i>		
50 %		<i>0.9551</i>	<i>0.9546</i>	<i>0.9545</i>	<i>0.9544</i>	<i>0.1435</i>	<i>0.0479</i>		
75 %		<i>0.9547</i>	<i>0.9545</i>	<i>0.9544</i>	<i>0.9544</i>	<i>0.1435</i>	<i>0.0479</i>		
90 %		<i>0.9545</i>	<i>0.9544</i>	<i>0.9544</i>	<i>0.9543</i>	<i>0.1434</i>	<i>0.0479</i>		

* Maximum values coming from multiple applications are marked in italics

OSR (BBCH 50-59)

PEC_{sw}: Deltamethrin sorbed to suspended solids

Table 8.9-25: Global maximum PEC_{sw} values for deltamethrin, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (winter) (BBCH 50-59) according to the Central EU zone GAP according to surface water Step 4 (simulated use PMT00, use group D according to ecotox)

PEC _{sw} ^o (µg/L)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D2 Ditch	0.0481	0.0131	0.0069	0.0036	0.0069	0.0036		
50 %		0.0241	0.0065	0.0035	0.0018	0.0035	0.0018		
75 %		0.0120	0.0033	0.0017	0.0009	0.0017	0.0009		
90 %		0.0048	0.0013	0.0007	0.0004	0.0007	0.0004		
None	D2 Stream	0.0428	0.0157	0.0083	0.0043	0.0083	0.0043		
50 %		0.0214	0.0078	0.0042	0.0022	0.0042	0.0022		
75 %		0.0107	0.0039	0.0021	0.0011	0.0021	0.0011		
90 %		0.0043	0.0016	0.0008	0.0004	0.0008	0.0004		
None	D3 Ditch	0.0475	0.0129	0.0068	0.0036	0.0068	0.0036		
50 %		0.0238	0.0064	0.0034	0.0018	0.0034	0.0018		
75 %		0.0119	0.0032	0.0017	0.0009	0.0017	0.0009		
90 %		0.0048	0.0013	0.0007	0.0004	0.0007	0.0004		
None	D4 Pond	0.0016	0.0014	0.0010	0.0007	0.0010	0.0007		
50 %		0.0008	0.0007	0.0005	0.0003	0.0005	0.0003		
75 %		0.0004	0.0004	0.0003	0.0002	0.0003	0.0002		
90 %		0.0002	0.0001	0.0001	<0.0010	0.0001	<0.0010		
None	D4 Stream	0.0365	0.0133	0.0071	0.0037	0.0071	0.0037		
50 %		0.0183	0.0067	0.0035	0.0018	0.0035	0.0018		
75 %		0.0091	0.0033	0.0018	0.0009	0.0018	0.0009		
90 %		0.0037	0.0013	0.0007	0.0004	0.0007	0.0004		
None	D5 Pond	0.0016	0.0014	0.0010	0.0007	0.0010	0.0007		
50 %		0.0008	0.0007	0.0005	0.0003	0.0005	0.0003		
75 %		0.0004	0.0004	0.0003	0.0002	0.0003	0.0002		
90 %		0.0002	0.0001	0.0001	<0.0010	0.0001	<0.0010		
None	D5 Stream	0.0385	0.0141	0.0075	0.0039	0.0075	0.0039		
50 %		0.0193	0.0070	0.0037	0.0019	0.0037	0.0019		
75 %		0.0096	0.0035	0.0019	0.0010	0.0019	0.0010		
90 %		0.0039	0.0014	0.0007	0.0004	0.0007	0.0004		
None	R1 Pond	0.0016	0.0014	0.0010	0.0007	0.0010	0.0007		
50 %		0.0008	0.0007	0.0005	0.0003	0.0005	0.0003		
75 %		0.0004	0.0004	0.0003	0.0002	0.0003	0.0002		
90 %		0.0002	0.0001	0.0001	<0.0010	0.0001	<0.0010		
None	R1 Stream	0.0311	0.0113	0.0060	0.0031	0.0060	0.0031		
50 %		0.0155	0.0057	0.0030	0.0016	0.0030	0.0016		

PEC _{sw} [°] (µg/L)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
75 %	R3 Stream	0.0078	0.0028	0.0015	0.0008	0.0015	0.0008		
90 %		0.0031	0.0011	0.0006	0.0003	0.0006	0.0003		
None		0.0439	0.0160	0.0085	0.0044	0.0085	0.0044		
50 %		0.0220	0.0080	0.0043	0.0022	0.0043	0.0022		
75 %		0.0110	0.0040	0.0021	0.0011	0.0021	0.0011		
90 %		0.0044	0.0016	0.0009	0.0004	0.0009	0.0004		

* Maximum values coming from multiple applications are marked in *italics*

° PEC_{sw} values including suspended solids are reported

Table 8.9-26: Global maximum PEC_{sw} values for deltamethrin, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (spring) (BBCH 50-59) according to the Central EU zone GAP according to surface water Step 4 (simulated use PMT01, **use group D according to ecotox)**

PEC _{sw} [°] (µg/L)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D1 Ditch	0.0481	0.0131	0.0069	0.0036	0.0069	0.0036		
50 %		0.0241	0.0065	0.0035	0.0018	0.0035	0.0018		
75 %		0.0120	0.0033	0.0017	0.0009	0.0017	0.0009		
90 %		0.0048	0.0013	0.0007	0.0004	0.0007	0.0004		
None	D1 Stream	0.0421	0.0154	0.0081	0.0043	0.0081	0.0043		
50 %		0.0211	0.0077	0.0041	0.0021	0.0041	0.0021		
75 %		0.0105	0.0039	0.0020	0.0010	0.0020	0.0010		
90 %		0.0042	0.0015	0.0008	0.0004	0.0008	0.0004		
None	D3 Ditch	0.0476	0.0129	0.0069	0.0036	0.0069	0.0036		
50 %		0.0238	0.0065	0.0034	0.0018	0.0034	0.0018		
75 %		0.0119	0.0032	0.0017	0.0009	0.0017	0.0009		
90 %		0.0048	0.0013	0.0007	0.0004	0.0007	0.0004		
None	D4 Pond	0.0016	0.0014	0.0010	0.0007	0.0010	0.0007		
50 %		0.0008	0.0007	0.0005	0.0003	0.0005	0.0003		
75 %		0.0004	0.0004	0.0003	0.0002	0.0003	0.0002		
90 %		0.0002	0.0001	0.0001	<0.0010	0.0001	<0.0010		
None	D4 Stream	0.0411	0.0150	0.0080	0.0042	0.0080	0.0042		
50 %		0.0206	0.0075	0.0040	0.0021	0.0040	0.0021		
75 %		0.0103	0.0038	0.0020	0.0010	0.0020	0.0010		
90 %		0.0041	0.0015	0.0008	0.0004	0.0008	0.0004		
None	D5 Pond	0.0016	0.0014	0.0010	0.0007	0.0010	0.0007		
50 %		0.0008	0.0007	0.0005	0.0003	0.0005	0.0003		
75 %		0.0004	0.0004	0.0003	0.0002	0.0003	0.0002		
90 %		0.0002	0.0001	0.0001	<0.0010	0.0001	<0.0010		

* Maximum values coming from multiple applications are marked in italics
 ° PECsw values including suspended solids are reported

Table 8.9-27: Global maximum PEC_{sw} values for deltamethrin, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (winter) (BBCH 50-59) according to the Central EU zone GAP according to surface water Step 4 (simulated use PMT00, **use group D according to ecotox**)

[illegible]

PEC _{sw} (µg/L)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D4 Stream	0.0207	0.0073	0.0038	0.0019	0.0038	0.0019		
50 %		0.0101	0.0036	0.0019	0.0009	0.0019	0.0009		
75 %		0.0049	0.0018	0.0009	0.0005	0.0009	0.0005		
90 %		0.0019	0.0007	0.0004	0.0002	0.0004	0.0002		
None	D5 Pond	0.0008	0.0007	0.0005	0.0003	0.0005	0.0003		
50 %		0.0004	0.0004	0.0002	0.0002	0.0002	0.0002		
75 %		0.0002	0.0002	0.0001	<0.0010	0.0001	<0.0010		
90 %		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
None	D5 Stream	0.0219	0.0077	0.0040	0.0020	0.0040	0.0020		
50 %		0.0107	0.0038	0.0020	0.0010	0.0020	0.0010		
75 %		0.0052	0.0019	0.0010	0.0005	0.0010	0.0005		
90 %		0.0020	0.0007	0.0004	0.0002	0.0004	0.0002		
None	R1 Pond	0.0008	0.0007	0.0005	0.0003	0.0005	0.0003		
50 %		0.0004	0.0004	0.0002	0.0002	0.0002	0.0002		
75 %		0.0002	0.0002	0.0001	<0.0010	0.0001	<0.0010		
90 %		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
None	R1 Stream	0.0175	0.0062	0.0032	0.0016	0.0032	0.0016		
50 %		0.0086	0.0030	0.0016	0.0008	0.0016	0.0008		
75 %		0.0042	0.0015	0.0008	0.0004	0.0008	0.0004		
90 %		0.0016	0.0006	0.0003	0.0002	0.0003	0.0002		
None	R3 Stream	0.0250	0.0088	0.0046	0.0023	0.0046	0.0023		
50 %		0.0123	0.0043	0.0023	0.0011	0.0023	0.0011		
75 %		0.0060	0.0021	0.0011	0.0006	0.0011	0.0006		
90 %		0.0023	0.0008	0.0004	0.0002	0.0004	0.0002		

* Maximum values coming from multiple applications are marked in *italics*

Table 8.9-28: Global maximum PEC_{sw} values for deltamethrin, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (spring) (BBCH 50-59) according to the Central EU zone GAP according to surface water Step 4 (simulated use PMT01, **use group D according to ecotox)**

PEC _{sw} (µg/L)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D1 Ditch	0.0275	0.0071	0.0037	0.0019	0.0037	0.0019		
50 %		0.0135	0.0035	0.0018	0.0009	0.0018	0.0009		
75 %		0.0066	0.0017	0.0009	0.0004	0.0009	0.0004		
90 %		0.0026	0.0007	0.0003	0.0002	0.0003	0.0002		
None	D1 Stream	0.0239	0.0085	0.0044	0.0022	0.0044	0.0022		
50 %		0.0117	0.0041	0.0022	0.0011	0.0022	0.0011		

PEC _{sw} (µg/L)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
75 %		0.0057	0.0020	0.0010	0.0005	0.0010	0.0005		
90 %		0.0022	0.0008	0.0004	0.0002	0.0004	0.0002		
None	D3 Ditch	0.0272	0.0071	0.0037	0.0019	0.0037	0.0019		
50 %		0.0133	0.0035	0.0018	0.0009	0.0018	0.0009		
75 %		0.0065	0.0017	0.0009	0.0004	0.0009	0.0004		
90 %		0.0025	0.0007	0.0003	0.0002	0.0003	0.0002		
None	D4 Pond	0.0009	0.0007	0.0005	0.0003	0.0005	0.0003		
50 %		0.0004	0.0004	0.0003	0.0002	0.0003	0.0002		
75 %		0.0002	0.0002	0.0001	<0.0010	0.0001	<0.0010		
90 %		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
None	D4 Stream	0.0234	0.0083	0.0043	0.0022	0.0043	0.0022		
50 %		0.0114	0.0040	0.0021	0.0011	0.0021	0.0011		
75 %		0.0056	0.0020	0.0010	0.0005	0.0010	0.0005		
90 %		0.0022	0.0008	0.0004	0.0002	0.0004	0.0002		
None	D5 Pond	0.0008	0.0007	0.0005	0.0003	0.0005	0.0003		
50 %		0.0004	0.0004	0.0003	0.0002	0.0003	0.0002		
75 %		0.0002	0.0002	0.0001	<0.0010	0.0001	<0.0010		
90 %		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
None	D5 Stream	0.0236	0.0084	0.0043	0.0022	0.0043	0.0022		
50 %		0.0116	0.0041	0.0021	0.0011	0.0021	0.0011		
75 %		0.0057	0.0020	0.0010	0.0005	0.0010	0.0005		
90 %		0.0022	0.0008	0.0004	0.0002	0.0004	0.0002		
None	R1 Pond	0.0008	0.0007	0.0005	0.0003	0.0005	0.0003		
50 %		0.0004	0.0004	0.0002	0.0002	0.0002	0.0002		
75 %		0.0002	0.0002	0.0001	<0.0010	0.0001	<0.0010		
90 %		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
None	R1 Stream	0.0177	0.0063	0.0032	0.0017	0.0032	0.0017		
50 %		0.0087	0.0031	0.0016	0.0008	0.0016	0.0008		
75 %		0.0042	0.0015	0.0008	0.0004	0.0008	0.0004		
90 %		0.0016	0.0006	0.0003	0.0002	0.0003	0.0002		

* Maximum values coming from multiple applications are marked in *italics*

PECsed:

Table 8.9-29: Global maximum PEC_{sed} values for deltamethrin, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (winter) (BBCH 50-59) according to the Central EU zone GAP according to sediment Step 4 (simulated use PMT00, use group D according to ecotox)

PEC _{sed} (µg/kg)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D2 Ditch	0.4259	0.1108	0.0575	0.0295	0.0575	0.0295		
50 %		0.2134	0.0555	0.0288	0.0146	0.0288	0.0146		
75 %		0.1068	0.0278	0.0146	0.0075	0.0146	0.0075		
90 %		0.0426	0.0112	0.0058	0.0031	0.0058	0.0031		
None	D2 Stream	0.2690	0.0983	0.0521	0.0272	0.0521	0.0272		
50 %		0.1347	0.0492	0.0262	0.0136	0.0262	0.0136		
75 %		0.0674	0.0247	0.0130	0.0067	0.0130	0.0067		
90 %		0.0270	0.0098	0.0052	0.0027	0.0052	0.0027		
None	D3 Ditch	0.2632	0.0683	0.0354	0.0181	0.0354	0.0181		
50 %		0.1317	0.0341	0.0177	0.0089	0.0177	0.0089		
75 %		0.0658	0.0171	0.0089	0.0046	0.0089	0.0046		
90 %		0.0262	0.0068	0.0035	0.0019	0.0035	0.0019		
None	D4 Pond	0.0455	0.0394	0.0278	0.0183	0.0278	0.0183		
50 %		0.0227	0.0197	0.0139	0.0092	0.0139	0.0092		
75 %		0.0115	0.0098	0.0068	0.0044	0.0068	0.0044		
90 %		0.0044	0.0041	0.0027	0.0017	0.0027	0.0017		
None	D4 Stream	0.0589	0.0203	0.0104	0.0052	0.0104	0.0052		
50 %		0.0291	0.0101	0.0051	0.0026	0.0051	0.0026		
75 %		0.0143	0.0049	0.0025	0.0013	0.0025	0.0013		
90 %		0.0056	0.0019	0.0010	0.0005	0.0010	0.0005		
None	D5 Pond	0.0474	0.0410	0.0290	0.0191	0.0290	0.0191		
50 %		0.0237	0.0205	0.0145	0.0095	0.0145	0.0095		
75 %		0.0120	0.0103	0.0071	0.0046	0.0071	0.0046		
90 %		0.0046	0.0042	0.0028	0.0018	0.0028	0.0018		
None	D5 Stream	0.0511	0.0176	0.0090	0.0045	0.0090	0.0045		
50 %		0.0252	0.0087	0.0044	0.0022	0.0044	0.0022		
75 %		0.0124	0.0043	0.0022	0.0011	0.0022	0.0011		
90 %		0.0048	0.0017	0.0008	0.0004	0.0008	0.0004		
None	R1 Pond	0.0569	0.0511	0.0401	0.0310	0.0289	0.0184		
50 %		0.0352	0.0323	0.0268	0.0226	0.0155	0.0095		
75 %		0.0246	0.0232	0.0206	0.0185	0.0086	0.0050		
90 %		0.0185	0.0183	0.0171	0.0162	0.0047	0.0023		
None	R1 Stream	0.4221	0.4177	0.4166	0.4160	0.0637	0.0215		
50 %		0.4187	0.4166	0.4160	0.4157	0.0631	0.0212		
75 %		0.4171	0.4160	0.4157	0.4156	0.0628	0.0211		
90 %		0.4161	0.4157	0.4156	0.4155	0.0626	0.0210		

PEC _{sed} (µg/kg)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	R3 Stream	<i>0.1992</i>	<i>0.1699</i>	<i>0.1621</i>	<i>0.1580</i>	<i>0.0317</i>	<i>0.0121</i>		
50 %		<i>0.1766</i>	<i>0.1618</i>	<i>0.1579</i>	<i>0.1560</i>	<i>0.0275</i>	<i>0.0100</i>		
75 %		<i>0.1651</i>	<i>0.1578</i>	<i>0.1560</i>	<i>0.1555</i>	<i>0.0254</i>	<i>0.0089</i>		
90 %		<i>0.1583</i>	<i>0.1558</i>	<i>0.1554</i>	<i>0.1552</i>	<i>0.0242</i>	<i>0.0083</i>		

* Maximum values coming from multiple applications are marked in italics

Table 8.9-30: Global maximum PEC_{sed} values for deltamethrin, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (spring) (BBCH 50-59) according to the Central EU zone GAP according to sediment Step 4 (simulated use PMT01, use group D according to ecotox)

PEC _{sed} (µg/kg)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D1 Ditch	<i>0.4908</i>	<i>0.1275</i>	<i>0.0661</i>	<i>0.0338</i>	<i>0.0661</i>	<i>0.0338</i>		
50 %		<i>0.2457</i>	<i>0.0638</i>	<i>0.0331</i>	<i>0.0167</i>	<i>0.0331</i>	<i>0.0167</i>		
75 %		<i>0.1229</i>	<i>0.0319</i>	<i>0.0167</i>	<i>0.0086</i>	<i>0.0167</i>	<i>0.0086</i>		
90 %		<i>0.0490</i>	<i>0.0128</i>	<i>0.0066</i>	<i>0.0035</i>	<i>0.0066</i>	<i>0.0035</i>		
None	D1 Stream	<i>0.1942</i>	<i>0.0696</i>	<i>0.0368</i>	<i>0.0192</i>	<i>0.0368</i>	<i>0.0192</i>		
50 %		<i>0.0970</i>	<i>0.0347</i>	<i>0.0184</i>	<i>0.0095</i>	<i>0.0184</i>	<i>0.0095</i>		
75 %		<i>0.0483</i>	<i>0.0174</i>	<i>0.0091</i>	<i>0.0047</i>	<i>0.0091</i>	<i>0.0047</i>		
90 %		<i>0.0192</i>	<i>0.0069</i>	<i>0.0036</i>	<i>0.0019</i>	<i>0.0036</i>	<i>0.0019</i>		
None	D3 Ditch	<i>0.2691</i>	<i>0.0700</i>	<i>0.0363</i>	<i>0.0186</i>	<i>0.0363</i>	<i>0.0186</i>		
50 %		<i>0.1348</i>	<i>0.0350</i>	<i>0.0181</i>	<i>0.0092</i>	<i>0.0181</i>	<i>0.0092</i>		
75 %		<i>0.0674</i>	<i>0.0175</i>	<i>0.0092</i>	<i>0.0047</i>	<i>0.0092</i>	<i>0.0047</i>		
90 %		<i>0.0269</i>	<i>0.0070</i>	<i>0.0036</i>	<i>0.0019</i>	<i>0.0036</i>	<i>0.0019</i>		
None	D4 Pond	<i>0.0453</i>	<i>0.0392</i>	<i>0.0277</i>	<i>0.0182</i>	<i>0.0277</i>	<i>0.0182</i>		
50 %		<i>0.0226</i>	<i>0.0196</i>	<i>0.0139</i>	<i>0.0091</i>	<i>0.0139</i>	<i>0.0091</i>		
75 %		<i>0.0115</i>	<i>0.0098</i>	<i>0.0068</i>	<i>0.0044</i>	<i>0.0068</i>	<i>0.0044</i>		
90 %		<i>0.0044</i>	<i>0.0041</i>	<i>0.0027</i>	<i>0.0017</i>	<i>0.0027</i>	<i>0.0017</i>		
None	D4 Stream	<i>0.1127</i>	<i>0.0393</i>	<i>0.0206</i>	<i>0.0106</i>	<i>0.0206</i>	<i>0.0106</i>		
50 %		<i>0.0559</i>	<i>0.0195</i>	<i>0.0102</i>	<i>0.0052</i>	<i>0.0102</i>	<i>0.0052</i>		
75 %		<i>0.0277</i>	<i>0.0096</i>	<i>0.0050</i>	<i>0.0025</i>	<i>0.0050</i>	<i>0.0025</i>		
90 %		<i>0.0109</i>	<i>0.0038</i>	<i>0.0020</i>	<i>0.0010</i>	<i>0.0020</i>	<i>0.0010</i>		
None	D5 Pond	<i>0.0462</i>	<i>0.0400</i>	<i>0.0283</i>	<i>0.0186</i>	<i>0.0283</i>	<i>0.0186</i>		
50 %		<i>0.0231</i>	<i>0.0200</i>	<i>0.0141</i>	<i>0.0093</i>	<i>0.0141</i>	<i>0.0093</i>		
75 %		<i>0.0117</i>	<i>0.0100</i>	<i>0.0069</i>	<i>0.0045</i>	<i>0.0069</i>	<i>0.0045</i>		
90 %		<i>0.0045</i>	<i>0.0041</i>	<i>0.0028</i>	<i>0.0017</i>	<i>0.0028</i>	<i>0.0017</i>		
None	D5 Stream	<i>0.1219</i>	<i>0.0425</i>	<i>0.0219</i>	<i>0.0111</i>	<i>0.0219</i>	<i>0.0111</i>		
50 %		<i>0.0605</i>	<i>0.0211</i>	<i>0.0108</i>	<i>0.0055</i>	<i>0.0108</i>	<i>0.0055</i>		

PEC _{sed} (µg/kg)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
75 %	R1 Pond	<i>0.0300</i>	<i>0.0104</i>	<i>0.0054</i>	<i>0.0027</i>	<i>0.0054</i>	<i>0.0027</i>		
90 %		<i>0.0118</i>	<i>0.0041</i>	<i>0.0021</i>	<i>0.0010</i>	<i>0.0021</i>	<i>0.0010</i>		
None		<i>0.0592</i>	<i>0.0559</i>	<i>0.0497</i>	<i>0.0446</i>	<i>0.0273</i>	<i>0.0178</i>		
50 %		<i>0.0470</i>	<i>0.0453</i>	<i>0.0422</i>	<i>0.0397</i>	<i>0.0140</i>	<i>0.0090</i>		
75 %	R1 Stream	<i>0.0410</i>	<i>0.0400</i>	<i>0.0384</i>	<i>0.0371</i>	<i>0.0090</i>	<i>0.0044</i>		
90 %		<i>0.0371</i>	<i>0.0370</i>	<i>0.0362</i>	<i>0.0357</i>	<i>0.0068</i>	<i>0.0027</i>		
None		<i>0.9812</i>	<i>0.9795</i>	<i>0.9791</i>	<i>0.9789</i>	<i>0.1475</i>	<i>0.0493</i>		
50 %		<i>0.9799</i>	<i>0.9791</i>	<i>0.9789</i>	<i>0.9788</i>	<i>0.1472</i>	<i>0.0492</i>		
75 %		<i>0.9793</i>	<i>0.9789</i>	<i>0.9788</i>	<i>0.9788</i>	<i>0.1471</i>	<i>0.0491</i>		
90 %		<i>0.9789</i>	<i>0.9788</i>	<i>0.9787</i>	<i>0.9787</i>	<i>0.1471</i>	<i>0.0491</i>		

* Maximum values coming from multiple applications are marked in italics

OSR (BBCH 65-79)

PEC_{sw}: Deltamethrin sorbed to suspended solids

Table 8.9-31: Global maximum PEC_{sw} values for deltamethrin, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (winter) (BBCH 65-79) according to the Central EU zone GAP according to surface water Step 4 (simulated use PMT00, **use group E according to ecotox**)

PEC _{sw} ^o (µg/L)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D2 Ditch	0.0321	0.0087	0.0046	0.0024	0.0046	0.0024		
50 %		0.0161	0.0044	0.0023	0.0012	0.0023	0.0012		
75 %		0.0080	0.0022	0.0012	0.0006	0.0012	0.0006		
90 %		0.0032	0.0009	0.0005	0.0002	0.0005	0.0002		
None	D2 Stream	0.0286	0.0104	0.0055	0.0029	0.0055	0.0029		
50 %		0.0143	0.0052	0.0028	0.0014	0.0028	0.0014		
75 %		0.0072	0.0026	0.0014	0.0007	0.0014	0.0007		
90 %		0.0029	0.0010	0.0006	0.0003	0.0006	0.0003		
None	D3 Ditch	0.0319	0.0086	0.0046	0.0024	0.0046	0.0024		
50 %		0.0159	0.0043	0.0023	0.0012	0.0023	0.0012		
75 %		0.0080	0.0021	0.0012	0.0006	0.0012	0.0006		
90 %		0.0032	0.0009	0.0005	0.0002	0.0005	0.0002		
None	D4 Pond	0.0011	0.0009	0.0007	0.0005	0.0007	0.0005		
50 %		0.0005	0.0005	0.0003	0.0002	0.0003	0.0002		
75 %		0.0003	0.0002	0.0002	0.0001	0.0002	0.0001		
90 %		0.0001	0.0001	<0.0010	<0.0010	<0.0010	<0.0010		
None	D4 Stream	0.0274	0.0100	0.0053	0.0027	0.0053	0.0027		

PEC _{sw} [°] (µg/L)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
50 %		0.0137	0.0050	0.0027	0.0014	0.0027	0.0014		
75 %		0.0069	0.0025	0.0013	0.0007	0.0013	0.0007		
90 %		0.0027	0.0010	0.0005	0.0003	0.0005	0.0003		
None	D5 Pond	0.0011	0.0009	0.0007	0.0005	0.0007	0.0005		
50 %		0.0006	0.0005	0.0003	0.0002	0.0003	0.0002		
75 %		0.0003	0.0002	0.0002	0.0001	0.0002	0.0001		
90 %		0.0001	0.0001	<0.0010	<0.0010	<0.0010	<0.0010		
None	D5 Stream	0.0296	0.0108	0.0057	0.0030	0.0057	0.0030		
50 %		0.0148	0.0054	0.0029	0.0015	0.0029	0.0015		
75 %		0.0074	0.0027	0.0014	0.0008	0.0014	0.0008		
90 %		0.0030	0.0011	0.0006	0.0003	0.0006	0.0003		
None	R1 Pond	0.0011	0.0009	0.0007	0.0005	0.0007	0.0005		
50 %		0.0005	0.0005	0.0003	0.0002	0.0003	0.0002		
75 %		0.0003	0.0002	0.0002	0.0001	0.0002	0.0001		
90 %		0.0001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
None	R1 Stream	0.0210	0.0077	0.0041	0.0021	0.0041	0.0021		
50 %		0.0105	0.0038	0.0020	0.0011	0.0020	0.0011		
75 %		0.0053	0.0019	0.0010	0.0005	0.0010	0.0005		
90 %		0.0021	0.0008	0.0004	0.0002	0.0004	0.0002		
None	R3 Stream	0.0293	0.0107	0.0057	0.0029	0.0057	0.0029		
50 %		0.0147	0.0054	0.0028	0.0015	0.0028	0.0015		
75 %		0.0073	0.0027	0.0014	0.0008	0.0014	0.0008		
90 %		0.0029	0.0011	0.0006	0.0003	0.0006	0.0003		

* Maximum values coming from multiple applications are marked in italics

° PEC_{sw} values including suspended solids are reported

Table 8.9-32: Global maximum PEC_{sw} values for deltamethrin, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (spring) (BBCH 65-79) according to the Central EU zone GAP according to surface water Step 4 (simulated use PMT01, use group E according to ecotox)

PEC _{sw} [°] (µg/L)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D1 Ditch	0.0321	0.0087	0.0046	0.0024	0.0046	0.0024		
50 %		0.0160	0.0044	0.0023	0.0012	0.0023	0.0012		
75 %		0.0080	0.0022	0.0012	0.0006	0.0012	0.0006		
90 %		0.0032	0.0009	0.0005	0.0002	0.0005	0.0002		
None	D1 Stream	0.0281	0.0103	0.0054	0.0028	0.0054	0.0028		
50 %		0.0140	0.0051	0.0027	0.0014	0.0027	0.0014		
75 %		0.0070	0.0026	0.0014	0.0007	0.0014	0.0007		

PEC _{sw} ^o (µg/L)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
90 %		0.0028	0.0010	0.0006	0.0003	0.0006	0.0003		
None	D3 Ditch	0.0318	0.0086	0.0046	0.0024	0.0046	0.0024		
50 %		0.0159	0.0043	0.0023	0.0012	0.0023	0.0012		
75 %		0.0080	0.0021	0.0012	0.0006	0.0012	0.0006		
90 %		0.0032	0.0009	0.0005	0.0002	0.0005	0.0002		
None	D4 Pond	0.0011	0.0009	0.0007	0.0005	0.0007	0.0005		
50 %		0.0006	0.0005	0.0003	0.0002	0.0003	0.0002		
75 %		0.0003	0.0002	0.0002	0.0001	0.0002	0.0001		
90 %		0.0001	0.0001	<0.0010	<0.0010	<0.0010	<0.0010		
None	D4 Stream	0.0274	0.0100	0.0053	0.0027	0.0053	0.0027		
50 %		0.0137	0.0050	0.0027	0.0014	0.0027	0.0014		
75 %		0.0069	0.0025	0.0013	0.0007	0.0013	0.0007		
90 %		0.0027	0.0010	0.0005	0.0003	0.0005	0.0003		
None	D5 Pond	0.0011	0.0009	0.0007	0.0005	0.0007	0.0005		
50 %		0.0005	0.0005	0.0003	0.0002	0.0003	0.0002		
75 %		0.0003	0.0002	0.0002	0.0001	0.0002	0.0001		
90 %		0.0001	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
None	D5 Stream	0.0296	0.0108	0.0057	0.0030	0.0057	0.0030		
50 %		0.0148	0.0054	0.0029	0.0015	0.0029	0.0015		
75 %		0.0074	0.0027	0.0014	0.0008	0.0014	0.0008		
90 %		0.0030	0.0011	0.0006	0.0003	0.0006	0.0003		
None	R1 Pond	0.0011	0.0009	0.0007	0.0005	0.0007	0.0005		
50 %		0.0005	0.0005	0.0003	0.0002	0.0003	0.0002		
75 %		0.0003	0.0002	0.0002	0.0001	0.0002	0.0001		
90 %		0.0001	0.0001	<0.0010	<0.0010	<0.0010	<0.0010		
None	R1 Stream	0.0210	0.0077	0.0041	0.0021	0.0041	0.0021		
50 %		0.0105	0.0038	0.0020	0.0011	0.0020	0.0011		
75 %		0.0053	0.0019	0.0010	0.0005	0.0010	0.0005		
90 %		0.0021	0.0008	0.0004	0.0002	0.0004	0.0002		

* Maximum values coming from multiple applications are marked in italics

^o PEC_{sw} values including suspended solids are reported

PEC_{sw}: Dissolved deltamethrin only

Table 8.9-33: Global maximum PEC_{sw} values for deltamethrin, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (winter) (BBCH 65-79) according to the Central EU zone GAP according to surface water Step 4 (simulated use PMT00, **use group E according to ecotox**)

PEC _{sw} (µg/L)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D2 Ditch	0.0181	0.0047	0.0025	0.0012	0.0025	0.0012		
50 %		0.0089	0.0023	0.0012	0.0006	0.0012	0.0006		
75 %		0.0043	0.0011	0.0006	0.0003	0.0006	0.0003		
90 %		0.0017	0.0004	0.0002	0.0001	0.0002	0.0001		
None	D2 Stream	0.0160	0.0057	0.0029	0.0015	0.0029	0.0015		
50 %		0.0078	0.0028	0.0014	0.0007	0.0014	0.0007		
75 %		0.0038	0.0013	0.0007	0.0004	0.0007	0.0004		
90 %		0.0015	0.0005	0.0003	0.0001	0.0003	0.0001		
None	D3 Ditch	0.0180	0.0047	0.0024	0.0012	0.0024	0.0012		
50 %		0.0088	0.0023	0.0012	0.0006	0.0012	0.0006		
75 %		0.0043	0.0011	0.0006	0.0003	0.0006	0.0003		
90 %		0.0017	0.0004	0.0002	0.0001	0.0002	0.0001		
None	D4 Pond	0.0006	0.0005	0.0003	0.0002	0.0003	0.0002		
50 %		0.0003	0.0002	0.0002	0.0001	0.0002	0.0001		
75 %		0.0001	0.0001	<0.0010	<0.0010	<0.0010	<0.0010		
90 %		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
None	D4 Stream	0.0154	0.0054	0.0028	0.0014	0.0028	0.0014		
50 %		0.0075	0.0027	0.0014	0.0007	0.0014	0.0007		
75 %		0.0037	0.0013	0.0007	0.0003	0.0007	0.0003		
90 %		0.0014	0.0005	0.0003	0.0001	0.0003	0.0001		
None	D5 Pond	0.0006	0.0005	0.0003	0.0002	0.0003	0.0002		
50 %		0.0003	0.0002	0.0002	0.0001	0.0002	0.0001		
75 %		0.0001	0.0001	<0.0010	<0.0010	<0.0010	<0.0010		
90 %		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
None	D5 Stream	0.0166	0.0059	0.0030	0.0015	0.0030	0.0015		
50 %		0.0081	0.0029	0.0015	0.0008	0.0015	0.0008		
75 %		0.0040	0.0014	0.0007	0.0004	0.0007	0.0004		
90 %		0.0015	0.0005	0.0003	0.0001	0.0003	0.0001		
None	R1 Pond	0.0006	0.0005	0.0003	0.0002	0.0003	0.0002		
50 %		0.0003	0.0002	0.0002	0.0001	0.0002	0.0001		
75 %		0.0001	0.0001	<0.0010	<0.0010	<0.0010	<0.0010		
90 %		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
None	R1 Stream	0.0117	0.0041	0.0021	0.0011	0.0021	0.0011		
50 %		0.0057	0.0020	0.0010	0.0005	0.0010	0.0005		
75 %		0.0028	0.0010	0.0005	0.0003	0.0005	0.0003		
90 %		0.0011	0.0004	0.0002	0.0001	0.0002	0.0001		

PEC _{sw} (µg/L)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	R3 Stream	0.0165	0.0058	0.0030	0.0015	0.0030	0.0015		
50 %		0.0081	0.0029	0.0015	0.0007	0.0015	0.0007		
75 %		0.0039	0.0014	0.0007	0.0004	0.0007	0.0004		
90 %		0.0015	0.0005	0.0003	0.0001	0.0003	0.0001		

* Maximum values coming from multiple applications are marked in *italics*

Table 8.9-34: Global maximum PEC_{sw} values for deltamethrin, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (spring) (BBCH 65-79) according to the Central EU zone GAP according to surface water Step 4 (simulated use PMT01, **use group E according to ecotox)**

PEC _{sw} (µg/L)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D1 Ditch	0.0181	0.0047	0.0024	0.0012	0.0024	0.0012		
50 %		0.0088	0.0023	0.0012	0.0006	0.0012	0.0006		
75 %		0.0043	0.0011	0.0006	0.0003	0.0006	0.0003		
90 %		0.0017	0.0004	0.0002	0.0001	0.0002	0.0001		
None	D1 Stream	0.0158	0.0056	0.0029	0.0015	0.0029	0.0015		
50 %		0.0077	0.0027	0.0014	0.0007	0.0014	0.0007		
75 %		0.0038	0.0013	0.0007	0.0004	0.0007	0.0004		
90 %		0.0015	0.0005	0.0003	0.0001	0.0003	0.0001		
None	D3 Ditch	0.0179	0.0047	0.0024	0.0012	0.0024	0.0012		
50 %		0.0088	0.0023	0.0012	0.0006	0.0012	0.0006		
75 %		0.0043	0.0011	0.0006	0.0003	0.0006	0.0003		
90 %		0.0017	0.0004	0.0002	0.0001	0.0002	0.0001		
None	D4 Pond	0.0006	0.0005	0.0003	0.0002	0.0003	0.0002		
50 %		0.0003	0.0002	0.0002	0.0001	0.0002	0.0001		
75 %		0.0001	0.0001	<0.0010	<0.0010	<0.0010	<0.0010		
90 %		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
None	D4 Stream	0.0154	0.0054	0.0028	0.0014	0.0028	0.0014		
50 %		0.0075	0.0027	0.0014	0.0007	0.0014	0.0007		
75 %		0.0037	0.0013	0.0007	0.0003	0.0007	0.0003		
90 %		0.0014	0.0005	0.0003	0.0001	0.0003	0.0001		
None	D5 Pond	0.0006	0.0005	0.0003	0.0002	0.0003	0.0002		
50 %		0.0003	0.0002	0.0002	0.0001	0.0002	0.0001		
75 %		0.0001	0.0001	<0.0010	<0.0010	<0.0010	<0.0010		
90 %		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
None	D5 Stream	0.0166	0.0059	0.0030	0.0015	0.0030	0.0015		
50 %		0.0081	0.0029	0.0015	0.0008	0.0015	0.0008		

PEC _{sw} (µg/L)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
75 %	R1 Pond	0.0040	0.0014	0.0007	0.0004	0.0007	0.0004		
90 %		0.0015	0.0005	0.0003	0.0001	0.0003	0.0001		
None		0.0006	<i>0.0005</i>	0.0003	0.0002	0.0003	0.0002		
50 %		0.0003	0.0002	0.0002	0.0001	0.0002	0.0001		
75 %	R1 Stream	0.0001	0.0001	<0.0010	<0.0010	<0.0010	<0.0010		
90 %		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		
None		0.0117	0.0041	0.0021	0.0011	0.0021	0.0011		
50 %		0.0057	0.0020	0.0010	0.0005	0.0010	0.0005		
75 %		0.0028	0.0010	0.0005	0.0003	0.0005	0.0003		
90 %		0.0011	0.0004	0.0002	0.0001	0.0002	0.0001		

* Maximum values coming from multiple applications are marked in italics

PEC_{sed}:

Table 8.9-35: Global maximum PEC_{sed} values for deltamethrin, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (winter) (BBCH 65-79) according to the Central EU zone GAP according to sediment Step 4 (simulated use PMT00, use group E according to ecotox)

PEC _{sed} (µg/kg)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D2 Ditch	<i>0.3367</i>	<i>0.0876</i>	<i>0.0456</i>	<i>0.0232</i>	<i>0.0456</i>	<i>0.0232</i>		
50 %		<i>0.1684</i>	<i>0.0436</i>	<i>0.0228</i>	<i>0.0116</i>	<i>0.0228</i>	<i>0.0116</i>		
75 %		<i>0.0844</i>	<i>0.0220</i>	<i>0.0112</i>	<i>0.0056</i>	<i>0.0112</i>	<i>0.0056</i>		
90 %		<i>0.0336</i>	<i>0.0088</i>	<i>0.0044</i>	<i>0.0024</i>	<i>0.0044</i>	<i>0.0024</i>		
None	D2 Stream	<i>0.2966</i>	<i>0.1048</i>	<i>0.0544</i>	<i>0.0276</i>	<i>0.0544</i>	<i>0.0276</i>		
50 %		<i>0.1483</i>	<i>0.0524</i>	<i>0.0272</i>	<i>0.0140</i>	<i>0.0272</i>	<i>0.0140</i>		
75 %		<i>0.0744</i>	<i>0.0264</i>	<i>0.0136</i>	<i>0.0068</i>	<i>0.0136</i>	<i>0.0068</i>		
90 %		<i>0.0296</i>	<i>0.0104</i>	<i>0.0056</i>	<i>0.0028</i>	<i>0.0056</i>	<i>0.0028</i>		
None	D3 Ditch	<i>0.2248</i>	<i>0.0586</i>	<i>0.0305</i>	<i>0.0155</i>	<i>0.0305</i>	<i>0.0155</i>		
50 %		<i>0.1125</i>	<i>0.0292</i>	<i>0.0153</i>	<i>0.0078</i>	<i>0.0153</i>	<i>0.0078</i>		
75 %		<i>0.0564</i>	<i>0.0147</i>	<i>0.0075</i>	<i>0.0037</i>	<i>0.0075</i>	<i>0.0037</i>		
90 %		<i>0.0225</i>	<i>0.0059</i>	<i>0.0029</i>	<i>0.0016</i>	<i>0.0029</i>	<i>0.0016</i>		
None	D4 Pond	<i>0.0304</i>	<i>0.0260</i>	<i>0.0186</i>	<i>0.0122</i>	<i>0.0186</i>	<i>0.0122</i>		
50 %		<i>0.0152</i>	<i>0.0132</i>	<i>0.0091</i>	<i>0.0061</i>	<i>0.0091</i>	<i>0.0061</i>		
75 %		<i>0.0074</i>	<i>0.0064</i>	<i>0.0047</i>	<i>0.0030</i>	<i>0.0047</i>	<i>0.0030</i>		
90 %		<i>0.0030</i>	<i>0.0027</i>	<i>0.0017</i>	<i>0.0013</i>	<i>0.0017</i>	<i>0.0013</i>		
None	D4 Stream	<i>0.0748</i>	<i>0.0261</i>	0.0136	0.0070	0.0136	0.0070		
50 %		<i>0.0371</i>	<i>0.0129</i>	0.0067	0.0034	0.0067	0.0034		
75 %		<i>0.0184</i>	<i>0.0064</i>	0.0034	0.0017	0.0034	0.0017		

PEC _{sed} (µg/kg)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
90 %		0.0072	0.0025	0.0013	0.0007	0.0013	0.0007		
None	D5 Pond	0.0310	0.0265	0.0190	0.0124	0.0190	0.0124		
50 %		0.0155	0.0134	0.0093	0.0062	0.0093	0.0062		
75 %		0.0076	0.0065	0.0048	0.0031	0.0048	0.0031		
90 %		0.0031	0.0028	0.0017	0.0014	0.0017	0.0014		
None	D5 Stream	0.0953	0.0333	0.0172	0.0088	0.0172	0.0088		
50 %		0.0473	0.0165	0.0085	0.0043	0.0085	0.0043		
75 %		0.0236	0.0083	0.0042	0.0022	0.0042	0.0022		
90 %		0.0093	0.0032	0.0017	0.0009	0.0017	0.0009		
None	R1 Pond	0.0537	0.0495	0.0425	0.0364	0.0215	0.0129		
50 %		0.0393	0.0374	0.0335	0.0307	0.0125	0.0071		
75 %		0.0320	0.0310	0.0294	0.0278	0.0083	0.0042		
90 %		0.0278	0.0275	0.0265	0.0262	0.0054	0.0026		
None	R1 Stream	0.7172	0.7114	0.7099	0.7091	0.1081	0.0364		
50 %		0.7127	0.7099	0.7091	0.7087	0.1073	0.0360		
75 %		0.7105	0.7091	0.7087	0.7085	0.1068	0.0358		
90 %		0.7092	0.7086	0.7085	0.7084	0.1066	0.0356		
None	R3 Stream	0.0971	0.0499	0.0478	0.0467	0.0173	0.0085		
50 %		0.0521	0.0477	0.0467	0.0462	0.0091	0.0045		
75 %		0.0486	0.0467	0.0462	0.0459	0.0074	0.0026		
90 %		0.0468	0.0460	0.0459	0.0457	0.0071	0.0024		

* Maximum values coming from multiple applications are marked in italics

Table 8.9-36: Global maximum PEC_{sed} values for deltamethrin, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (spring) (BBCH 65-79) according to the Central EU zone GAP according to sediment Step 4 (simulated use PMT01, use group E according to ecotox)

PEC _{sed} (µg/kg)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D1 Ditch	0.3433	0.0893	0.0465	0.0237	0.0465	0.0237		
50 %		0.1717	0.0445	0.0233	0.0118	0.0233	0.0118		
75 %		0.0861	0.0224	0.0114	0.0057	0.0114	0.0057		
90 %		0.0343	0.0090	0.0045	0.0024	0.0045	0.0024		
None	D1 Stream	0.1373	0.0483	0.0250	0.0127	0.0250	0.0127		
50 %		0.0685	0.0241	0.0125	0.0064	0.0125	0.0064		
75 %		0.0343	0.0121	0.0062	0.0032	0.0062	0.0032		
90 %		0.0136	0.0047	0.0025	0.0013	0.0025	0.0013		
None	D3 Ditch	0.1876	0.0489	0.0255	0.0130	0.0255	0.0130		

PEC _{sed} (µg/kg)	Scenario	Step 4 deltamethrin							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
50 %		0.0939	0.0243	0.0127	0.0065	0.0127	0.0065		
75 %		0.0471	0.0123	0.0062	0.0031	0.0062	0.0031		
90 %		0.0188	0.0049	0.0025	0.0013	0.0025	0.0013		
None		0.0304	0.0260	0.0186	0.0122	0.0186	0.0122		
50 %	D4 Pond	0.0152	0.0132	0.0091	0.0061	0.0091	0.0061		
75 %		0.0074	0.0064	0.0047	0.0030	0.0047	0.0030		
90 %		0.0030	0.0027	0.0017	0.0013	0.0017	0.0013		
None		0.0748	0.0261	0.0136	0.0070	0.0136	0.0070		
50 %	D4 Stream	0.0371	0.0129	0.0067	0.0034	0.0067	0.0034		
75 %		0.0184	0.0064	0.0034	0.0017	0.0034	0.0017		
90 %		0.0072	0.0025	0.0013	0.0007	0.0013	0.0007		
None		0.0293	0.0251	0.0179	0.0117	0.0179	0.0117		
50 %	D5 Pond	0.0147	0.0127	0.0088	0.0059	0.0088	0.0059		
75 %		0.0072	0.0062	0.0046	0.0029	0.0046	0.0029		
90 %		0.0029	0.0026	0.0016	0.0013	0.0016	0.0013		
None		0.0901	0.0326	0.0171	0.0088	0.0171	0.0088		
50 %	D5 Stream	0.0447	0.0161	0.0084	0.0043	0.0084	0.0043		
75 %		0.0222	0.0079	0.0042	0.0022	0.0042	0.0022		
90 %		0.0088	0.0031	0.0017	0.0009	0.0017	0.0009		
None		0.0576	0.0549	0.0505	0.0467	0.0198	0.0124		
50 %	R1 Pond	0.0485	0.0473	0.0449	0.0431	0.0116	0.0065		
75 %		0.0439	0.0433	0.0423	0.0413	0.0089	0.0039		
90 %		0.0413	0.0411	0.0404	0.0402	0.0071	0.0029		
None		1.11	1.11	1.11	1.11	0.1672	0.0558		
50 %	R1 Stream	1.11	1.11	1.11	1.11	0.1670	0.0558		
75 %		1.11	1.11	1.11	1.11	0.1669	0.0557		
90 %		1.11	1.11	1.11	1.11	0.1669	0.0557		

* Maximum values coming from multiple applications are marked in italics

Metabolite of deltamethrin

Table 8.9-37: FOCUS Step 1, 2 PEC_{sw} and PEC_{sed} for Br₂CA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×7.5 g a.s./ha, BBCH 30-49, spring)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw,twa} (µg/L)**	21d-PEC _{sw,twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	1.05 -		1.04	1.04	0.268 -
Step 2						
N-Europe S-Europe	Mar. - May (Spring)	0.055 0.101		0.055 0.101	0.055 0.100	0.014 0.026

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-38: FOCUS Step 1, 2 PEC_{sw} and PEC_{sed} for Br₂CA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×7.5 g a.s./ha, BBCH 30-49, summer)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	1.05 -		1.04	1.04	0.268 -
Step 2						
N-Europe S-Europe	Jun. - Sep. (Summer)	0.055 0.078		0.055 0.078	0.055 0.077	0.014 0.020

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-39: FOCUS Step 1, 2 PEC_{sw} and PEC_{sed} for Br₂CA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×7.5 g a.s./ha, BBCH 30-49, autumn)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	1.05 -		1.04	1.04	0.268 -
Step 2						
N-Europe S-Europe	Oct. - Feb. (Autumn)	0.124 0.101		0.123 0.100	0.123 0.100	0.032 0.026

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-40: FOCUS Step 1, 2 PEC_{sw} and PEC_{sed} for Br₂CA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×7.5 g a.s./ha, BBCH 30-49, spring)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	1.05 -		1.04	1.04	0.268 -
Step 2						
N-Europe S-Europe	Mar. - May (Spring)	0.055 0.101		0.055 0.100	0.055 0.100	0.014 0.026

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-41: FOCUS Step 1, 2 PEC_{sw} and PEC_{sed} for Br₂CA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×7.5 g a.s./ha, BBCH 50-59, spring)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	1.05 -		1.04	1.04	0.268 -
Step 2						
N-Europe S-Europe	Mar. - May (Spring)	0.047 0.086		0.047 0.085	0.047 0.085	0.012 0.022

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-42: FOCUS Step 1, 2 PEC_{sw} and PEC_{sed} for Br₂CA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×7.5 g a.s./ha, BBCH 50-59, summer)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	1.05 -		1.04	1.04	0.268 -
Step 2						
N-Europe S-Europe	Jun. - Sep. (Summer)	0.047 0.066		0.047 0.066	0.047 0.066	0.012 0.017

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-43: FOCUS Step 1, 2 PEC_{sw} and PEC_{sed} for Br₂CA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×7.5 g a.s./ha, BBCH 50-59, autumn)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	1.05 -		1.04	1.04	0.268 -
Step 2						
N-Europe S-Europe	Oct. - Feb. (Autumn)	0.105 0.086		0.104 0.085	0.104 0.085	0.027 0.022

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-44: FOCUS Step 1, 2 PEC_{sw} and PEC_{sed} for Br₂CA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×7.5 g a.s./ha, BBCH 50-59, spring)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	1.05 -		1.04	1.04	0.268 -
Step 2						
N-Europe S-Europe	Mar. - May (Spring)	0.047 0.086		0.047 0.085	0.047 0.085	0.012 0.022

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-45: FOCUS Step 1, 2 PEC_{sw} and PEC_{sed} for Br₂CA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×5 g a.s./ha, BBCH 65-79, spring)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	0.697 -		0.696	0.692	0.178 -
Step 2						
N-Europe S-Europe	Mar. - May (Spring)	0.032 0.057		0.031 0.057	0.031 0.057	0.008 0.015

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-46: FOCUS Step 1, 2 PEC_{sw} and PEC_{sed} for Br₂CA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×5 g a.s./ha, BBCH 65-79, summer)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	0.697 -		0.696	0.692	0.178 -
Step 2						
N-Europe S-Europe	Jun. - Sep. (Summer)	0.032 0.044		0.031 0.044	0.031 0.044	0.008 0.011

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-47: FOCUS Step 1, 2 PEC_{sw} and PEC_{sed} for Br₂CA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×5 g a.s./ha, BBCH 65-79, spring)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	0.697 -		0.696	0.692	0.178 -
Step 2						
N-Europe S-Europe	Mar. - May (Spring)	0.032 0.057		0.031 0.057	0.031 0.057	0.008 0.015

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-48: FOCUS Step 1, 2 PEC_{sw} and PEC_{sed} for Br₂CA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×5 g a.s./ha, BBCH 65-79, summer)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	0.697 -		0.696	0.692	0.178 -
Step 2						
N-Europe S-Europe	Jun. - Sep. (Summer)	0.032 0.044		0.031 0.044	0.031 0.044	0.008 0.011

* Single applications marked

** TWA-interval as required by ecotox

zRMS comments:

The input parameters considered by the Applicant in surface water modelling for deltamethrin and metabolite Br₂CA presented in Table 8.9-6 are in line with EU agreed endpoints reported in the Review Report (6504/VI/99-final of 2002). Data on degradation of deltamethrin in aquatic systems considered at Steps 3+4 was amended accordingly to comply with information provided in the modelling report.

It was noted that for metabolite Br₂CA the maximum soil DT₅₀ of 21 days was considered in performed calculations, although mean of 2.3 days should have been considered in line with LoEP and 12.3 days has been indicated in point 8.9.1 regarding justification for new endpoints. Nevertheless, consideration of the longest soil DT₅₀ represents worst case and is thus agreed by the zRMS.

As indicated in the commenting box in point 8.9.2, the application data assumed in simulations were agreed by the zRMS.

Step 4 simulations were performed in line with recommendations of the FOCUS work group on landscape and mitigation factors (2007).

Surface water modelling was independently validated by the zRMS using the same input parameters. Obtained values were in good agreement with those obtained by the Applicant and therefore surface water exposure reported

in Tables 8.9-7 to 8.9-48 may be used in the aquatic risk assessment.

The zRMS would like to point out that initially, the Applicant provided modelling based on new, not EU agreed degradation data, derived in kinetic re-evaluation of the EU agreed soil laboratory and field degradation/dissipation studies as well as water-sediment studies. However, as already indicated in points 8.3.1.1, 8.4.1.1 and 8.6.1 of this document, kinetic re-evaluation is considered to be the new active substance data, which may be used at the zonal level only in exceptional cases, when e.g. no safe use is identified using the EU agreed endpoints. Furthermore, the Working Document of the Central Zone in area of Section 8 indicates that modelling based on new/refined input parameters should be presented in addition to (and not instead of) simulations based on EU agreed data. Taking this into account, the Applicant was requested to provide surface water modelling performed with consideration of the EU agreed endpoints, which are now presented in tables above. Since relevant surface water simulations could be performed using EU agreed parameters, simulations based on the new active substance data were removed from the Core Assessment in order to avoid confusion.

Simulations performed for applications in winter oilseed rape are considered protective for application of the product in spring OSR in Central Zone scenarios not defined for this crop.

Following the commenting period it was noted by that PEC_{sw} values were incorrectly reported in Table 8.9-19. Respective corrections were thus made by the zRMS.

Please note that additional surface water modelling may be required by the Member States that do not accept simulations performed according to FOCUS recommendations.

8.9.2.2 Flupyradifurone and its metabolites

Table 8.9-49: Input parameters related to active substance flupyradifurone and metabolites for PEC_{sw}/sed calculations STEP 1/2 and 3/(4) (if necessary)

Compound	Flupyra-difurone	6-CNA	DFA	BYI 02960-succinamide	BYI 02960-azabicyclo-succinamide	Value in accordance to EU endpoint y/n/ Reference
Molecular weight (g/mol)	288.7	157.6	96.0	306.7	288.3	Y/ EFSA Journal 2015;13(2):4020
Saturated vapour pressure (Pa)	9.1×10^{-7} at 20°C	not required for Step 1+2/	not required for Step 1+2/	not required for Step 1+2/	not required for Step 1+2/	Y/ EFSA Journal 2015;13(2):4020
Water solubility (mg/L)	3200	1430	500000	120000	180000	Y/ EFSA Journal 2015;13(2):4020
Diffusion coefficient in water (m ² /d)	4.3×10^{-5}	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	default
Diffusion coefficient in air (m ² /d)	0.43	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	default
K_{foc} (mL/g)	98.4 (arithmetic mean, n = 6)	88.0 (arithmetic mean, n = 4)	6.8 (arithmetic mean, n = 5)	0.0001	0.0001	Y/ EFSA Journal 2015;13(2):4020
Freundlich Exponent 1/n	0.866 (arithmetic mean, n = 6)	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	Y/ EFSA Journal 2015;13(2):4020
Plant Uptake	0.5 ^a (retained for SMS information) 0 ^b	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	Y/ EFSA Journal 2015;13(2):4020
Wash-Off factor from Crop (1/mm)	0.05 (MACRO) 0.50 (PRZM)	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	not required for Step 1+2	
DT _{50,soil} (d)	94.8 (geomean,	4.7 (geomean,	44.7 (geomean,	0.1 (default)	0.1 (default)	Y/ EFSA Journal

Compound	Flupyra-difurone	6-CNA	DFA	BYI 02960-succinamide	BYI 02960-azabicyclo-succinamide	Value in accordance to EU endpoint y/n/ Reference
	normalisation to pF2, 20°C with Q ₁₀ of 2.58, n = 6)	lab, normalisation to pF2, 20°C with Q ₁₀ of 2.58, n = 5)	lab, normalisation to pF2, 20°C with Q ₁₀ of 2.58, n = 3)			2015;13(2):4020
DT _{50,water} (d)	228	1000 (default)	249	1000 (default)	1000 (default)	Y/ EFSA Journal 2015;13(2):4020
DT _{50,sed} (d)	Step 1+2: 228 Step 3+4: 1000	1000 (default)	249	1000 (default)	1000 (default)	Y/ EFSA Journal 2015;13(2):4020
DT _{50,whole system} (d)	228	1000	249	1000 (default)	1000 (default)	Y/ EFSA Journal 2015;13(2):4020
Maximum occurrence observed (% molar basis with respect to the parent)	-	Soil: 17.1 Water / Sediment: 0	Soil: 33.9 Water / Sediment: 6.9	Soil: 0 Water / Sediment: 39.6	Soil: 0 Water / Sediment: 25.9	Y/ EFSA Journal 2015;13(2):4020
Formation fraction in soil:	-	-	-	-	-	

^A Applicability of TSCF = 0.5 (plant uptake factor) for active Flupyradifurone for exposure modelling (PEC_{gw}, PEC_{sw}) -M-755019-01-1 (see Appendix 3). Please note that calculations based on TSCF of 0.5 were retained for CMS information only, since zRMS is of the opinion that available data are not sufficient to derived the exact TSCF value for flupyradifurone. See commenting box in point 8.8.2.2 for detailed discussion on TSCF.

^B TSCF = 0 (plant uptake factor) as requested by zRMS Poland. Calculations based on PUF/TSCF = 0.5 should still be considered as described in the EFSA Journal 2015;13(2):4020.

PEC_{sw/sed} (at Step 3 PUF = 0.5, retained for information of the concerned Member States that do accept consideration of Briggs equation for TSCF refinement. Please note that Step 3 results were not validated by the zRMS in additional modelling and for this reason they are given in grey letters, in order to distinguish fully validated from non-validated information)

Table 8.9-50: FOCUS Step 1,2 (spring) and 3 PEC_{sw} and PEC_{sed} for flupyradifurone following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 30-49)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw,twa} (µg/L)**	21d-PEC _{sw,twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	34.185 -	RunOff/Drain.	33.714	33.003	33.418 -
Step 2						
N-Europe S-Europe	Mar. - May (Spring)	2.6510 4.4887	RunOff/Drain. RunOff/Drain.	2.5941 4.4124	2.5384 4.3187	2.5698 4.3726
Step 3						
D1	Ditch	1.9450	Drainage	1.8750	1.7830	5.0820
D1	Stream	1.2970	Drainage	1.1600	1.0680	2.7660
D3	Ditch	0.3584 *	Spray drift	0.0802	0.0306	0.1686
D4	Pond	0.4599	Drainage	0.4583	0.4496	1.6660
D4	Stream	0.4534	Drainage	0.3600	0.2802	0.5564
D5	Pond	0.3328	Drainage	0.3309	0.3229	1.6660
D5	Stream	0.3391 *	Spray drift	0.1632	0.1177	0.4193
R1	Pond	0.1236	Runoff	0.1185	0.1103	0.3335
R1	Stream	1.0080	Runoff	0.0999	0.0434	0.3128

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-51: FOCUS Step 1,2 (summer) PEC_{sw} and PEC_{sed} for flupyradifurone following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 30-49)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	34.185 -	RunOff/Drain.	33.714	33.003	33.418 -
Step 2						
N-Europe	Jun. - Sep.	2.6510	RunOff/Drain.	2.5941	2.5384	2.5698
S-Europe	(Summer)	3.5698	RunOff/Drain.	3.5033	3.4286	3.4712

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-52: FOCUS Step 1,2 (autumn) and 3 PEC_{sw} and PEC_{sed} for flupyradifurone following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 30-49)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	34.185 -	RunOff/Drain.	33.714	33.003	33.418 -
Step 2						
N-Europe	Oct. - Feb.	5.4076	RunOff/Drain.	5.3216	5.2089	5.2741
S-Europe	(Autumn)	4.4887	RunOff/Drain.	4.4124	4.3187	4.3726
Step 3						
D2	Ditch	10.640	Drainage	5.9780	4.7060	11.350
D2	Stream	6.7390	Drainage	3.1410	2.4500	6.4310
D3	Ditch	0.3586 *	Spray drift	0.0561	0.0400	0.1948
D4	Pond	0.5162	Drainage	0.5142	0.5035	1.8490
D4	Stream	0.4808	Drainage	0.3817	0.3187	0.6110
D5	Pond	0.3156	Drainage	0.3140	0.3068	1.6260
D5	Stream	0.3381	Spray drift	0.1410	0.1128	0.3990
R1	Pond	0.0979	Runoff	0.0945	0.0917	0.2687
R1	Stream	1.4350	Runoff	0.1705	0.0755	0.3945
R3	Stream	1.0930	Runoff	0.1132	0.0378	0.3030

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-53: FOCUS Step 1,2 (spring) PEC_{sw} and PEC_{sed} for flupyradifurone following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 30-49)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	34.185 -	RunOff/Drain.	33.714	33.003	33.418 -
Step 2						
N-Europe	Mar. - May	2.6510	RunOff/Drain.	2.5941	2.5384	2.5698
S-Europe	(Spring)	4.4887	RunOff/Drain.	4.4124	4.3187	4.3726

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-54: FOCUS Step 1,2 (spring) and 3 PEC_{sw} and PEC_{sed} for flupyradifurone following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 50-59)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	34.185 -	RunOff/Drain.	33.714	33.003	33.418 -
Step 2						
N-Europe	Mar. - May	2.3447	RunOff/Drain.	2.2911	2.2417	2.2693
S-Europe	(Spring)	3.8761	RunOff/Drain.	3.8063	3.7253	3.7717
Step 3						
D1	Ditch	2.5140	Drainage	2.4160	2.2900	5.8800
D1	Stream	1.6830	Drainage	1.4930	1.3470	3.1800
D3	Ditch	0.3579 *	Spray drift	0.0798	0.0302	0.1694
D4	Pond	0.4678	Drainage	0.4663	0.4573	1.6350
D4	Stream	0.4839	Drainage	0.3799	0.2870	0.5506
D5	Pond	0.3419	Drainage	0.3407	0.3351	1.9950
D5	Stream	0.3807	Spray drift	0.1720	0.1650	0.6278
R1	Pond	0.1030 *	Runoff	0.0980	0.0922	0.3284
R1	Stream	1.0830	Runoff	0.1266	0.0482	0.3837 *

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-55: FOCUS Step 1,2 (summer) PEC_{sw} and PEC_{sed} for flupyradifurone following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 50-59)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	34.185 -	RunOff/Drain.	33.714	33.003	33.418 -
Step 2						
N-Europe	Jun. - Sep.	2.3447	RunOff/Drain.	2.2911	2.2417	2.2693
S-Europe	(Summer)	3.1104	RunOff/Drain.	3.0487	2.9835	3.0205

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-56: FOCUS Step 1,2 (autumn) and 3 PEC_{sw} and PEC_{sed} for flupyradifurone following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 50-59)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	34.185 -	RunOff/Drain.	33.714	33.003	33.418 -
Step 2						
N-Europe	Oct. - Feb.	4.6419	RunOff/Drain.	4.5640	4.4671	4.5229
S-Europe	(Autumn)	3.8761	RunOff/Drain.	3.8063	3.7253	3.7717
Step 3						
D2	Ditch	5.0300	Drainage	4.4760	3.8800	7.5150
D2	Stream	3.9690	Drainage	2.2900	2.0900	4.6110
D3	Ditch	0.3577 *	Spray drift	0.0573	0.0384	0.1433
D4	Pond	0.3757	Drainage	0.3744	0.3672	1.3900
D4	Stream	0.3677	Drainage	0.2946	0.2315	0.4470
D5	Pond	0.2985	Drainage	0.2968	0.2900	1.5290
D5	Stream	0.3332	Spray drift	0.1345	0.1033	0.3867
R1	Pond	0.1821	Runoff	0.1743	0.1621	0.4781
R1	Stream	1.1330	Runoff	0.1329	0.0485	0.4791
R3	Stream	2.0940	Runoff	0.2880	0.1006	0.6891

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-57: FOCUS Step 1,2 (spring) PEC_{sw} and PEC_{sed} for flupyradifurone following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 50-59)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	34.185 -	RunOff/Drain.	33.714	33.003	33.418 -
Step 2						
N-Europe	Mar. - May	2.3447	RunOff/Drain.	2.2911	2.2417	2.2693
S-Europe	(Spring)	3.8761	RunOff/Drain.	3.8063	3.7253	3.7717

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-58: FOCUS Step 1,2 (spring) and 3 PEC_{sw} and PEC_{sed} for flupyradifurone following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×37.5 g a.s./ha, BBCH 65-79)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	22.790 -	RunOff/Drain.	22.476	22.002	22.279 -
Step 2						
N-Europe	Mar. - May	1.5631	RunOff/Drain.	1.5274	1.4945	1.5129
S-Europe	(Spring)	2.5841	RunOff/Drain.	2.5375	2.4835	2.5145
Step 3						
D1	Ditch	2.1510	Drainage	2.0620	1.9450	4.6430
D1	Stream	1.4590	Drainage	1.2740	1.1260	2.5230
D3	Ditch	0.2388 *	Spray drift	0.0704	0.0247	0.1197
D4	Pond	0.3273	Drainage	0.3262	0.3200	1.1760
D4	Stream	0.3368	Drainage	0.2655	0.2007	0.3963
D5	Pond	0.2077	Drainage	0.2070	0.2035	1.2520
D5	Stream	0.2217 *	Spray drift	0.1033	0.0981	0.3825
R1	Pond	0.1296	Runoff	0.1242	0.1154	0.3340
R1	Stream	1.0410	Runoff	0.1261	0.0722	0.3448

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-59: FOCUS Step 1,2 (summer) PEC_{sw} and PEC_{sed} for flupyradifurone following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×37.5 g a.s./ha, BBCH 65-79)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	22.790 -	RunOff/Drain.	22.476	22.002	22.279 -
Step 2						
N-Europe	Jun. - Sep.	1.5631	RunOff/Drain.	1.5274	1.4945	1.5129
S-Europe	(Summer)	2.0736	RunOff/Drain.	2.0325	1.9890	2.0137

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-60: FOCUS Step 1,2 (spring) and 3 PEC_{sw} and PEC_{sed} for flupyradifurone following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×37.5 g a.s./ha, BBCH 65-79)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	22.790 -	RunOff/Drain.	22.476	22.002	22.279 -
Step 2						
N-Europe	Mar. - May	1.5631	RunOff/Drain.	1.5274	1.4945	1.5129
S-Europe	(Spring)	2.5841	RunOff/Drain.	2.5375	2.4835	2.5145
Step 3						
D2	Ditch	4.8500	Drainage	2.6360	2.1360	5.4170
D2	Stream	3.0690	Drainage	1.3660	1.0940	3.1150
D3	Ditch	0.2389 *	Spray drift	0.0714	0.0447	0.1248
D4	Pond	0.2725	Drainage	0.2716	0.2663	0.9382
D4	Stream	0.3007	Drainage	0.2347	0.1707	0.3115
D5	Pond	0.2508	Drainage	0.2506	0.2496	1.4770
D5	Stream	0.2216 *	Spray drift	0.1400	0.1359	0.4981
R1	Pond	0.1492	Runoff	0.1427	0.1360	0.4049
R1	Stream	0.8361	Runoff	0.1191	0.0488	0.2452
R3	Stream	0.9793	Runoff	0.1158	0.0446	0.2292 *

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-61: FOCUS Step 1,2 (summer) PEC_{sw} and PEC_{sed} for flupyradifurone following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×37.5 g a.s./ha, BBCH 65-79)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	22.790 -	RunOff/Drain.	22.476	22.002	22.279 -
Step 2						
N-Europe	Jun. - Sep.	1.5631	RunOff/Drain.	1.5274	1.4945	1.5129
S-Europe	(Summer)	2.0736	RunOff/Drain.	2.0325	1.9890	2.0137

* Single applications marked

** TWA-interval as required by ecotox

FOCUS Step 3 (plant uptake factor for the parent flupyradifurone was set to 0)

Table 8.9-61A: FOCUS Step 3 PEC_{sw} and PEC_{sed} for flupyradifurone following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 30-49)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 3						
D2	Ditch	10.740	Drainage	6.0420	4.7600	11.560
D2	Stream	6.8010	Drainage	3.1760	2.4790	6.5620
D3	Ditch	0.3592 *	Spray drift	0.0588	0.0428	0.2328
D4	Pond	0.5931	Drainage	0.5909	0.5787	2.1370
D4	Stream	0.5404	Drainage	0.4315	0.3649	0.7050
D5	Pond	0.3373	Drainage	0.3355	0.3280	1.7270
D5	Stream	0.3440	Spray drift	0.1506	0.1201	0.4224
R1	Pond	0.0991	Runoff	0.0956	0.0928	0.2718
R1	Stream	1.4560	Runoff	0.1725	0.0763	0.3991
R3	Stream	1.1030	Runoff	0.1170	0.0391	0.3115

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-61B: FOCUS Step 3 PEC_{sw} and PEC_{sed} for flupyradifurone following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 30-49)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 3						
D1	Ditch	1.9900	Drainage	1.9180	1.8260	5.2000
D1	Stream	1.3260	Drainage	1.1870	1.0950	2.8450
D3	Ditch	0.3587	Spray drift	0.0812	0.0316	0.1751
D4	Pond	0.4971	Drainage	0.4954	0.4860	1.8070
D4	Stream	0.4837	Drainage	0.3853	0.3023	0.6035
D5	Pond	0.3521	Drainage	0.3501	0.3417	1.7520
D5	Stream	0.3408	Spray drift	0.1728	0.1247	0.4411
R1	Pond	0.1284	Runoff	0.1230	0.1145	0.3451
R1	Stream	1.0380	Runoff	0.1049	0.0445	0.3256

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-61C: FOCUS Step 3 PEC_{sw} and PEC_{sed} for flupyradifurone following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 50-59)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 3						
D2	Ditch	5.0890	Drainage	4.5270	3.9450	7.6990
D2	Stream	4.0200	Drainage	2.3150	2.1200	4.7170
D3	Ditch	0.3580	Spray drift	0.0582	0.0394	0.1485
D4	Pond	0.4207	Drainage	0.4193	0.4113	1.5670
D4	Stream	0.4031	Drainage	0.3248	0.2585	0.5039
D5	Pond	0.3163	Drainage	0.3145	0.3073	1.6090
D5	Stream	0.3366	Spray drift	0.1426	0.1087	0.4042
R1	Pond	0.1831	Runoff	0.1752	0.1630	0.4824
R1	Stream	1.1380	Runoff	0.1335	0.0489	0.4808
R3	Stream	2.1210	Runoff	0.2917	0.1019	0.6966

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-61D: FOCUS Step 3 PEC_{sw} and PEC_{sed} for flupyradifurone following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 50-59)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 3						
D1	Ditch	2.5530	Drainage	2.4550	2.3270	5.9910
D1	Stream	1.7080	Drainage	1.5170	1.3710	3.2460
D3	Ditch	0.3581	Spray drift	0.0807	0.0311	0.1752
D4	Pond	0.4927	Drainage	0.4910	0.4815	1.7300
D4	Stream	0.5035	Drainage	0.3965	0.3017	0.5822
D5	Pond	0.3548	Drainage	0.3536	0.3477	2.0520
D5	Stream	0.3827	Spray drift	0.1768	0.1686	0.6392
R1	Pond	0.1032	Runoff	0.0982	0.0925	0.3346
R1	Stream	1.1070	Runoff	0.1269	0.0503	0.3845

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-61E: FOCUS Step 3 PEC_{sw} and PEC_{sed} for flupyradifurone following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×37.5 g a.s./ha, BBCH 65-79)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 3						
D2	Ditch	4.8740	Drainage	2.6510	2.1490	5.4530
D2	Stream	3.0840	Drainage	1.3740	1.1010	3.1380
D3	Ditch	0.2389	Spray drift	0.0715	0.0448	0.1257
D4	Pond	0.2854	Drainage	0.2844	0.2788	0.9867
D4	Stream	0.3115	Drainage	0.2436	0.1785	0.3269
D5	Pond	0.2542	Drainage	0.2540	0.2530	1.5030
D5	Stream	0.2216	Spray drift	0.1415	0.1374	0.5034
R1	Pond	0.1505	Runoff	0.1440	0.1374	0.4091
R1	Stream	0.8405	Runoff	0.1197	0.0493	0.2466
R3	Stream	0.9810	Runoff	0.1164	0.0448	0.2295

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-61F: FOCUS Step 3 PEC_{sw} and PEC_{sed} for flupyradifurone following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×37.5 g a.s./ha, BBCH 65-79)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 3						
D1	Ditch	2.1650	Drainage	2.0770	1.9600	4.6920
D1	Stream	1.4690	Drainage	1.2830	1.1350	2.5510
D3	Ditch	0.2388	Spray drift	0.0706	0.0249	0.1217
D4	Pond	0.3426	Drainage	0.3415	0.3350	1.2340
D4	Stream	0.3494	Drainage	0.2761	0.2099	0.4155
D5	Pond	0.2123	Drainage	0.2116	0.2080	1.2750
D5	Stream	0.2217	Spray drift	0.1054	0.0997	0.3877
R1	Pond	0.1302	Runoff	0.1248	0.1159	0.3355
R1	Stream	1.0480	Runoff	0.1267	0.0726	0.3466

* Single applications marked

** TWA-interval as required by ecotox

FOCUS Step 4 (PUF = 0.5, retained for information of the concerned Member States that do accept consideration of Briggs equation for TSCF refinement. Please note that Step 3 results were not validated by the zRMS in additional modelling and for this reason they are given in grey letters, in order to distinguish fully validated from non-validated information))

Table 8.9-62: Global maximum PEC_{sw} values for flupyradifurone, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (winter) (BBCH 30-49) according to the Central EU zone GAP according to surface water Step 4 (simulated use PMT00)

PEC _{sw} (µg/L)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D2 Ditch	10.6400	10.6400	10.6400	10.6400	10.6400	10.6400		
50 %		10.6400	10.6400	10.6400	10.6400	10.6400	10.6400		
75 %		10.6400	10.6400	10.6400	10.6400	10.6400	10.6400		
90 %		10.6400	10.6400	10.6400	10.6400	10.6400	10.6400		
None	D2 Stream	6.7390	6.7390	6.7390	6.7390	6.7390	6.7390		
50 %		6.7390	6.7390	6.7390	6.7390	6.7390	6.7390		
75 %		6.7390	6.7390	6.7390	6.7390	6.7390	6.7390		
90 %		6.7390	6.7390	6.7390	6.7390	6.7390	6.7390		
None	D3 Ditch	0.3586	0.0995	0.0556	0.0349	0.0556	0.0349		
50 %		0.1808	0.0540	0.0346	0.0271	0.0346	0.0271		
75 %		0.0919	0.0338	0.0271	0.0271	0.0271	0.0271		
90 %		0.0447	0.0271	0.0271	0.0271	0.0271	0.0271		
None	D4 Pond	0.5162	0.5158	0.5153	0.5148	0.5153	0.5148		
50 %		0.5150	0.5149	0.5146	0.5143	0.5146	0.5143		
75 %		0.5144	0.5144	0.5142	0.5141	0.5142	0.5141		
90 %		0.5141	0.5141	0.5140	0.5140	0.5140	0.5140		
None	D4 Stream	0.4808	0.4808	0.4808	0.4808	0.4808	0.4808		
50 %		0.4808	0.4808	0.4808	0.4808	0.4808	0.4808		
75 %		0.4808	0.4808	0.4808	0.4808	0.4808	0.4808		
90 %		0.4808	0.4808	0.4808	0.4808	0.4808	0.4808		
None	D5 Pond	0.3156	0.3153	0.3148	0.3144	0.3148	0.3144		
50 %		0.3146	0.3144	0.3142	0.3139	0.3142	0.3139		
75 %		0.3140	0.3140	0.3138	0.3137	0.3138	0.3137		
90 %		0.3137	0.3137	0.3136	0.3136	0.3136	0.3136		
None	D5 Stream	0.3381	0.2197	0.2197	0.2197	0.2197	0.2197		
50 %		0.2197	0.2197	0.2197	0.2197	0.2197	0.2197		
75 %		0.2197	0.2197	0.2197	0.2197	0.2197	0.2197		
90 %		0.2197	0.2197	0.2197	0.2197	0.2197	0.2197		
None	R1 Pond	0.0979	0.0959	0.0923	0.0891	0.0427	0.0227		
50 %		0.0906	0.0896	0.0878	0.0862	0.0382	0.0198		
75 %		0.0870	0.0864	0.0855	0.0847	0.0359	0.0183		
90 %		0.0848	0.0846	0.0842	0.0839	0.0345	0.0174		
None	R1 Stream	1.4350	1.4350	1.4350	1.4350	0.6512	0.3411		
50 %		1.4350	1.4350	1.4350	1.4350	0.6512	0.3411		

PEC _{sw} (µg/L)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
75 %	R3 Stream	<i>1.4350</i>	<i>1.4350</i>	<i>1.4350</i>	<i>1.4350</i>	<i>0.6512</i>	<i>0.3411</i>		
90 %		<i>1.4350</i>	<i>1.4350</i>	<i>1.4350</i>	<i>1.4350</i>	<i>0.6512</i>	<i>0.3411</i>		
None		1.0930	1.0930	1.0930	1.0930	0.4920	0.2572		
50 %		1.0930	1.0930	1.0930	1.0930	0.4920	0.2572		
75 %		1.0930	1.0930	1.0930	1.0930	0.4920	0.2572		
90 %		1.0930	1.0930	1.0930	1.0930	0.4920	0.2572		

* Maximum values coming from multiple applications are marked in italics

Table 8.9-63: Global maximum PEC_{sw} values for flupyradifurone, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (spring) (BBCH 30-49) according to the Central EU zone GAP according to surface water Step 4 (simulated use PMT01)

PEC _{sw} (µg/L)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D1 Ditch	<i>1.9450</i>	<i>1.9450</i>	<i>1.9450</i>	<i>1.9450</i>	<i>1.9450</i>	<i>1.9450</i>		
50 %		<i>1.9450</i>	<i>1.9450</i>	<i>1.9450</i>	<i>1.9450</i>	<i>1.9450</i>	<i>1.9450</i>		
75 %		<i>1.9450</i>	<i>1.9450</i>	<i>1.9450</i>	<i>1.9450</i>	<i>1.9450</i>	<i>1.9450</i>		
90 %		<i>1.9450</i>	<i>1.9450</i>	<i>1.9450</i>	<i>1.9450</i>	<i>1.9450</i>	<i>1.9450</i>		
None	D1 Stream	<i>1.2970</i>	<i>1.2970</i>	<i>1.2970</i>	<i>1.2970</i>	<i>1.2970</i>	<i>1.2970</i>		
50 %		<i>1.2970</i>	<i>1.2970</i>	<i>1.2970</i>	<i>1.2970</i>	<i>1.2970</i>	<i>1.2970</i>		
75 %		<i>1.2970</i>	<i>1.2970</i>	<i>1.2970</i>	<i>1.2970</i>	<i>1.2970</i>	<i>1.2970</i>		
90 %		<i>1.2970</i>	<i>1.2970</i>	<i>1.2970</i>	<i>1.2970</i>	<i>1.2970</i>	<i>1.2970</i>		
None	D3 Ditch	0.3584	0.0983	0.0528	0.0281	0.0528	0.0281		
50 %		0.1799	0.0499	0.0274	0.0170	0.0274	0.0170		
75 %		0.0907	0.0266	0.0169	0.0153	0.0169	0.0153		
90 %		0.0375	0.0153	0.0153	0.0153	0.0153	0.0153		
None	D4 Pond	0.4599	0.4593	0.4583	0.4575	0.4583	0.4575		
50 %		0.4579	0.4576	0.4571	0.4567	0.4571	0.4567		
75 %		0.4569	0.4567	0.4565	0.4563	0.4565	0.4563		
90 %		0.4563	0.4562	0.4561	0.4560	0.4561	0.4560		
None	D4 Stream	0.4534	0.4534	0.4534	0.4534	0.4534	0.4534		
50 %		0.4534	0.4534	0.4534	0.4534	0.4534	0.4534		
75 %		0.4534	0.4534	0.4534	0.4534	0.4534	0.4534		
90 %		0.4534	0.4534	0.4534	0.4534	0.4534	0.4534		
None	D5 Pond	0.3328	0.3324	0.3317	0.3311	0.3317	0.3311		
50 %		0.3314	0.3312	0.3309	0.3306	0.3309	0.3306		
75 %		0.3307	0.3306	0.3305	0.3303	0.3305	0.3303		
90 %		0.3303	0.3303	0.3302	0.3301	0.3302	0.3301		
None	D5 Stream	0.3391	0.2627	0.2627	0.2627	0.2627	0.2627		

* Maximum values coming from multiple applications are marked in italics

[illegible]

PEC _{sed} (µg/kg)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D5 Pond	<i>1.6260</i>	<i>1.6210</i>	<i>1.6120</i>	<i>1.6050</i>	<i>1.6120</i>	<i>1.6050</i>		
50 %		<i>1.6080</i>	<i>1.6060</i>	<i>1.6010</i>	<i>1.5980</i>	<i>1.6010</i>	<i>1.5980</i>		
75 %		<i>1.5990</i>	<i>1.5980</i>	<i>1.5960</i>	<i>1.5940</i>	<i>1.5960</i>	<i>1.5940</i>		
90 %		<i>1.5940</i>	<i>1.5940</i>	<i>1.5930</i>	<i>1.5920</i>	<i>1.5930</i>	<i>1.5920</i>		
None	D5 Stream	<i>0.3990</i>	<i>0.3968</i>	<i>0.3966</i>	<i>0.3965</i>	<i>0.3966</i>	<i>0.3965</i>		
50 %		<i>0.3969</i>	<i>0.3966</i>	<i>0.3965</i>	<i>0.3964</i>	<i>0.3965</i>	<i>0.3964</i>		
75 %		<i>0.3967</i>	<i>0.3965</i>	<i>0.3964</i>	<i>0.3964</i>	<i>0.3964</i>	<i>0.3964</i>		
90 %		<i>0.3965</i>	<i>0.3964</i>	<i>0.3964</i>	<i>0.3964</i>	<i>0.3964</i>	<i>0.3964</i>		
None	R1 Pond	<i>0.2687</i>	<i>0.2627</i>	<i>0.2520</i>	<i>0.2426</i>	<i>0.1257</i>	<i>0.0702</i>		
50 %		<i>0.2471</i>	<i>0.2441</i>	<i>0.2388</i>	<i>0.2341</i>	<i>0.1115</i>	<i>0.0606</i>		
75 %		<i>0.2363</i>	<i>0.2348</i>	<i>0.2321</i>	<i>0.2298</i>	<i>0.1044</i>	<i>0.0558</i>		
90 %		<i>0.2298</i>	<i>0.2292</i>	<i>0.2281</i>	<i>0.2272</i>	<i>0.1001</i>	<i>0.0529</i>		
None	R1 Stream	<i>0.3945</i>	<i>0.3920</i>	<i>0.3913</i>	<i>0.3909</i>	<i>0.1791</i>	<i>0.0962</i>		
50 %		<i>0.3925</i>	<i>0.3913</i>	<i>0.3909</i>	<i>0.3907</i>	<i>0.1788</i>	<i>0.0960</i>		
75 %		<i>0.3916</i>	<i>0.3909</i>	<i>0.3907</i>	<i>0.3907</i>	<i>0.1786</i>	<i>0.0959</i>		
90 %		<i>0.3910</i>	<i>0.3907</i>	<i>0.3906</i>	<i>0.3906</i>	<i>0.1784</i>	<i>0.0958</i>		
None	R3 Stream	<i>0.3030</i>	<i>0.2988</i>	<i>0.2976</i>	<i>0.2970</i>	<i>0.1390</i>	<i>0.0752</i>		
50 %		<i>0.2997</i>	<i>0.2976</i>	<i>0.2970</i>	<i>0.2967</i>	<i>0.1384</i>	<i>0.0748</i>		
75 %		<i>0.2981</i>	<i>0.2970</i>	<i>0.2967</i>	<i>0.2966</i>	<i>0.1380</i>	<i>0.0747</i>		
90 %		<i>0.2971</i>	<i>0.2966</i>	<i>0.2965</i>	<i>0.2965</i>	<i>0.1379</i>	<i>0.0746</i>		

* Maximum values coming from multiple applications are marked in italics

Table 8.9-65: Global maximum PEC_{sed} values for flupyradifurone, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (spring) (BBCH 30-49) according to the Central EU zone GAP according to sediment Step 4 (simulated use PMT01)

PEC _{sed} (µg/kg)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D1 Ditch	<i>5.0820</i>	<i>4.8070</i>	<i>4.7610</i>	<i>4.7370</i>	<i>4.7610</i>	<i>4.7370</i>		
50 %		<i>4.8950</i>	<i>4.7590</i>	<i>4.7360</i>	<i>4.7240</i>	<i>4.7360</i>	<i>4.7240</i>		
75 %		<i>4.8040</i>	<i>4.7360</i>	<i>4.7240</i>	<i>4.7180</i>	<i>4.7240</i>	<i>4.7180</i>		
90 %		<i>4.7480</i>	<i>4.7210</i>	<i>4.7170</i>	<i>4.7140</i>	<i>4.7170</i>	<i>4.7140</i>		
None	D1 Stream	<i>2.7660</i>	<i>2.7620</i>	<i>2.7610</i>	<i>2.7600</i>	<i>2.7610</i>	<i>2.7600</i>		
50 %		<i>2.7630</i>	<i>2.7610</i>	<i>2.7600</i>	<i>2.7600</i>	<i>2.7600</i>	<i>2.7600</i>		
75 %		<i>2.7610</i>	<i>2.7600</i>	<i>2.7600</i>	<i>2.7600</i>	<i>2.7600</i>	<i>2.7600</i>		
90 %		<i>2.7600</i>	<i>2.7600</i>	<i>2.7600</i>	<i>2.7600</i>	<i>2.7600</i>	<i>2.7600</i>		
None	D3 Ditch	<i>0.1686</i>	<i>0.1112</i>	<i>0.1100</i>	<i>0.1093</i>	<i>0.1100</i>	<i>0.1093</i>		
50 %		<i>0.1137</i>	<i>0.1099</i>	<i>0.1092</i>	<i>0.1089</i>	<i>0.1092</i>	<i>0.1089</i>		
75 %		<i>0.1111</i>	<i>0.1092</i>	<i>0.1089</i>	<i>0.1087</i>	<i>0.1089</i>	<i>0.1087</i>		

* Maximum values coming from multiple applications are marked in italics

[illegible]

PEC _{sw} (µg/L)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
75 %		3.9690	3.9690	3.9690	3.9690	3.9690	3.9690		
90 %		3.9690	3.9690	3.9690	3.9690	3.9690	3.9690		
None	D3 Ditch	0.3577	0.0979	0.0525	0.0279	0.0525	0.0279		
50 %		0.1795	0.0496	0.0269	0.0159	0.0269	0.0159		
75 %		0.0904	0.0254	0.0157	0.0152	0.0157	0.0152		
90 %		0.0369	0.0152	0.0152	0.0152	0.0152	0.0152		
None	D4 Pond	0.3757	0.3752	0.3743	0.3736	0.3743	0.3736		
50 %		0.3740	0.3737	0.3733	0.3729	0.3733	0.3729		
75 %		0.3731	0.3730	0.3728	0.3726	0.3728	0.3726		
90 %		0.3726	0.3725	0.3725	0.3724	0.3725	0.3724		
None	D4 Stream	0.3677	0.3677	0.3677	0.3677	0.3677	0.3677		
50 %		0.3677	0.3677	0.3677	0.3677	0.3677	0.3677		
75 %		0.3677	0.3677	0.3677	0.3677	0.3677	0.3677		
90 %		0.3677	0.3677	0.3677	0.3677	0.3677	0.3677		
None	D5 Pond	0.2985	0.2981	0.2975	0.2970	0.2975	0.2970		
50 %		0.2973	0.2971	0.2968	0.2965	0.2968	0.2965		
75 %		0.2967	0.2966	0.2964	0.2963	0.2964	0.2963		
90 %		0.2963	0.2963	0.2962	0.2962	0.2962	0.2962		
None	D5 Stream	0.3332	0.2127	0.2127	0.2127	0.2127	0.2127		
50 %		0.2127	0.2127	0.2127	0.2127	0.2127	0.2127		
75 %		0.2127	0.2127	0.2127	0.2127	0.2127	0.2127		
90 %		0.2127	0.2127	0.2127	0.2127	0.2127	0.2127		
None	R1 Pond	0.1821	0.1800	0.1763	0.1731	0.0769	0.0399		
50 %		0.1746	0.1736	0.1718	0.1701	0.0723	0.0369		
75 %		0.1709	0.1704	0.1695	0.1687	0.0699	0.0354		
90 %		0.1687	0.1685	0.1681	0.1678	0.0686	0.0345		
None	R1 Stream	1.1330	1.1330	1.1330	1.1330	0.5155	0.2701		
50 %		1.1330	1.1330	1.1330	1.1330	0.5155	0.2701		
75 %		1.1330	1.1330	1.1330	1.1330	0.5155	0.2701		
90 %		1.1330	1.1330	1.1330	1.1330	0.5155	0.2701		
None	R3 Stream	2.0940	2.0940	2.0940	2.0940	0.9558	0.5014		
50 %		2.0940	2.0940	2.0940	2.0940	0.9558	0.5014		
75 %		2.0940	2.0940	2.0940	2.0940	0.9558	0.5014		
90 %		2.0940	2.0940	2.0940	2.0940	0.9558	0.5014		

* Maximum values coming from multiple applications are marked in italics

Table 8.9-67: Global maximum PEC_{sw} values for flupyradifurone, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (spring) (BBCH 50-59) according to the Central EU zone GAP according to surface water Step 4 (simulated use PMT01)

PEC _{sw} (µg/L)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D1 Ditch	<i>2.5140</i>	<i>2.5140</i>	<i>2.5140</i>	<i>2.5140</i>	<i>2.5140</i>	<i>2.5140</i>		
50 %		<i>2.5140</i>	<i>2.5140</i>	<i>2.5140</i>	<i>2.5140</i>	<i>2.5140</i>	<i>2.5140</i>		
75 %		<i>2.5140</i>	<i>2.5140</i>	<i>2.5140</i>	<i>2.5140</i>	<i>2.5140</i>	<i>2.5140</i>		
90 %		<i>2.5140</i>	<i>2.5140</i>	<i>2.5140</i>	<i>2.5140</i>	<i>2.5140</i>	<i>2.5140</i>		
None	D1 Stream	<i>1.6830</i>	<i>1.6830</i>	<i>1.6830</i>	<i>1.6830</i>	<i>1.6830</i>	<i>1.6830</i>		
50 %		<i>1.6830</i>	<i>1.6830</i>	<i>1.6830</i>	<i>1.6830</i>	<i>1.6830</i>	<i>1.6830</i>		
75 %		<i>1.6830</i>	<i>1.6830</i>	<i>1.6830</i>	<i>1.6830</i>	<i>1.6830</i>	<i>1.6830</i>		
90 %		<i>1.6830</i>	<i>1.6830</i>	<i>1.6830</i>	<i>1.6830</i>	<i>1.6830</i>	<i>1.6830</i>		
None	D3 Ditch	0.3579	0.0977	0.0522	0.0275	0.0522	0.0275		
50 %		0.1794	0.0492	0.0269	0.0165	0.0269	0.0165		
75 %		0.0901	0.0261	0.0164	0.0146	0.0164	0.0146		
90 %		0.0370	0.0146	0.0146	0.0146	0.0146	0.0146		
None	D4 Pond	0.4678	0.4672	0.4660	0.4651	0.4660	0.4651		
50 %		0.4655	0.4652	0.4646	0.4641	0.4646	0.4641		
75 %		0.4644	0.4642	0.4639	0.4637	0.4639	0.4637		
90 %		0.4637	0.4636	0.4635	0.4634	0.4635	0.4634		
None	D4 Stream	0.4839	0.4839	0.4839	0.4839	0.4839	0.4839		
50 %		0.4839	0.4839	0.4839	0.4839	0.4839	0.4839		
75 %		0.4839	0.4839	0.4839	0.4839	0.4839	0.4839		
90 %		0.4839	0.4839	0.4839	0.4839	0.4839	0.4839		
None	D5 Pond	0.3419	0.3415	0.3407	0.3401	0.3407	0.3401		
50 %		0.3404	0.3402	0.3398	0.3395	0.3398	0.3395		
75 %		0.3397	0.3396	0.3394	0.3392	0.3394	0.3392		
90 %		0.3392	0.3392	0.3391	0.3390	0.3391	0.3390		
None	D5 Stream	0.3807	0.2273	0.2273	0.2273	0.2273	0.2273		
50 %		0.2460	0.2273	0.2273	0.2273	0.2273	0.2273		
75 %		0.2273	0.2273	0.2273	0.2273	0.2273	0.2273		
90 %		0.2273	0.2273	0.2273	0.2273	0.2273	0.2273		
None	R1 Pond	0.1030	0.1016	0.0990	0.0967	0.0439	0.0231		
50 %		0.0976	0.0969	0.0956	0.0945	0.0405	0.0209		
75 %		0.0950	0.0946	0.0940	0.0934	0.0388	0.0197		
90 %		0.0934	0.0932	0.0930	0.0927	0.0378	0.0191		
None	R1 Stream	1.0830	1.0830	1.0830	1.0830	0.4861	0.2546		
50 %		1.0830	1.0830	1.0830	1.0830	0.4861	0.2546		
75 %		1.0830	1.0830	1.0830	1.0830	0.4861	0.2546		
90 %		1.0830	1.0830	1.0830	1.0830	0.4861	0.2546		

* Maximum values coming from multiple applications are marked in italics

Table 8.9-68: Global maximum PEC_{sed} values for flupyradifurone, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (winter) (BBCH 50-59) according to the Central EU zone GAP according to sediment Step 4 (simulated use PMT00)

PEC _{sed} (µg/kg)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D2 Ditch	7.5150	7.2700	7.2290	7.2070	7.2290	7.2070		
50 %		7.3500	7.2270	7.2060	7.1950	7.2060	7.1950		
75 %		7.2670	7.2060	7.1950	7.1900	7.1950	7.1900		
90 %		7.2170	7.1930	7.1880	7.1860	7.1880	7.1860		
None	D2 Stream	4.6110	4.5870	4.5800	4.5770	4.5800	4.5770		
50 %		4.5920	4.5800	4.5770	4.5750	4.5770	4.5750		
75 %		4.5830	4.5770	4.5750	4.5740	4.5750	4.5740		
90 %		4.5770	4.5750	4.5740	4.5740	4.5740	4.5740		
None	D3 Ditch	0.1433	0.1013	0.1004	0.1000	0.1004	0.1000		
50 %		0.1030	0.1004	0.1000	0.0997	0.1000	0.0997		
75 %		0.1013	0.0999	0.0997	0.0996	0.0997	0.0996		
90 %		0.1002	0.0997	0.0996	0.0995	0.0996	0.0995		
None	D4 Pond	1.3900	1.3850	1.3760	1.3680	1.3760	1.3680		
50 %		1.3720	1.3700	1.3650	1.3610	1.3650	1.3610		
75 %		1.3630	1.3620	1.3600	1.3580	1.3600	1.3580		
90 %		1.3580	1.3570	1.3560	1.3560	1.3560	1.3560		
None	D4 Stream	0.4470	0.4465	0.4464	0.4463	0.4464	0.4463		
50 %		0.4466	0.4464	0.4463	0.4463	0.4463	0.4463		
75 %		0.4464	0.4463	0.4463	0.4463	0.4463	0.4463		
90 %		0.4463	0.4463	0.4463	0.4463	0.4463	0.4463		
None	D5 Pond	1.5290	1.5240	1.5140	1.5060	1.5140	1.5060		
50 %		1.5100	1.5080	1.5030	1.4990	1.5030	1.4990		
75 %		1.5010	1.5000	1.4970	1.4950	1.4970	1.4950		
90 %		1.4950	1.4950	1.4940	1.4930	1.4940	1.4930		
None	D5 Stream	0.3867	0.3745	0.3733	0.3732	0.3733	0.3732		
50 %		0.3773	0.3733	0.3732	0.3732	0.3732	0.3732		
75 %		0.3734	0.3732	0.3732	0.3732	0.3732	0.3732		
90 %		0.3732	0.3732	0.3732	0.3732	0.3732	0.3732		
None	R1 Pond	0.4781	0.4725	0.4623	0.4534	0.2144	0.1164		
50 %		0.4577	0.4548	0.4498	0.4453	0.2010	0.1074		
75 %		0.4474	0.4460	0.4435	0.4412	0.1943	0.1028		
90 %		0.4413	0.4407	0.4397	0.4388	0.1902	0.1001		
None	R1 Stream	0.4791	0.4763	0.4756	0.4752	0.1942	0.1025		
50 %		0.4770	0.4756	0.4752	0.4750	0.1937	0.1022		
75 %		0.4759	0.4752	0.4750	0.4749	0.1935	0.1021		
90 %		0.4752	0.4749	0.4749	0.4748	0.1934	0.1021		
None	R3 Stream	0.6891	0.6813	0.6791	0.6779	0.3087	0.1661		
50 %		0.6831	0.6790	0.6779	0.6773	0.3075	0.1654		

PEC _{sed} (µg/kg)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
75 %		<i>0.6800</i>	<i>0.6779</i>	<i>0.6773</i>	<i>0.6769</i>	<i>0.3068</i>	<i>0.1651</i>		
90 %		<i>0.6780</i>	<i>0.6771</i>	<i>0.6769</i>	<i>0.6767</i>	<i>0.3064</i>	<i>0.1649</i>		

* Maximum values coming from multiple applications are marked in italics

Table 8.9-69: Global maximum PEC_{sed} values for flupyradifurone, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (spring) (BBCH 50-59) according to the Central EU zone GAP according to sediment Step 4 (simulated use PMT01)

PEC _{sed} (µg/kg)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D1 Ditch	<i>5.8800</i>	<i>5.5820</i>	<i>5.5310</i>	<i>5.5040</i>	<i>5.5310</i>	<i>5.5040</i>		
50 %		<i>5.6790</i>	<i>5.5290</i>	<i>5.5030</i>	<i>5.4900</i>	<i>5.5030</i>	<i>5.4900</i>		
75 %		<i>5.5780</i>	<i>5.5020</i>	<i>5.4900</i>	<i>5.4830</i>	<i>5.4900</i>	<i>5.4830</i>		
90 %		<i>5.5170</i>	<i>5.4860</i>	<i>5.4810</i>	<i>5.4790</i>	<i>5.4810</i>	<i>5.4790</i>		
None	D1 Stream	<i>3.1800</i>	<i>3.1750</i>	<i>3.1730</i>	<i>3.1720</i>	<i>3.1730</i>	<i>3.1720</i>		
50 %		<i>3.1760</i>	<i>3.1730</i>	<i>3.1720</i>	<i>3.1720</i>	<i>3.1720</i>	<i>3.1720</i>		
75 %		<i>3.1740</i>	<i>3.1720</i>	<i>3.1720</i>	<i>3.1720</i>	<i>3.1720</i>	<i>3.1720</i>		
90 %		<i>3.1730</i>	<i>3.1720</i>	<i>3.1720</i>	<i>3.1720</i>	<i>3.1720</i>	<i>3.1720</i>		
None	D3 Ditch	<i>0.1694</i>	<i>0.1063</i>	<i>0.1049</i>	<i>0.1042</i>	<i>0.1049</i>	<i>0.1042</i>		
50 %		<i>0.1088</i>	<i>0.1049</i>	<i>0.1042</i>	<i>0.1038</i>	<i>0.1042</i>	<i>0.1038</i>		
75 %		<i>0.1062</i>	<i>0.1042</i>	<i>0.1038</i>	<i>0.1037</i>	<i>0.1038</i>	<i>0.1037</i>		
90 %		<i>0.1046</i>	<i>0.1038</i>	<i>0.1036</i>	<i>0.1035</i>	<i>0.1036</i>	<i>0.1035</i>		
None	D4 Pond	<i>1.6350</i>	<i>1.6300</i>	<i>1.6210</i>	<i>1.6130</i>	<i>1.6210</i>	<i>1.6130</i>		
50 %		<i>1.6170</i>	<i>1.6140</i>	<i>1.6100</i>	<i>1.6060</i>	<i>1.6100</i>	<i>1.6060</i>		
75 %		<i>1.6080</i>	<i>1.6070</i>	<i>1.6040</i>	<i>1.6020</i>	<i>1.6040</i>	<i>1.6020</i>		
90 %		<i>1.6020</i>	<i>1.6020</i>	<i>1.6010</i>	<i>1.6000</i>	<i>1.6010</i>	<i>1.6000</i>		
None	D4 Stream	<i>0.5506</i>	<i>0.5489</i>	<i>0.5485</i>	<i>0.5482</i>	<i>0.5485</i>	<i>0.5482</i>		
50 %		<i>0.5493</i>	<i>0.5484</i>	<i>0.5482</i>	<i>0.5481</i>	<i>0.5482</i>	<i>0.5481</i>		
75 %		<i>0.5486</i>	<i>0.5482</i>	<i>0.5481</i>	<i>0.5480</i>	<i>0.5481</i>	<i>0.5480</i>		
90 %		<i>0.5482</i>	<i>0.5481</i>	<i>0.5480</i>	<i>0.5480</i>	<i>0.5480</i>	<i>0.5480</i>		
None	D5 Pond	<i>1.9950</i>	<i>1.9900</i>	<i>1.9800</i>	<i>1.9720</i>	<i>1.9800</i>	<i>1.9720</i>		
50 %		<i>1.9760</i>	<i>1.9740</i>	<i>1.9690</i>	<i>1.9650</i>	<i>1.9690</i>	<i>1.9650</i>		
75 %		<i>1.9670</i>	<i>1.9650</i>	<i>1.9630</i>	<i>1.9610</i>	<i>1.9630</i>	<i>1.9610</i>		
90 %		<i>1.9610</i>	<i>1.9600</i>	<i>1.9590</i>	<i>1.9590</i>	<i>1.9590</i>	<i>1.9590</i>		
None	D5 Stream	<i>0.6278</i>	<i>0.6226</i>	<i>0.6223</i>	<i>0.6221</i>	<i>0.6223</i>	<i>0.6221</i>		
50 %		<i>0.6229</i>	<i>0.6223</i>	<i>0.6221</i>	<i>0.6220</i>	<i>0.6221</i>	<i>0.6220</i>		
75 %		<i>0.6224</i>	<i>0.6221</i>	<i>0.6220</i>	<i>0.6220</i>	<i>0.6220</i>	<i>0.6220</i>		
90 %		<i>0.6221</i>	<i>0.6220</i>	<i>0.6220</i>	<i>0.6220</i>	<i>0.6220</i>	<i>0.6220</i>		
None	R1 Pond	<i>0.3284</i>	<i>0.3226</i>	<i>0.3122</i>	<i>0.3031</i>	<i>0.1509</i>	<i>0.0833</i>		

* Maximum values coming from multiple applications are marked in italics

[illegible]

PEC _{sw} (µg/L)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D5 Stream	0.2216	<i>0.1425</i>	<i>0.1425</i>	<i>0.1425</i>	<i>0.1425</i>	<i>0.1425</i>		
50 %		<i>0.1425</i>	<i>0.1425</i>	<i>0.1425</i>	<i>0.1425</i>	<i>0.1425</i>	<i>0.1425</i>		
75 %		<i>0.1425</i>	<i>0.1425</i>	<i>0.1425</i>	<i>0.1425</i>	<i>0.1425</i>	<i>0.1425</i>		
90 %		<i>0.1425</i>	<i>0.1425</i>	<i>0.1425</i>	<i>0.1425</i>	<i>0.1425</i>	<i>0.1425</i>		
None	R1 Pond	<i>0.1492</i>	<i>0.1479</i>	<i>0.1454</i>	<i>0.1434</i>	<i>0.0631</i>	<i>0.0328</i>		
50 %		<i>0.1443</i>	<i>0.1437</i>	<i>0.1424</i>	<i>0.1414</i>	<i>0.0601</i>	<i>0.0307</i>		
75 %		<i>0.1419</i>	<i>0.1416</i>	<i>0.1410</i>	<i>0.1405</i>	<i>0.0586</i>	<i>0.0297</i>		
90 %		<i>0.1405</i>	<i>0.1403</i>	<i>0.1401</i>	<i>0.1399</i>	<i>0.0576</i>	<i>0.0291</i>		
None	R1 Stream	<i>0.8361</i>	<i>0.8361</i>	<i>0.8361</i>	<i>0.8361</i>	<i>0.3762</i>	<i>0.1963</i>		
50 %		<i>0.8361</i>	<i>0.8361</i>	<i>0.8361</i>	<i>0.8361</i>	<i>0.3762</i>	<i>0.1963</i>		
75 %		<i>0.8361</i>	<i>0.8361</i>	<i>0.8361</i>	<i>0.8361</i>	<i>0.3762</i>	<i>0.1963</i>		
90 %		<i>0.8361</i>	<i>0.8361</i>	<i>0.8361</i>	<i>0.8361</i>	<i>0.3762</i>	<i>0.1963</i>		
None	R3 Stream	<i>0.9793</i>	<i>0.9793</i>	<i>0.9793</i>	<i>0.9793</i>	<i>0.4441</i>	<i>0.2324</i>		
50 %		<i>0.9793</i>	<i>0.9793</i>	<i>0.9793</i>	<i>0.9793</i>	<i>0.4441</i>	<i>0.2324</i>		
75 %		<i>0.9793</i>	<i>0.9793</i>	<i>0.9793</i>	<i>0.9793</i>	<i>0.4441</i>	<i>0.2324</i>		
90 %		<i>0.9793</i>	<i>0.9793</i>	<i>0.9793</i>	<i>0.9793</i>	<i>0.4441</i>	<i>0.2324</i>		

* Maximum values coming from multiple applications are marked in italics

Table 8.9-71: Global maximum PEC_{sw} values for flupyradifurone, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (spring) (BBCH 65-79) according to the Central EU zone GAP according to surface water Step 4 (simulated use PMT01)

PEC _{sw} (µg/L)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D1 Ditch	<i>2.1510</i>	<i>2.1500</i>	<i>2.1500</i>	<i>2.1500</i>	<i>2.1500</i>	<i>2.1500</i>		
50 %		<i>2.1510</i>	<i>2.1500</i>	<i>2.1500</i>	<i>2.1500</i>	<i>2.1500</i>	<i>2.1500</i>		
75 %		<i>2.1500</i>	<i>2.1500</i>	<i>2.1500</i>	<i>2.1500</i>	<i>2.1500</i>	<i>2.1500</i>		
90 %		<i>2.1500</i>	<i>2.1500</i>	<i>2.1500</i>	<i>2.1500</i>	<i>2.1500</i>	<i>2.1500</i>		
None	D1 Stream	<i>1.4590</i>	<i>1.4590</i>	<i>1.4590</i>	<i>1.4590</i>	<i>1.4590</i>	<i>1.4590</i>		
50 %		<i>1.4590</i>	<i>1.4590</i>	<i>1.4590</i>	<i>1.4590</i>	<i>1.4590</i>	<i>1.4590</i>		
75 %		<i>1.4590</i>	<i>1.4590</i>	<i>1.4590</i>	<i>1.4590</i>	<i>1.4590</i>	<i>1.4590</i>		
90 %		<i>1.4590</i>	<i>1.4590</i>	<i>1.4590</i>	<i>1.4590</i>	<i>1.4590</i>	<i>1.4590</i>		
None	D3 Ditch	0.2388	0.0649	0.0345	0.0180	0.0345	0.0180		
50 %		0.1195	0.0325	0.0174	0.0091	0.0174	0.0091		
75 %		0.0599	0.0164	0.0089	0.0054	0.0089	0.0054		
90 %		0.0241	0.0073	0.0052	0.0052	0.0052	0.0052		
None	D4 Pond	<i>0.3273</i>	<i>0.3268</i>	<i>0.3261</i>	<i>0.3254</i>	<i>0.3261</i>	<i>0.3254</i>		
50 %		<i>0.3257</i>	<i>0.3255</i>	<i>0.3251</i>	<i>0.3248</i>	<i>0.3251</i>	<i>0.3248</i>		
75 %		<i>0.3250</i>	<i>0.3249</i>	<i>0.3247</i>	<i>0.3245</i>	<i>0.3247</i>	<i>0.3245</i>		

PEC _{sw} (µg/L)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
90 %		0.3245	0.3245	0.3244	0.3243	0.3244	0.3243		
None	D4 Stream	0.3368	0.3368	0.3368	0.3368	0.3368	0.3368		
50 %		0.3368	0.3368	0.3368	0.3368	0.3368	0.3368		
75 %		0.3368	0.3368	0.3368	0.3368	0.3368	0.3368		
90 %		0.3368	0.3368	0.3368	0.3368	0.3368	0.3368		
None	D5 Pond	0.2077	0.2074	0.2068	0.2063	0.2068	0.2063		
50 %		0.2065	0.2064	0.2061	0.2058	0.2061	0.2058		
75 %		0.2059	0.2058	0.2057	0.2056	0.2057	0.2056		
90 %		0.2056	0.2055	0.2055	0.2054	0.2055	0.2054		
None	D5 Stream	0.2217	0.1410	0.1410	0.1410	0.1410	0.1410		
50 %		0.1410	0.1410	0.1410	0.1410	0.1410	0.1410		
75 %		0.1410	0.1410	0.1410	0.1410	0.1410	0.1410		
90 %		0.1410	0.1410	0.1410	0.1410	0.1410	0.1410		
None	R1 Pond	0.1296	0.1281	0.1253	0.1230	0.0549	0.0286		
50 %		0.1240	0.1233	0.1219	0.1207	0.0514	0.0264		
75 %		0.1213	0.1209	0.1202	0.1196	0.0497	0.0252		
90 %		0.1196	0.1194	0.1192	0.1189	0.0487	0.0245		
None	R1 Stream	1.0410	1.0410	1.0410	1.0410	0.4731	0.2477		
50 %		1.0410	1.0410	1.0410	1.0410	0.4731	0.2477		
75 %		1.0410	1.0410	1.0410	1.0410	0.4731	0.2477		
90 %		1.0410	1.0410	1.0410	1.0410	0.4731	0.2477		

* Maximum values coming from multiple applications are marked in italics

Table 8.9-72: Global maximum PEC_{sed} values for flupyradifurone, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (winter) (BBCH 65-79) according to the Central EU zone GAP according to sediment Step 4 (simulated use PMT00)

PEC _{sed} (µg/kg)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D2 Ditch	5.4170	5.2640	5.2380	5.2240	5.2380	5.2240		
50 %		5.3140	5.2370	5.2240	5.2170	5.2240	5.2170		
75 %		5.2620	5.2230	5.2170	5.2130	5.2170	5.2130		
90 %		5.2300	5.2150	5.2120	5.2110	5.2120	5.2110		
None	D2 Stream	3.1150	3.0350	3.0130	3.0020	3.0130	3.0020		
50 %		3.0530	3.0130	3.0020	2.9960	3.0020	2.9960		
75 %		3.0220	3.0020	2.9960	2.9930	2.9960	2.9930		
90 %		3.0030	2.9950	2.9930	2.9920	2.9930	2.9920		
None	D3 Ditch	0.1248	0.0405	0.0266	0.0257	0.0266	0.0257		
50 %		0.0686	0.0265	0.0257	0.0253	0.0257	0.0253		

PEC _{sed} (µg/kg)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
75 %		0.0393	0.0257	0.0253	0.0251	0.0253	0.0251		
90 %		0.0261	0.0252	0.0250	0.0249	0.0250	0.0249		
None	D4 Pond	0.9382	0.9347	0.9281	0.9226	0.9281	0.9226		
50 %		0.9252	0.9234	0.9201	0.9174	0.9201	0.9174		
75 %		0.9187	0.9178	0.9161	0.9147	0.9161	0.9147		
90 %		0.9147	0.9144	0.9137	0.9131	0.9137	0.9131		
None	D4 Stream	0.3115	0.3103	0.3099	0.3098	0.3099	0.3098		
50 %		0.3105	0.3099	0.3098	0.3097	0.3098	0.3097		
75 %		0.3101	0.3098	0.3097	0.3096	0.3097	0.3096		
90 %		0.3098	0.3097	0.3096	0.3096	0.3096	0.3096		
None	D5 Pond	1.4770	1.4730	1.4670	1.4610	1.4670	1.4610		
50 %		1.4640	1.4620	1.4590	1.4560	1.4590	1.4560		
75 %		1.4570	1.4560	1.4550	1.4530	1.4550	1.4530		
90 %		1.4530	1.4530	1.4520	1.4520	1.4520	1.4520		
None	D5 Stream	0.4981	0.4981	0.4981	0.4981	0.4981	0.4981		
50 %		0.4981	0.4981	0.4981	0.4981	0.4981	0.4981		
75 %		0.4981	0.4981	0.4981	0.4981	0.4981	0.4981		
90 %		0.4981	0.4981	0.4981	0.4981	0.4981	0.4981		
None	R1 Pond	0.4049	0.4013	0.3945	0.3889	0.1815	0.0984		
50 %		0.3915	0.3897	0.3863	0.3835	0.1726	0.0922		
75 %		0.3848	0.3839	0.3822	0.3808	0.1682	0.0891		
90 %		0.3808	0.3804	0.3798	0.3792	0.1655	0.0873		
None	R1 Stream	0.2452	0.2424	0.2419	0.2416	0.1040	0.0550		
50 %		0.2429	0.2418	0.2416	0.2414	0.1036	0.0548		
75 %		0.2421	0.2416	0.2414	0.2414	0.1033	0.0547		
90 %		0.2416	0.2414	0.2413	0.2413	0.1032	0.0546		
None	R3 Stream	0.2292	0.2250	0.2238	0.2231	0.1048	0.0565		
50 %		0.2259	0.2237	0.2231	0.2227	0.1041	0.0561		
75 %		0.2242	0.2230	0.2227	0.2225	0.1037	0.0559		
90 %		0.2231	0.2226	0.2225	0.2224	0.1035	0.0558		

* Maximum values coming from multiple applications are marked in italics

Table 8.9-73: Global maximum PEC_{sed} values for flupyradifurone, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (spring) (BBCH 65-79) according to the Central EU zone GAP according to sediment Step 4 (simulated use PMT01)

PEC _{sed} (µg/kg)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D1 Ditch	4.6430	4.4160	4.3770	4.3560	4.3770	4.3560		

PEC _{sed} (µg/kg)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10m low	20m high		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
50 %		4.4900	4.3750	4.3560	4.3450	4.3560	4.3450		
75 %		4.4120	4.3550	4.3450	4.3400	4.3450	4.3400		
90 %		4.3660	4.3430	4.3390	4.3370	4.3390	4.3370		
None	D1 Stream	2.5230	2.5190	2.5170	2.5170	2.5170	2.5170		
50 %		2.5190	2.5170	2.5170	2.5170	2.5170	2.5170		
75 %		2.5180	2.5170	2.5170	2.5160	2.5170	2.5160		
90 %		2.5170	2.5170	2.5160	2.5160	2.5160	2.5160		
None	D3 Ditch	0.1197	0.0443	0.0411	0.0403	0.0411	0.0403		
50 %		0.0694	0.0410	0.0403	0.0399	0.0403	0.0399		
75 %		0.0433	0.0403	0.0399	0.0397	0.0399	0.0397		
90 %		0.0407	0.0398	0.0397	0.0396	0.0397	0.0396		
None	D4 Pond	1.1760	1.1720	1.1660	1.1610	1.1660	1.1610		
50 %		1.1640	1.1620	1.1590	1.1560	1.1590	1.1560		
75 %		1.1570	1.1570	1.1550	1.1540	1.1550	1.1540		
90 %		1.1540	1.1530	1.1530	1.1520	1.1530	1.1520		
None	D4 Stream	0.3963	0.3952	0.3949	0.3947	0.3949	0.3947		
50 %		0.3954	0.3949	0.3947	0.3946	0.3947	0.3946		
75 %		0.3950	0.3947	0.3946	0.3946	0.3946	0.3946		
90 %		0.3947	0.3946	0.3946	0.3946	0.3946	0.3946		
None	D5 Pond	1.2520	1.2480	1.2410	1.2360	1.2410	1.2360		
50 %		1.2380	1.2360	1.2330	1.2300	1.2330	1.2300		
75 %		1.2310	1.2310	1.2290	1.2270	1.2290	1.2270		
90 %		1.2270	1.2270	1.2260	1.2260	1.2260	1.2260		
None	D5 Stream	0.3825	0.3825	0.3825	0.3825	0.3825	0.3825		
50 %		0.3825	0.3825	0.3825	0.3825	0.3825	0.3825		
75 %		0.3825	0.3825	0.3825	0.3825	0.3825	0.3825		
90 %		0.3825	0.3825	0.3825	0.3825	0.3825	0.3825		
None	R1 Pond	0.3340	0.3302	0.3230	0.3170	0.1494	0.0813		
50 %		0.3198	0.3179	0.3143	0.3113	0.1401	0.0749		
75 %		0.3127	0.3117	0.3099	0.3084	0.1354	0.0717		
90 %		0.3084	0.3080	0.3073	0.3067	0.1326	0.0697		
None	R1 Stream	0.3448	0.3424	0.3418	0.3414	0.1491	0.0795		
50 %		0.3430	0.3418	0.3414	0.3413	0.1488	0.0793		
75 %		0.3420	0.3414	0.3413	0.3412	0.1486	0.0792		
90 %		0.3415	0.3412	0.3412	0.3411	0.1485	0.0791		

* Maximum values coming from multiple applications are marked in italics

FOCUS Step (plant uptake factor for the parent flupyradifurone was set to 0)

Table 8.9-73A: Global maximum PEC_{sw} values for flupyradifurone, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (winter) (BBCH 30-49) according to the Central EU zone GAP according to surface water Step 4 (simulated use PMT01)

PEC _{sw} (µg/L)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10 m	20 m		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D2 Ditch	10.7400	10.7400	10.7400	10.7400	10.7400	10.7400		
50 %		10.7400	10.7400	10.7400	10.7400	10.7400	10.7400		
75 %		10.7400	10.7400	10.7400	10.7400	10.7400	10.7400		
90 %		10.7400	10.7400	10.7400	10.7400	10.7400	10.7400		
None	D2 Stream	6.8010	6.8010	6.8010	6.8010	6.8010	6.8010		
50 %		6.8010	6.8010	6.8010	6.8010	6.8010	6.8010		
75 %		6.8010	6.8010	6.8010	6.8010	6.8010	6.8010		
90 %		6.8010	6.8010	6.8010	6.8010	6.8010	6.8010		
None	D3 Ditch	0.3592	0.1001	0.0584	0.0378	0.0584	0.0378		
50 %		0.1814	0.0568	0.0375	0.0329	0.0375	0.0329		
75 %		0.0941	0.0366	0.0329	0.0329	0.0329	0.0329		
90 %		0.0475	0.0329	0.0329	0.0329	0.0329	0.0329		
None	D4 Pond	0.5931	0.5927	0.5922	0.5917	0.5922	0.5917		
50 %		0.5919	0.5918	0.5915	0.5912	0.5915	0.5912		
75 %		0.5914	0.5913	0.5911	0.5910	0.5911	0.5910		
90 %		0.5910	0.5910	0.5909	0.5909	0.5909	0.5909		
None	D4 Stream	0.5404	0.5404	0.5404	0.5404	0.5404	0.5404		
50 %		0.5404	0.5404	0.5404	0.5404	0.5404	0.5404		
75 %		0.5404	0.5404	0.5404	0.5404	0.5404	0.5404		
90 %		0.5404	0.5404	0.5404	0.5404	0.5404	0.5404		
None	D5 Pond	0.3373	0.3370	0.3365	0.3360	0.3365	0.3360		
50 %		0.3362	0.3361	0.3358	0.3356	0.3358	0.3356		
75 %		0.3357	0.3356	0.3355	0.3354	0.3355	0.3354		
90 %		0.3354	0.3354	0.3353	0.3353	0.3353	0.3353		
None	D5 Stream	0.3440	0.2343	0.2343	0.2343	0.2343	0.2343		
50 %		0.2343	0.2343	0.2343	0.2343	0.2343	0.2343		
75 %		0.2343	0.2343	0.2343	0.2343	0.2343	0.2343		
90 %		0.2343	0.2343	0.2343	0.2343	0.2343	0.2343		
None	R1 Pond	0.0991	0.0970	0.0934	0.0902	0.0432	0.0229		
50 %		0.0918	0.0907	0.0889	0.0873	0.0386	0.0200		
75 %		0.0881	0.0876	0.0867	0.0859	0.0364	0.0185		
90 %		0.0859	0.0857	0.0854	0.0850	0.0350	0.0177		
None	R1 Stream	1.4560	1.4560	1.4560	1.4560	0.6604	0.3459		
50 %		1.4560	1.4560	1.4560	1.4560	0.6604	0.3459		
75 %		1.4560	1.4560	1.4560	1.4560	0.6604	0.3459		
90 %		1.4560	1.4560	1.4560	1.4560	0.6604	0.3459		
None	R3 Stream	1.1030	1.1030	1.1030	1.1030	0.4968	0.2597		
50 %		1.1030	1.1030	1.1030	1.1030	0.4968	0.2597		

PEC _{sw} (µg/L)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10 m	20 m		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
75 %		1.1030	1.1030	1.1030	1.1030	0.4968	0.2597		
90 %		1.1030	1.1030	1.1030	1.1030	0.4968	0.2597		

* Maximum values coming from multiple applications are marked in italics

Table 8.9-73B: Global maximum PEC_{sw} values for flupyradifurone, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (spring) (BBCH 30-49) according to the Central EU zone GAP according to surface water Step 4 (simulated use PMT02)

PEC _{sw} (µg/L)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10 m	20 m		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D1 Ditch	<i>1.9900</i>	<i>1.9900</i>	<i>1.9890</i>	<i>1.9890</i>	<i>1.9890</i>	<i>1.9890</i>		
50 %		<i>1.9900</i>	<i>1.9890</i>	<i>1.9890</i>	<i>1.9890</i>	<i>1.9890</i>	<i>1.9890</i>		
75 %		<i>1.9900</i>	<i>1.9890</i>	<i>1.9890</i>	<i>1.9890</i>	<i>1.9890</i>	<i>1.9890</i>		
90 %		<i>1.9890</i>	<i>1.9890</i>	<i>1.9890</i>	<i>1.9890</i>	<i>1.9890</i>	<i>1.9890</i>		
None	D1 Stream	<i>1.3260</i>	<i>1.3260</i>	<i>1.3260</i>	<i>1.3260</i>	<i>1.3260</i>	<i>1.3260</i>		
50 %		<i>1.3260</i>	<i>1.3260</i>	<i>1.3260</i>	<i>1.3260</i>	<i>1.3260</i>	<i>1.3260</i>		
75 %		<i>1.3260</i>	<i>1.3260</i>	<i>1.3260</i>	<i>1.3260</i>	<i>1.3260</i>	<i>1.3260</i>		
90 %		<i>1.3260</i>	<i>1.3260</i>	<i>1.3260</i>	<i>1.3260</i>	<i>1.3260</i>	<i>1.3260</i>		
None	D3 Ditch	0.3587	0.0986	0.0531	0.0288	0.0531	0.0288		
50 %		0.1802	0.0502	0.0285	0.0181	0.0285	0.0181		
75 %		0.0910	0.0277	0.0180	0.0179	0.0180	0.0179		
90 %		0.0386	0.0179	0.0179	0.0179	0.0179	0.0179		
None	D4 Pond	0.4971	0.4966	0.4955	0.4947	0.4955	0.4947		
50 %		0.4951	0.4948	0.4943	0.4939	0.4943	0.4939		
75 %		0.4941	0.4940	0.4937	0.4935	0.4937	0.4935		
90 %		0.4935	0.4935	0.4933	0.4933	0.4933	0.4933		
None	D4 Stream	0.4837	0.4837	0.4837	0.4837	0.4837	0.4837		
50 %		0.4837	0.4837	0.4837	0.4837	0.4837	0.4837		
75 %		0.4837	0.4837	0.4837	0.4837	0.4837	0.4837		
90 %		0.4837	0.4837	0.4837	0.4837	0.4837	0.4837		
None	D5 Pond	0.3521	0.3518	0.3510	0.3505	0.3510	0.3505		
50 %		0.3508	0.3506	0.3502	0.3499	0.3502	0.3499		
75 %		0.3501	0.3500	0.3498	0.3497	0.3498	0.3497		
90 %		0.3497	0.3496	0.3496	0.3495	0.3496	0.3495		
None	D5 Stream	0.3408	0.2776	0.2776	0.2776	0.2776	0.2776		
50 %		0.2776	0.2776	0.2776	0.2776	0.2776	0.2776		
75 %		0.2776	0.2776	0.2776	0.2776	0.2776	0.2776		
90 %		0.2776	0.2776	0.2776	0.2776	0.2776	0.2776		
None	R1 Pond	0.1284	0.1264	0.1230	0.1200	0.0549	0.0288		
50 %		0.1214	0.1204	0.1187	0.1172	0.0506	0.0260		

PEC _{sw} (µg/L)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10 m	20 m		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
75 %	R1 Stream	<i>0.1179</i>	<i>0.1174</i>	<i>0.1166</i>	<i>0.1158</i>	<i>0.0484</i>	<i>0.0246</i>		
90 %		<i>0.1158</i>	<i>0.1156</i>	<i>0.1153</i>	<i>0.1150</i>	<i>0.0471</i>	<i>0.0237</i>		
None		1.0380	1.0380	1.0380	1.0380	0.4712	0.2468		
50 %		1.0380	1.0380	1.0380	1.0380	0.4712	0.2468		
75 %		1.0380	1.0380	1.0380	1.0380	0.4712	0.2468		
90 %		1.0380	1.0380	1.0380	1.0380	0.4712	0.2468		

* Maximum values coming from multiple applications are marked in italics

Table 8.9-73C: Global maximum PEC_{sed} values for flupyradifurone, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (winter) (BBCH 30-49) according to the Central EU zone GAP according to sediment Step 4 (simulated use PMT01)

PEC _{sed} (µg/kg)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10 m	20 m		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D2 Ditch	<i>11.5600</i>	<i>11.5300</i>	<i>11.5200</i>	<i>11.5200</i>	<i>11.5200</i>	<i>11.5200</i>		
50 %		<i>11.5400</i>	<i>11.5200</i>	<i>11.5200</i>	<i>11.5200</i>	<i>11.5200</i>	<i>11.5200</i>		
75 %		<i>11.5300</i>	<i>11.5200</i>	<i>11.5200</i>	<i>11.5200</i>	<i>11.5200</i>	<i>11.5200</i>		
90 %		<i>11.5200</i>	<i>11.5200</i>	<i>11.5200</i>	<i>11.5200</i>	<i>11.5200</i>	<i>11.5200</i>		
None	D2 Stream	<i>6.5620</i>	<i>6.5490</i>	<i>6.5460</i>	<i>6.5440</i>	<i>6.5460</i>	<i>6.5440</i>		
50 %		<i>6.5520</i>	<i>6.5450</i>	<i>6.5440</i>	<i>6.5430</i>	<i>6.5440</i>	<i>6.5430</i>		
75 %		<i>6.5470</i>	<i>6.5440</i>	<i>6.5430</i>	<i>6.5420</i>	<i>6.5430</i>	<i>6.5420</i>		
90 %		<i>6.5440</i>	<i>6.5430</i>	<i>6.5420</i>	<i>6.5420</i>	<i>6.5420</i>	<i>6.5420</i>		
None	D3 Ditch	<i>0.2328</i>	<i>0.2292</i>	<i>0.2286</i>	<i>0.2283</i>	<i>0.2286</i>	<i>0.2283</i>		
50 %		<i>0.2304</i>	<i>0.2286</i>	<i>0.2283</i>	<i>0.2282</i>	<i>0.2283</i>	<i>0.2282</i>		
75 %		<i>0.2292</i>	<i>0.2283</i>	<i>0.2282</i>	<i>0.2281</i>	<i>0.2282</i>	<i>0.2281</i>		
90 %		<i>0.2285</i>	<i>0.2281</i>	<i>0.2281</i>	<i>0.2280</i>	<i>0.2281</i>	<i>0.2280</i>		
None	D4 Pond	<i>2.1370</i>	<i>2.1330</i>	<i>2.1260</i>	<i>2.1190</i>	<i>2.1260</i>	<i>2.1190</i>		
50 %		<i>2.1230</i>	<i>2.1210</i>	<i>2.1170</i>	<i>2.1140</i>	<i>2.1170</i>	<i>2.1140</i>		
75 %		<i>2.1150</i>	<i>2.1140</i>	<i>2.1120</i>	<i>2.1110</i>	<i>2.1120</i>	<i>2.1110</i>		
90 %		<i>2.1110</i>	<i>2.1100</i>	<i>2.1100</i>	<i>2.1090</i>	<i>2.1100</i>	<i>2.1090</i>		
None	D4 Stream	<i>0.7050</i>	<i>0.7048</i>	<i>0.7048</i>	<i>0.7048</i>	<i>0.7048</i>	<i>0.7048</i>		
50 %		<i>0.7049</i>	<i>0.7048</i>	<i>0.7048</i>	<i>0.7047</i>	<i>0.7048</i>	<i>0.7047</i>		
75 %		<i>0.7048</i>	<i>0.7048</i>	<i>0.7047</i>	<i>0.7047</i>	<i>0.7047</i>	<i>0.7047</i>		
90 %		<i>0.7048</i>	<i>0.7047</i>	<i>0.7047</i>	<i>0.7047</i>	<i>0.7047</i>	<i>0.7047</i>		
None	D5 Pond	<i>1.7270</i>	<i>1.7220</i>	<i>1.7130</i>	<i>1.7050</i>	<i>1.7130</i>	<i>1.7050</i>		
50 %		<i>1.7090</i>	<i>1.7070</i>	<i>1.7020</i>	<i>1.6980</i>	<i>1.7020</i>	<i>1.6980</i>		
75 %		<i>1.7000</i>	<i>1.6990</i>	<i>1.6970</i>	<i>1.6950</i>	<i>1.6970</i>	<i>1.6950</i>		
90 %		<i>1.6950</i>	<i>1.6940</i>	<i>1.6940</i>	<i>1.6930</i>	<i>1.6940</i>	<i>1.6930</i>		
None	D5 Stream	<i>0.4224</i>	<i>0.4204</i>	<i>0.4202</i>	<i>0.4201</i>	<i>0.4202</i>	<i>0.4201</i>		
50 %		<i>0.4206</i>	<i>0.4202</i>	<i>0.4201</i>	<i>0.4201</i>	<i>0.4201</i>	<i>0.4201</i>		

PEC _{sed} (µg/kg)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10 m	20 m		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
75 %	R1 Pond	<i>0.4203</i>	<i>0.4201</i>	<i>0.4201</i>	<i>0.4200</i>	<i>0.4201</i>	<i>0.4200</i>		
90 %		<i>0.4201</i>	<i>0.4200</i>	<i>0.4200</i>	<i>0.4200</i>	<i>0.4200</i>	<i>0.4200</i>		
None		<i>0.2718</i>	<i>0.2658</i>	<i>0.2552</i>	<i>0.2458</i>	<i>0.1270</i>	<i>0.0709</i>		
50 %		<i>0.2503</i>	<i>0.2473</i>	<i>0.2419</i>	<i>0.2372</i>	<i>0.1129</i>	<i>0.0614</i>		
75 %	R1 Stream	<i>0.2395</i>	<i>0.2380</i>	<i>0.2353</i>	<i>0.2329</i>	<i>0.1057</i>	<i>0.0565</i>		
90 %		<i>0.2330</i>	<i>0.2324</i>	<i>0.2313</i>	<i>0.2304</i>	<i>0.1014</i>	<i>0.0536</i>		
None		<i>0.3991</i>	<i>0.3966</i>	<i>0.3959</i>	<i>0.3955</i>	<i>0.1813</i>	<i>0.0974</i>		
50 %		<i>0.3972</i>	<i>0.3959</i>	<i>0.3955</i>	<i>0.3954</i>	<i>0.1809</i>	<i>0.0972</i>		
75 %	R3 Stream	<i>0.3962</i>	<i>0.3955</i>	<i>0.3954</i>	<i>0.3953</i>	<i>0.1807</i>	<i>0.0971</i>		
90 %		<i>0.3956</i>	<i>0.3953</i>	<i>0.3952</i>	<i>0.3952</i>	<i>0.1806</i>	<i>0.0970</i>		
None		<i>0.3115</i>	<i>0.3073</i>	<i>0.3062</i>	<i>0.3056</i>	<i>0.1431</i>	<i>0.0774</i>		
50 %		<i>0.3083</i>	<i>0.3061</i>	<i>0.3055</i>	<i>0.3052</i>	<i>0.1424</i>	<i>0.0770</i>		
75 %	R3 Stream	<i>0.3066</i>	<i>0.3055</i>	<i>0.3052</i>	<i>0.3051</i>	<i>0.1421</i>	<i>0.0769</i>		
90 %		<i>0.3056</i>	<i>0.3052</i>	<i>0.3051</i>	<i>0.3050</i>	<i>0.1419</i>	<i>0.0768</i>		

* Maximum values coming from multiple applications are marked in italics

Table 8.9-73D: Global maximum PEC_{sed} values for flupyradifurone, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (spring) (BBCH 30-49) according to the Central EU zone GAP according to sediment Step 4 (simulated use PMT02)

PEC _{sed} (µg/kg)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10 m	20 m		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D1 Ditch	<i>5.2000</i>	<i>4.9300</i>	<i>4.8850</i>	<i>4.8600</i>	<i>4.8850</i>	<i>4.8600</i>		
50 %		<i>5.0180</i>	<i>4.8830</i>	<i>4.8600</i>	<i>4.8470</i>	<i>4.8600</i>	<i>4.8470</i>		
75 %		<i>4.9270</i>	<i>4.8590</i>	<i>4.8470</i>	<i>4.8410</i>	<i>4.8470</i>	<i>4.8410</i>		
90 %		<i>4.8720</i>	<i>4.8440</i>	<i>4.8400</i>	<i>4.8370</i>	<i>4.8400</i>	<i>4.8370</i>		
None	D1 Stream	<i>2.8450</i>	<i>2.8410</i>	<i>2.8400</i>	<i>2.8390</i>	<i>2.8400</i>	<i>2.8390</i>		
50 %		<i>2.8420</i>	<i>2.8400</i>	<i>2.8390</i>	<i>2.8390</i>	<i>2.8390</i>	<i>2.8390</i>		
75 %		<i>2.8400</i>	<i>2.8390</i>	<i>2.8390</i>	<i>2.8390</i>	<i>2.8390</i>	<i>2.8390</i>		
90 %		<i>2.8390</i>	<i>2.8390</i>	<i>2.8390</i>	<i>2.8390</i>	<i>2.8390</i>	<i>2.8390</i>		
None	D3 Ditch	<i>0.1751</i>	<i>0.1287</i>	<i>0.1274</i>	<i>0.1267</i>	<i>0.1274</i>	<i>0.1267</i>		
50 %		<i>0.1311</i>	<i>0.1274</i>	<i>0.1267</i>	<i>0.1264</i>	<i>0.1267</i>	<i>0.1264</i>		
75 %		<i>0.1286</i>	<i>0.1267</i>	<i>0.1264</i>	<i>0.1262</i>	<i>0.1264</i>	<i>0.1262</i>		
90 %		<i>0.1271</i>	<i>0.1263</i>	<i>0.1262</i>	<i>0.1261</i>	<i>0.1262</i>	<i>0.1261</i>		
None	D4 Pond	<i>1.8070</i>	<i>1.8030</i>	<i>1.7940</i>	<i>1.7860</i>	<i>1.7940</i>	<i>1.7860</i>		
50 %		<i>1.7900</i>	<i>1.7880</i>	<i>1.7830</i>	<i>1.7790</i>	<i>1.7830</i>	<i>1.7790</i>		
75 %		<i>1.7810</i>	<i>1.7800</i>	<i>1.7780</i>	<i>1.7760</i>	<i>1.7780</i>	<i>1.7760</i>		
90 %		<i>1.7760</i>	<i>1.775</i>	<i>1.7750</i>	<i>1.7740</i>	<i>1.7750</i>	<i>1.7740</i>		
None	D4 Stream	<i>0.6035</i>	<i>0.6025</i>	<i>0.6023</i>	<i>0.6021</i>	<i>0.6023</i>	<i>0.6021</i>		
50 %		<i>0.6028</i>	<i>0.6022</i>	<i>0.6021</i>	<i>0.6020</i>	<i>0.6021</i>	<i>0.6020</i>		

PEC _{sed} (µg/kg)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10 m	20 m		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
75 %	D5 Pond	<i>0.6024</i>	<i>0.6021</i>	<i>0.6020</i>	<i>0.6020</i>	<i>0.6020</i>	<i>0.6020</i>		
90 %		<i>0.6021</i>	<i>0.6020</i>	<i>0.6020</i>	<i>0.6020</i>	<i>0.6020</i>	<i>0.6020</i>		
None		<i>1.7520</i>	<i>1.7460</i>	<i>1.7370</i>	<i>1.7290</i>	<i>1.7370</i>	<i>1.7290</i>		
50 %		<i>1.7330</i>	<i>1.7300</i>	<i>1.7250</i>	<i>1.7210</i>	<i>1.7250</i>	<i>1.7210</i>		
75 %	D5 Stream	<i>1.7230</i>	<i>1.7220</i>	<i>1.7190</i>	<i>1.7170</i>	<i>1.7190</i>	<i>1.7170</i>		
90 %		<i>1.7170</i>	<i>1.7170</i>	<i>1.7160</i>	<i>1.7150</i>	<i>1.7160</i>	<i>1.7150</i>		
None		<i>0.4411</i>	<i>0.4408</i>	<i>0.4407</i>	<i>0.4407</i>	<i>0.4407</i>	<i>0.4407</i>		
50 %		<i>0.4409</i>	<i>0.4407</i>	<i>0.4407</i>	<i>0.4407</i>	<i>0.4407</i>	<i>0.4407</i>		
75 %	R1 Pond	<i>0.4407</i>	<i>0.4407</i>	<i>0.4407</i>	<i>0.4406</i>	<i>0.4407</i>	<i>0.4406</i>		
90 %		<i>0.4407</i>	<i>0.4406</i>	<i>0.4406</i>	<i>0.4406</i>	<i>0.4406</i>	<i>0.4406</i>		
None		<i>0.3451</i>	<i>0.3393</i>	<i>0.3288</i>	<i>0.3195</i>	<i>0.1574</i>	<i>0.0866</i>		
50 %		<i>0.3240</i>	<i>0.3210</i>	<i>0.3158</i>	<i>0.3111</i>	<i>0.1435</i>	<i>0.0773</i>		
75 %	R1 Stream	<i>0.3134</i>	<i>0.3119</i>	<i>0.3092</i>	<i>0.3069</i>	<i>0.1366</i>	<i>0.0726</i>		
90 %		<i>0.3069</i>	<i>0.3064</i>	<i>0.3053</i>	<i>0.3044</i>	<i>0.1324</i>	<i>0.0698</i>		
None		<i>0.3256</i>	<i>0.3237</i>	<i>0.3232</i>	<i>0.3229</i>	<i>0.1484</i>	<i>0.0801</i>		
50 %		<i>0.3241</i>	<i>0.3231</i>	<i>0.3229</i>	<i>0.3228</i>	<i>0.1481</i>	<i>0.0800</i>		
75 %	D2 Ditch	<i>0.3234</i>	<i>0.3229</i>	<i>0.3228</i>	<i>0.3227</i>	<i>0.1480</i>	<i>0.0799</i>		
90 %		<i>0.3229</i>	<i>0.3227</i>	<i>0.3227</i>	<i>0.3226</i>	<i>0.1479</i>	<i>0.0798</i>		

* Maximum values coming from multiple applications are marked in italics

Table 8.9-73E: Global maximum PEC_{sw} values for flupyradifurone, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (winter) (BBCH 50-59) according to the Central EU zone GAP according to surface water Step 4 (simulated use PMT01)

PEC _{sw} (µg/L)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10 m	20 m		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D2 Ditch	<i>5.0890</i>	<i>5.0690</i>	<i>5.0660</i>	<i>5.0640</i>	<i>5.0660</i>	<i>5.0640</i>		
50 %		<i>5.0750</i>	<i>5.0660</i>	<i>5.0640</i>	<i>5.0630</i>	<i>5.0640</i>	<i>5.0630</i>		
75 %		<i>5.0690</i>	<i>5.0640</i>	<i>5.0630</i>	<i>5.0620</i>	<i>5.0630</i>	<i>5.0620</i>		
90 %		<i>5.0650</i>	<i>5.0630</i>	<i>5.0620</i>	<i>5.0620</i>	<i>5.0620</i>	<i>5.0620</i>		
None	D2 Stream	<i>4.0200</i>	<i>4.0200</i>	<i>4.0200</i>	<i>4.0200</i>	<i>4.0200</i>	<i>4.0200</i>		
50 %		<i>4.0200</i>	<i>4.0200</i>	<i>4.0200</i>	<i>4.0200</i>	<i>4.0200</i>	<i>4.0200</i>		
75 %		<i>4.0200</i>	<i>4.0200</i>	<i>4.0200</i>	<i>4.0200</i>	<i>4.0200</i>	<i>4.0200</i>		
90 %		<i>4.0200</i>	<i>4.0200</i>	<i>4.0200</i>	<i>4.0200</i>	<i>4.0200</i>	<i>4.0200</i>		
None	D3 Ditch	<i>0.3580</i>	<i>0.0982</i>	<i>0.0528</i>	<i>0.0281</i>	<i>0.0528</i>	<i>0.0281</i>		
50 %		<i>0.1797</i>	<i>0.0498</i>	<i>0.0273</i>	<i>0.0182</i>	<i>0.0273</i>	<i>0.0182</i>		
75 %		<i>0.0906</i>	<i>0.0264</i>	<i>0.0182</i>	<i>0.0182</i>	<i>0.0182</i>	<i>0.0182</i>		
90 %		<i>0.0374</i>	<i>0.0182</i>	<i>0.0182</i>	<i>0.0182</i>	<i>0.0182</i>	<i>0.0182</i>		
None	D4 Pond	<i>0.4207</i>	<i>0.4203</i>	<i>0.4194</i>	<i>0.4186</i>	<i>0.4194</i>	<i>0.4186</i>		
50 %		<i>0.4190</i>	<i>0.4188</i>	<i>0.4183</i>	<i>0.4180</i>	<i>0.4183</i>	<i>0.4180</i>		

* Maximum values coming from multiple applications are marked in italics

[illegible]

PEC _{sw} (µg/L)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10 m	20 m		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
75 %	D3 Ditch	<i>1.7080</i>	<i>1.7080</i>	<i>1.7080</i>	<i>1.7080</i>	<i>1.7080</i>	<i>1.7080</i>		
90 %		<i>1.7080</i>	<i>1.7080</i>	<i>1.7080</i>	<i>1.7080</i>	<i>1.7080</i>	<i>1.7080</i>		
None		0.3581	0.0978	0.0524	0.0282	0.0524	0.0282		
50 %		0.1795	0.0494	0.0279	0.0175	0.0279	0.0175		
75 %	D4 Pond	0.0903	0.0271	0.0173	0.0170	0.0173	0.0170		
90 %		0.0380	0.0170	0.0170	0.0170	0.0170	0.0170		
None		0.4927	0.4920	0.4908	0.4899	0.4908	0.4899		
50 %		0.4904	0.4900	0.4894	0.4890	0.4894	0.4890		
75 %	D4 Stream	0.4892	0.4890	0.4887	0.4885	0.4887	0.4885		
90 %		0.4885	0.4884	0.4883	0.4882	0.4883	0.4882		
None		0.5035	0.5035	0.5035	0.5035	0.5035	0.5035		
50 %		0.5035	0.5035	0.5035	0.5035	0.5035	0.5035		
75 %	D5 Pond	0.5035	0.5035	0.5035	0.5035	0.5035	0.5035		
90 %		0.5035	0.5035	0.5035	0.5035	0.5035	0.5035		
None		0.3548	0.3544	0.3537	0.3530	0.3537	0.3530		
50 %		0.3534	0.3531	0.3528	0.3525	0.3528	0.3525		
75 %	D5 Stream	0.3526	0.3525	0.3523	0.3522	0.3523	0.3522		
90 %		0.3522	0.3521	0.3520	0.3520	0.3520	0.3520		
None		0.3827	0.2369	0.2369	0.2369	0.2369	0.2369		
50 %		0.2480	0.2369	0.2369	0.2369	0.2369	0.2369		
75 %	R1 Pond	0.2369	0.2369	0.2369	0.2369	0.2369	0.2369		
90 %		0.2369	0.2369	0.2369	0.2369	0.2369	0.2369		
None		0.1032	0.1018	0.0992	0.0969	0.0440	0.0231		
50 %		0.0979	0.0972	0.0959	0.0947	0.0406	0.0209		
75 %	R1 Stream	0.0952	0.0948	0.0942	0.0936	0.0389	0.0198		
90 %		0.0936	0.0935	0.0932	0.0930	0.0379	0.0191		
None		1.1070	1.1070	1.1070	1.1070	0.4873	0.2553		
50 %		1.1070	1.1070	1.1070	1.1070	0.4873	0.2553		
75 %		1.1070	1.1070	1.1070	1.1070	0.4873	0.2553		
90 %		1.1070	1.1070	1.1070	1.1070	0.4873	0.2553		

* Maximum values coming from multiple applications are marked in italics

Table 8.9-73G: Global maximum PEC_{sed} values for flupyradifurone, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (winter) (BBCH 50-59) according to the Central EU zone GAP according to sediment Step 4 (simulated use PMT01)

PEC _{sed} (µg/kg)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10 m	20 m		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D2 Ditch	7.6990	7.4550	7.4140	7.3920	7.4140	7.3920		
50 %		7.5340	7.4130	7.3920	7.3810	7.3920	7.3810		

PECsed (µg/kg)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10 m	20 m		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
75 %	D2 Stream	7.4520	7.3910	7.3810	7.3750	7.3810	7.3750		
90 %		7.4030	7.3780	7.3740	7.3720	7.3740	7.3720		
None		4.7170	4.6930	4.6860	4.6830	4.6860	4.6830		
50 %		4.6980	4.6860	4.6830	4.6810	4.6830	4.6810		
75 %		4.6890	4.6830	4.6810	4.6800	4.6810	4.6800		
90 %		4.6830	4.6810	4.6800	4.6800	4.6800	4.6800		
None	D3 Ditch	0.1485	0.1199	0.1190	0.1186	0.1190	0.1186		
50 %		0.1216	0.1190	0.1185	0.1183	0.1185	0.1183		
75 %		0.1198	0.1185	0.1183	0.1182	0.1183	0.1182		
90 %		0.1188	0.1183	0.1182	0.1181	0.1182	0.1181		
None	D4 Pond	1.5670	1.5620	1.5530	1.5460	1.5530	1.5460		
50 %		1.5500	1.5470	1.5430	1.5390	1.5430	1.5390		
75 %		1.5410	1.5400	1.5370	1.5350	1.5370	1.5350		
90 %		1.5350	1.5350	1.5340	1.5330	1.5340	1.5330		
None	D4 Stream	0.5039	0.5034	0.5033	0.5032	0.5033	0.5032		
50 %		0.5035	0.5033	0.5032	0.5032	0.5032	0.5032		
75 %		0.5033	0.5032	0.5032	0.5032	0.5032	0.5032		
90 %		0.5032	0.5032	0.5032	0.5032	0.5032	0.5032		
None	D5 Pond	1.6090	1.6040	1.5940	1.5860	1.5940	1.5860		
50 %		1.5900	1.5880	1.5830	1.5790	1.5830	1.5790		
75 %		1.5810	1.5800	1.5770	1.5750	1.5770	1.5750		
90 %		1.5750	1.5750	1.5740	1.5730	1.5740	1.5730		
None	D5 Stream	0.4042	0.3919	0.3911	0.3910	0.3911	0.3910		
50 %		0.3947	0.3911	0.3910	0.3910	0.3910	0.3910		
75 %		0.3911	0.3910	0.3910	0.3909	0.3910	0.3909		
90 %		0.3910	0.3909	0.3909	0.3909	0.3909	0.3909		
None	R1 Pond	0.4824	0.4767	0.4666	0.4577	0.2163	0.1174		
50 %		0.4620	0.4591	0.4541	0.4496	0.2029	0.1083		
75 %		0.4518	0.4503	0.4478	0.4456	0.1961	0.1038		
90 %		0.4456	0.4450	0.4440	0.4431	0.1921	0.1010		
None	R1 Stream	0.4808	0.4781	0.4773	0.4769	0.1950	0.1029		
50 %		0.4787	0.4773	0.4769	0.4767	0.1946	0.1027		
75 %		0.4776	0.4769	0.4767	0.4766	0.1944	0.1026		
90 %		0.4770	0.4767	0.4766	0.4766	0.1942	0.1025		
None	R3 Stream	0.6966	0.6888	0.6867	0.6855	0.3123	0.1680		
50 %		0.6906	0.6866	0.6854	0.6848	0.3111	0.1674		
75 %		0.6875	0.6854	0.6848	0.6845	0.3105	0.1670		
90 %		0.6856	0.6847	0.6844	0.6843	0.3101	0.1668		

* Maximum values coming from multiple applications are marked in italics

Table 8.9-73H: Global maximum PEC_{sed} values for flupyradifurone, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (spring) (BBCH 50-59) according to the Central EU zone GAP according to sediment Step 4 (simulated use PMT02)

PEC _{sed} (µg/kg)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10 m	20 m		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D1 Ditch	<i>5.9910</i>	<i>5.6930</i>	<i>5.6430</i>	<i>5.6160</i>	<i>5.6430</i>	<i>5.6160</i>		
50 %		<i>5.7910</i>	<i>5.6410</i>	<i>5.6150</i>	<i>5.6020</i>	<i>5.6150</i>	<i>5.6020</i>		
75 %		<i>5.6900</i>	<i>5.6140</i>	<i>5.6020</i>	<i>5.5950</i>	<i>5.6020</i>	<i>5.5950</i>		
90 %		<i>5.6290</i>	<i>5.5990</i>	<i>5.5930</i>	<i>5.5910</i>	<i>5.5930</i>	<i>5.5910</i>		
None	D1 Stream	<i>3.2460</i>	<i>3.2410</i>	<i>3.2400</i>	<i>3.2390</i>	<i>3.2400</i>	<i>3.2390</i>		
50 %		<i>3.2420</i>	<i>3.2400</i>	<i>3.2390</i>	<i>3.2390</i>	<i>3.2390</i>	<i>3.2390</i>		
75 %		<i>3.2400</i>	<i>3.2390</i>	<i>3.2390</i>	<i>3.2380</i>	<i>3.2390</i>	<i>3.2380</i>		
90 %		<i>3.2390</i>	<i>3.2390</i>	<i>3.2380</i>	<i>3.2380</i>	<i>3.2380</i>	<i>3.2380</i>		
None	D3 Ditch	<i>0.1752</i>	<i>0.1222</i>	<i>0.1209</i>	<i>0.1202</i>	<i>0.1209</i>	<i>0.1202</i>		
50 %		<i>0.1248</i>	<i>0.1209</i>	<i>0.1202</i>	<i>0.1198</i>	<i>0.1202</i>	<i>0.1198</i>		
75 %		<i>0.1221</i>	<i>0.1202</i>	<i>0.1198</i>	<i>0.1197</i>	<i>0.1198</i>	<i>0.1197</i>		
90 %		<i>0.1205</i>	<i>0.1197</i>	<i>0.1196</i>	<i>0.1195</i>	<i>0.1196</i>	<i>0.1195</i>		
None	D4 Pond	<i>1.7300</i>	<i>1.7250</i>	<i>1.7160</i>	<i>1.7080</i>	<i>1.7160</i>	<i>1.7080</i>		
50 %		<i>1.7120</i>	<i>1.7100</i>	<i>1.7050</i>	<i>1.7010</i>	<i>1.7050</i>	<i>1.7010</i>		
75 %		<i>1.7030</i>	<i>1.7020</i>	<i>1.7000</i>	<i>1.6980</i>	<i>1.7000</i>	<i>1.6980</i>		
90 %		<i>1.6980</i>	<i>1.6970</i>	<i>1.6960</i>	<i>1.6960</i>	<i>1.6960</i>	<i>1.6960</i>		
None	D4 Stream	<i>0.5822</i>	<i>0.5805</i>	<i>0.5801</i>	<i>0.5798</i>	<i>0.5801</i>	<i>0.5798</i>		
50 %		<i>0.5809</i>	<i>0.5801</i>	<i>0.5798</i>	<i>0.5797</i>	<i>0.5798</i>	<i>0.5797</i>		
75 %		<i>0.5803</i>	<i>0.5798</i>	<i>0.5797</i>	<i>0.5797</i>	<i>0.5797</i>	<i>0.5797</i>		
90 %		<i>0.5799</i>	<i>0.5797</i>	<i>0.5797</i>	<i>0.5796</i>	<i>0.5797</i>	<i>0.5796</i>		
None	D5 Pond	<i>2.0520</i>	<i>2.0470</i>	<i>2.0370</i>	<i>2.0290</i>	<i>2.0370</i>	<i>2.0290</i>		
50 %		<i>2.0330</i>	<i>2.0310</i>	<i>2.0260</i>	<i>2.0220</i>	<i>2.0260</i>	<i>2.0220</i>		
75 %		<i>2.0240</i>	<i>2.0230</i>	<i>2.0200</i>	<i>2.0180</i>	<i>2.0200</i>	<i>2.0180</i>		
90 %		<i>2.0180</i>	<i>2.0180</i>	<i>2.0170</i>	<i>2.0160</i>	<i>2.0170</i>	<i>2.0160</i>		
None	D5 Stream	<i>0.6392</i>	<i>0.6341</i>	<i>0.6338</i>	<i>0.6336</i>	<i>0.6338</i>	<i>0.6336</i>		
50 %		<i>0.6344</i>	<i>0.6338</i>	<i>0.6336</i>	<i>0.6335</i>	<i>0.6336</i>	<i>0.6335</i>		
75 %		<i>0.6339</i>	<i>0.6336</i>	<i>0.6335</i>	<i>0.6335</i>	<i>0.6335</i>	<i>0.6335</i>		
90 %		<i>0.6336</i>	<i>0.6335</i>	<i>0.6335</i>	<i>0.6334</i>	<i>0.6335</i>	<i>0.6334</i>		
None	R1 Pond	<i>0.3346</i>	<i>0.3288</i>	<i>0.3185</i>	<i>0.3093</i>	<i>0.1535</i>	<i>0.0847</i>		
50 %		<i>0.3137</i>	<i>0.3108</i>	<i>0.3056</i>	<i>0.3011</i>	<i>0.1398</i>	<i>0.0754</i>		
75 %		<i>0.3033</i>	<i>0.3018</i>	<i>0.2992</i>	<i>0.2969</i>	<i>0.1329</i>	<i>0.0707</i>		
90 %		<i>0.2970</i>	<i>0.2964</i>	<i>0.2953</i>	<i>0.2944</i>	<i>0.1288</i>	<i>0.0679</i>		
None	R1 Stream	<i>0.3845</i>	<i>0.3818</i>	<i>0.3811</i>	<i>0.3807</i>	<i>0.1616</i>	<i>0.0859</i>		
50 %		<i>0.3824</i>	<i>0.3810</i>	<i>0.3806</i>	<i>0.3804</i>	<i>0.1612</i>	<i>0.0857</i>		
75 %		<i>0.3813</i>	<i>0.3806</i>	<i>0.3804</i>	<i>0.3803</i>	<i>0.1610</i>	<i>0.0855</i>		
90 %		<i>0.3807</i>	<i>0.3804</i>	<i>0.3803</i>	<i>0.3802</i>	<i>0.1608</i>	<i>0.0855</i>		

* Maximum values coming from multiple applications are marked in italics

Table 8.9-73I: Global maximum PEC_{sw} values for flupyradifurone, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (winter) (BBCH 65-79) according to the Central EU zone GAP according to surface water Step 4 (simulated use PMT01)

PEC _{sw} (µg/L)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10 m	20 m		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D2 Ditch	4.8740	4.8740	4.8740	4.8740	4.8740	4.8740		
50 %		4.8740	4.8740	4.8740	4.8740	4.8740	4.8740		
75 %		4.8740	4.8740	4.8740	4.8740	4.8740	4.8740		
90 %		4.8740	4.8740	4.8740	4.8740	4.8740	4.8740		
None	D2 Stream	3.0840	3.0840	3.0840	3.0840	3.0840	3.0840		
50 %		3.0840	3.0840	3.0840	3.0840	3.0840	3.0840		
75 %		3.0840	3.0840	3.0840	3.0840	3.0840	3.0840		
90 %		3.0840	3.0840	3.0840	3.0840	3.0840	3.0840		
None	D3 Ditch	0.2389	0.0648	0.0344	0.0179	0.0344	0.0179		
50 %		0.1195	0.0324	0.0172	0.0090	0.0172	0.0090		
75 %		0.0598	0.0162	0.0086	0.0045	0.0086	0.0045		
90 %		0.0239	0.0065	0.0039	0.0039	0.0039	0.0039		
None	D4 Pond	0.2854	0.2849	0.2841	0.2834	0.2841	0.2834		
50 %		0.2837	0.2835	0.2831	0.2827	0.2831	0.2827		
75 %		0.2829	0.2828	0.2826	0.2824	0.2826	0.2824		
90 %		0.2824	0.2824	0.2823	0.2822	0.2823	0.2822		
None	D4 Stream	0.3115	0.3115	0.3115	0.3115	0.3115	0.3115		
50 %		0.3115	0.3115	0.3115	0.3115	0.3115	0.3115		
75 %		0.3115	0.3115	0.3115	0.3115	0.3115	0.3115		
90 %		0.3115	0.3115	0.3115	0.3115	0.3115	0.3115		
None	D5 Pond	0.2542	0.2542	0.2542	0.2542	0.2542	0.2542		
50 %		0.2542	0.2542	0.2542	0.2542	0.2542	0.2542		
75 %		0.2542	0.2542	0.2542	0.2542	0.2542	0.2542		
90 %		0.2542	0.2542	0.2542	0.2542	0.2542	0.2542		
None	D5 Stream	0.2216	0.1440	0.1440	0.1440	0.1440	0.1440		
50 %		0.1440	0.1440	0.1440	0.1440	0.1440	0.1440		
75 %		0.1440	0.1440	0.1440	0.1440	0.1440	0.1440		
90 %		0.1440	0.1440	0.1440	0.1440	0.1440	0.1440		
None	R1 Pond	0.1505	0.1492	0.1468	0.1447	0.0637	0.0330		
50 %		0.1457	0.1450	0.1438	0.1428	0.0606	0.0310		
75 %		0.1433	0.1429	0.1423	0.1418	0.0591	0.0300		
90 %		0.1418	0.1417	0.1414	0.1412	0.0582	0.0294		
None	R1 Stream	0.8405	0.8405	0.8405	0.8405	0.3784	0.1974		
50 %		0.8405	0.8405	0.8405	0.8405	0.3784	0.1974		
75 %		0.8405	0.8405	0.8405	0.8405	0.3784	0.1974		
90 %		0.8405	0.8405	0.8405	0.8405	0.3784	0.1974		
None	R3 Stream	0.9810	0.9810	0.9810	0.9810	0.4451	0.2328		
50 %		0.9810	0.9810	0.9810	0.9810	0.4451	0.2328		
75 %		0.9810	0.9810	0.9810	0.9810	0.4451	0.2328		

PEC _{sw} (µg/L)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10 m	20 m		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
90 %		0.9810	0.9810	0.9810	0.9810	0.4451	0.2328		

* Maximum values coming from multiple applications are marked in italics

Table 8.9-73J: Global maximum PEC_{sw} values for flupyradifurone, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (spring) (BBCH 65-79) according to the Central EU zone GAP according to surface water Step 4 (simulated use PMT02)

PEC _{sw} (µg/L)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10 m	20 m		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D1 Ditch	<i>2.1650</i>	<i>2.1650</i>	<i>2.1650</i>	<i>2.1650</i>	<i>2.1650</i>	<i>2.1650</i>		
50 %		<i>2.1650</i>	<i>2.1650</i>	<i>2.1650</i>	<i>2.1650</i>	<i>2.1650</i>	<i>2.1650</i>		
75 %		<i>2.1650</i>	<i>2.1650</i>	<i>2.1650</i>	<i>2.1650</i>	<i>2.1650</i>	<i>2.1650</i>		
90 %		<i>2.1650</i>	<i>2.1650</i>	<i>2.1650</i>	<i>2.1650</i>	<i>2.1650</i>	<i>2.1650</i>		
None	D1 Stream	<i>1.4690</i>	<i>1.4690</i>	<i>1.4690</i>	<i>1.4690</i>	<i>1.4690</i>	<i>1.4690</i>		
50 %		<i>1.4690</i>	<i>1.4690</i>	<i>1.4690</i>	<i>1.4690</i>	<i>1.4690</i>	<i>1.4690</i>		
75 %		<i>1.4690</i>	<i>1.4690</i>	<i>1.4690</i>	<i>1.4690</i>	<i>1.4690</i>	<i>1.4690</i>		
90 %		<i>1.4690</i>	<i>1.4690</i>	<i>1.4690</i>	<i>1.4690</i>	<i>1.4690</i>	<i>1.4690</i>		
None	D3 Ditch	0.2388	0.0649	0.0346	0.0181	0.0346	0.0181		
50 %		0.1195	0.0326	0.0174	0.0092	0.0174	0.0092		
75 %		0.0599	0.0164	0.0092	0.0059	0.0092	0.0059		
90 %		0.0241	0.0076	0.0059	0.0059	0.0059	0.0059		
None	D4 Pond	<i>0.3426</i>	<i>0.3422</i>	<i>0.3414</i>	<i>0.3408</i>	<i>0.3414</i>	<i>0.3408</i>		
50 %		<i>0.3411</i>	<i>0.3409</i>	<i>0.3405</i>	<i>0.3402</i>	<i>0.3405</i>	<i>0.3402</i>		
75 %		<i>0.3403</i>	<i>0.3402</i>	<i>0.3400</i>	<i>0.3399</i>	<i>0.3400</i>	<i>0.3399</i>		
90 %		<i>0.3399</i>	<i>0.3398</i>	<i>0.3398</i>	<i>0.3397</i>	<i>0.3398</i>	<i>0.3397</i>		
None	D4 Stream	<i>0.3494</i>	<i>0.3494</i>	<i>0.3494</i>	<i>0.3494</i>	<i>0.3494</i>	<i>0.3494</i>		
50 %		<i>0.3494</i>	<i>0.3494</i>	<i>0.3494</i>	<i>0.3494</i>	<i>0.3494</i>	<i>0.3494</i>		
75 %		<i>0.3494</i>	<i>0.3494</i>	<i>0.3494</i>	<i>0.3494</i>	<i>0.3494</i>	<i>0.3494</i>		
90 %		<i>0.3494</i>	<i>0.3494</i>	<i>0.3494</i>	<i>0.3494</i>	<i>0.3494</i>	<i>0.3494</i>		
None	D5 Pond	<i>0.2123</i>	<i>0.2120</i>	<i>0.2114</i>	<i>0.2109</i>	<i>0.2114</i>	<i>0.2109</i>		
50 %		<i>0.2111</i>	<i>0.2110</i>	<i>0.2107</i>	<i>0.2104</i>	<i>0.2107</i>	<i>0.2104</i>		
75 %		<i>0.2105</i>	<i>0.2104</i>	<i>0.2103</i>	<i>0.2102</i>	<i>0.2103</i>	<i>0.2102</i>		
90 %		<i>0.2102</i>	<i>0.2101</i>	<i>0.2101</i>	<i>0.2100</i>	<i>0.2101</i>	<i>0.2100</i>		
None	D5 Stream	<i>0.2217</i>	<i>0.1439</i>	<i>0.1439</i>	<i>0.1439</i>	<i>0.1439</i>	<i>0.1439</i>		
50 %		<i>0.1439</i>	<i>0.1439</i>	<i>0.1439</i>	<i>0.1439</i>	<i>0.1439</i>	<i>0.1439</i>		
75 %		<i>0.1439</i>	<i>0.1439</i>	<i>0.1439</i>	<i>0.1439</i>	<i>0.1439</i>	<i>0.1439</i>		
90 %		<i>0.1439</i>	<i>0.1439</i>	<i>0.1439</i>	<i>0.1439</i>	<i>0.1439</i>	<i>0.1439</i>		
None	R1 Pond	<i>0.1302</i>	<i>0.1287</i>	<i>0.1259</i>	<i>0.1236</i>	<i>0.0552</i>	<i>0.0288</i>		
50 %		<i>0.1247</i>	<i>0.1239</i>	<i>0.1225</i>	<i>0.1214</i>	<i>0.0517</i>	<i>0.0265</i>		
75 %		<i>0.1219</i>	<i>0.1215</i>	<i>0.1208</i>	<i>0.1202</i>	<i>0.0500</i>	<i>0.0254</i>		

* Maximum values coming from multiple applications are marked in *italics*

[illegible]

PEC _{sed} (µg/kg)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10 m	20 m		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
90 %		<i>0.5034</i>	<i>0.5034</i>	<i>0.5034</i>	<i>0.5034</i>	<i>0.5034</i>	<i>0.5034</i>		
None	R1 Pond	<i>0.4091</i>	<i>0.4055</i>	<i>0.3988</i>	<i>0.3932</i>	<i>0.1834</i>	<i>0.0993</i>		
50 %		<i>0.3958</i>	<i>0.3940</i>	<i>0.3906</i>	<i>0.3878</i>	<i>0.1745</i>	<i>0.0932</i>		
75 %		<i>0.3891</i>	<i>0.3882</i>	<i>0.3865</i>	<i>0.3851</i>	<i>0.1701</i>	<i>0.0901</i>		
90 %		<i>0.3851</i>	<i>0.3847</i>	<i>0.3840</i>	<i>0.3835</i>	<i>0.1674</i>	<i>0.0882</i>		
None	R1 Stream	<i>0.2466</i>	<i>0.2437</i>	<i>0.2429</i>	<i>0.2427</i>	<i>0.1047</i>	<i>0.0554</i>		
50 %		<i>0.2444</i>	<i>0.2429</i>	<i>0.2427</i>	<i>0.2425</i>	<i>0.1043</i>	<i>0.0552</i>		
75 %		<i>0.2432</i>	<i>0.2426</i>	<i>0.2425</i>	<i>0.2424</i>	<i>0.1040</i>	<i>0.0550</i>		
90 %		<i>0.2427</i>	<i>0.2425</i>	<i>0.2424</i>	<i>0.2424</i>	<i>0.1039</i>	<i>0.0550</i>		
None	R3 Stream	<i>0.2295</i>	<i>0.2253</i>	<i>0.2241</i>	<i>0.2235</i>	<i>0.1050</i>	<i>0.0566</i>		
50 %		<i>0.2262</i>	<i>0.2241</i>	<i>0.2234</i>	<i>0.2231</i>	<i>0.1043</i>	<i>0.0562</i>		
75 %		<i>0.2245</i>	<i>0.2234</i>	<i>0.2231</i>	<i>0.2229</i>	<i>0.1040</i>	<i>0.0560</i>		
90 %		<i>0.2235</i>	<i>0.2230</i>	<i>0.2228</i>	<i>0.2228</i>	<i>0.1037</i>	<i>0.0559</i>		

* Maximum values coming from multiple applications are marked in italics

Table 8.9-73L: Global maximum PEC_{sed} values for flupyradifurone, following single/multiple applications(s) of DLT+FPF EC 85 to oil seed rape (spring) (BBCH 65-79) according to the Central EU zone GAP according to sediment Step 4 (simulated use PMT02)

PEC _{sed} (µg/kg)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10 m	20 m		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
None	D1 Ditch	<i>4.6920</i>	<i>4.4650</i>	<i>4.4270</i>	<i>4.4060</i>	<i>4.4270</i>	<i>4.4060</i>		
50 %		<i>4.5390</i>	<i>4.4250</i>	<i>4.4060</i>	<i>4.3950</i>	<i>4.4060</i>	<i>4.3950</i>		
75 %		<i>4.4620</i>	<i>4.4050</i>	<i>4.3950</i>	<i>4.3900</i>	<i>4.3950</i>	<i>4.3900</i>		
90 %		<i>4.4160</i>	<i>4.3930</i>	<i>4.3890</i>	<i>4.3870</i>	<i>4.3890</i>	<i>4.3870</i>		
None	D1 Stream	<i>2.5510</i>	<i>2.5470</i>	<i>2.5460</i>	<i>2.5460</i>	<i>2.5460</i>	<i>2.5460</i>		
50 %		<i>2.5480</i>	<i>2.5460</i>	<i>2.5460</i>	<i>2.5450</i>	<i>2.5460</i>	<i>2.5450</i>		
75 %		<i>2.5470</i>	<i>2.5460</i>	<i>2.5450</i>	<i>2.5450</i>	<i>2.5450</i>	<i>2.5450</i>		
90 %		<i>2.5460</i>	<i>2.5450</i>	<i>2.5450</i>	<i>2.5450</i>	<i>2.5450</i>	<i>2.5450</i>		
None	D3 Ditch	<i>0.1217</i>	<i>0.0478</i>	<i>0.0464</i>	<i>0.0456</i>	<i>0.0464</i>	<i>0.0456</i>		
50 %		<i>0.0715</i>	<i>0.0463</i>	<i>0.0456</i>	<i>0.0452</i>	<i>0.0456</i>	<i>0.0452</i>		
75 %		<i>0.0477</i>	<i>0.0456</i>	<i>0.0452</i>	<i>0.0450</i>	<i>0.0452</i>	<i>0.0450</i>		
90 %		<i>0.0460</i>	<i>0.0451</i>	<i>0.0450</i>	<i>0.0449</i>	<i>0.0450</i>	<i>0.0449</i>		
None	D4 Pond	<i>1.2340</i>	<i>1.2300</i>	<i>1.2240</i>	<i>1.2190</i>	<i>1.2240</i>	<i>1.2190</i>		
50 %		<i>1.2210</i>	<i>1.2200</i>	<i>1.2170</i>	<i>1.2140</i>	<i>1.2170</i>	<i>1.2140</i>		
75 %		<i>1.2150</i>	<i>1.2140</i>	<i>1.2130</i>	<i>1.2120</i>	<i>1.2130</i>	<i>1.2120</i>		
90 %		<i>1.2120</i>	<i>1.2110</i>	<i>1.2110</i>	<i>1.2100</i>	<i>1.2110</i>	<i>1.2100</i>		
None	D4 Stream	<i>0.4155</i>	<i>0.4144</i>	<i>0.4141</i>	<i>0.4139</i>	<i>0.4141</i>	<i>0.4139</i>		
50 %		<i>0.4146</i>	<i>0.4141</i>	<i>0.4139</i>	<i>0.4138</i>	<i>0.4139</i>	<i>0.4138</i>		
75 %		<i>0.4142</i>	<i>0.4139</i>	<i>0.4138</i>	<i>0.4138</i>	<i>0.4138</i>	<i>0.4138</i>		

PEC _{sed} (µg/kg)	Scenario	Step 4 flupyradifurone							
Nozzle reduction	Vegetated strip (m)	None	None	None	None	10 m	20 m		
	No spray buffer (m)	0 m	5 m	10 m	20 m	10 m	20 m		
90 %		<i>0.4139</i>	<i>0.4138</i>	<i>0.4138</i>	<i>0.4138</i>	<i>0.4138</i>	<i>0.4138</i>		
None	D5 Pond	<i>1.2750</i>	<i>1.2720</i>	<i>1.2650</i>	<i>1.2590</i>	<i>1.2650</i>	<i>1.2590</i>		
50 %		<i>1.2620</i>	<i>1.2600</i>	<i>1.2560</i>	<i>1.2540</i>	<i>1.2560</i>	<i>1.2540</i>		
75 %		<i>1.2550</i>	<i>1.2540</i>	<i>1.2520</i>	<i>1.2510</i>	<i>1.2520</i>	<i>1.2510</i>		
90 %		<i>1.2510</i>	<i>1.2500</i>	<i>1.2500</i>	<i>1.2490</i>	<i>1.2500</i>	<i>1.2490</i>		
None	D5 Stream	<i>0.3877</i>	<i>0.3877</i>	<i>0.3877</i>	<i>0.3877</i>	<i>0.3877</i>	<i>0.3877</i>		
50 %		<i>0.3877</i>	<i>0.3877</i>	<i>0.3877</i>	<i>0.3877</i>	<i>0.3877</i>	<i>0.3877</i>		
75 %		<i>0.3877</i>	<i>0.3877</i>	<i>0.3877</i>	<i>0.3877</i>	<i>0.3877</i>	<i>0.3877</i>		
90 %		<i>0.3877</i>	<i>0.3877</i>	<i>0.3877</i>	<i>0.3877</i>	<i>0.3877</i>	<i>0.3877</i>		
None	R1 Pond	<i>0.3355</i>	<i>0.3317</i>	<i>0.3245</i>	<i>0.3185</i>	<i>0.1500</i>	<i>0.0816</i>		
50 %		<i>0.3213</i>	<i>0.3194</i>	<i>0.3158</i>	<i>0.3128</i>	<i>0.1407</i>	<i>0.0752</i>		
75 %		<i>0.3142</i>	<i>0.3132</i>	<i>0.3114</i>	<i>0.3100</i>	<i>0.1361</i>	<i>0.0720</i>		
90 %		<i>0.3099</i>	<i>0.3095</i>	<i>0.3088</i>	<i>0.3082</i>	<i>0.1333</i>	<i>0.0701</i>		
None	R1 Stream	<i>0.3466</i>	<i>0.3441</i>	<i>0.3435</i>	<i>0.3432</i>	<i>0.1500</i>	<i>0.0799</i>		
50 %		<i>0.3447</i>	<i>0.3435</i>	<i>0.3432</i>	<i>0.3430</i>	<i>0.1496</i>	<i>0.0797</i>		
75 %		<i>0.3437</i>	<i>0.3431</i>	<i>0.3430</i>	<i>0.3429</i>	<i>0.1494</i>	<i>0.0796</i>		
90 %		<i>0.3432</i>	<i>0.3429</i>	<i>0.3429</i>	<i>0.3428</i>	<i>0.1493</i>	<i>0.0796</i>		

* Maximum values coming from multiple applications are marked in italics

Metabolites of flupyradifurone

6-CNA

Table 8.9-74: FOCUS Step 1, 2 (spring) PEC_{sw} and PEC_{sed} for 6-CNA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 30-49)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	3.1330 -	RunOff/Drain.	3.1254	3.1103	2.7570 -
Step 2						
N-Europe	Mar. - May	0.0587	RunOff/Drain.	0.0586	0.0583	0.0517
S-Europe	(Spring)	0.1174	RunOff/Drain.	0.1172	0.1166	0.1033

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-75: FOCUS Step 1, 2 (summer) PEC_{sw} and PEC_{sed} for 6-CNA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 30-49)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	3.1330 -	RunOff/Drain.	3.1254	3.1103	2.7570 -
Step 2						
N-Europe S-Europe	Jun. - Sep. (Summer)	0.0587 0.0881	RunOff/Drain. RunOff/Drain.	0.0586 0.0879	0.0583 0.0874	0.0517 0.0775

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-76: FOCUS Step 1, 2 (autumn) PEC_{sw} and PEC_{sed} for 6-CNA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 30-49)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	3.1330 -	RunOff/Drain.	3.1254	3.1103	2.7570 -
Step 2						
N-Europe S-Europe	Oct. - Feb. (Autumn)	0.1468 0.1174	RunOff/Drain. RunOff/Drain.	0.1464 0.1172	0.1457 0.1166	0.1292 0.1033

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-77: FOCUS Step 1, 2 (spring) PEC_{sw} and PEC_{sed} for 6-CNA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 30-49)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	3.1330 -	RunOff/Drain.	3.1254	3.1103	2.7570 -
Step 2						
N-Europe S-Europe	Mar. - May (Spring)	0.0587 0.1174	RunOff/Drain. RunOff/Drain.	0.0586 0.1172	0.0583 0.1166	0.0517 0.1033

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-78: FOCUS Step 1, 2 (spring) PEC_{sw} and PEC_{sed} for 6-CNA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 50-59)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	3.1330 -	RunOff/Drain.	3.1254	3.1103	2.7570 -
Step 2						
N-Europe S-Europe	Mar. - May (Spring)	0.0489 0.0979	RunOff/Drain. RunOff/Drain.	0.0488 0.0976	0.0486 0.0972	0.0431 0.0861

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-79: FOCUS Step 1, 2 (summer) PEC_{sw} and PEC_{sed} for 6-CNA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 50-59)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	3.1330 -	RunOff/Drain.	3.1254	3.1103	2.7570 -
Step 2						
N-Europe S-Europe	Jun. - Sep. (Summer)	0.0489 0.0734	RunOff/Drain. RunOff/Drain.	0.0488 0.0732	0.0486 0.0729	0.0431 0.0646

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-80: FOCUS Step 1, 2 (autumn) PEC_{sw} and PEC_{sed} for 6-CNA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 50-59)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	3.1330 -	RunOff/Drain.	3.1254	3.1103	2.7570 -
Step 2						
N-Europe S-Europe	Oct. - Feb. (Autumn)	0.1223 0.0979	RunOff/Drain. RunOff/Drain.	0.1220 0.0976	0.1214 0.0972	0.1076 0.0861

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-81: FOCUS Step 1, 2 (spring) PEC_{sw} and PEC_{sed} for 6-CNA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 50-59)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	3.1330 -	RunOff/Drain.	3.1254	3.1103	2.7570 -
Step 2						
N-Europe S-Europe	Mar. - May (Spring)	0.0489 0.0979	RunOff/Drain. RunOff/Drain.	0.0488 0.0976	0.0486 0.0972	0.0431 0.0861

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-82: FOCUS Step 1, 2 (spring) PEC_{sw} and PEC_{sed} for 6-CNA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×37.5 g a.s./ha, BBCH 65-79)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	2.0886 -	RunOff/Drain.	2.0836	2.0735	1.8380 -
Step 2						
N-Europe S-Europe	Mar. - May (Spring)	0.0326 0.0652	RunOff/Drain. RunOff/Drain.	0.0325 0.0651	0.0324 0.0648	0.0287 0.0574

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-83: FOCUS Step 1, 2 (summer) PEC_{sw} and PEC_{sed} for 6-CNA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×37.5 g a.s./ha, BBCH 65-79)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw,twa} (µg/L)**	21d-PEC _{sw,twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	2.0886 -	RunOff/Drain.	2.0836	2.0735	1.8380 -
Step 2						
N-Europe	Jun. - Sep.	0.0326	RunOff/Drain.	0.0325	0.0324	0.0287
S-Europe	(Summer)	0.0489	RunOff/Drain.	0.0488	0.0486	0.0431

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-84: FOCUS Step 1, 2 (spring) PEC_{sw} and PEC_{sed} for 6-CNA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×37.5 g a.s./ha, BBCH 65-79)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw,twa} (µg/L)**	21d-PEC _{sw,twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	2.0886 -	RunOff/Drain.	2.0836	2.0735	1.8380 -
Step 2						
N-Europe	Mar. - May	0.0326	RunOff/Drain.	0.0325	0.0324	0.0287
S-Europe	(Spring)	0.0652	RunOff/Drain.	0.0651	0.0648	0.0574

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-85: FOCUS Step 1, 2 (summer) PEC_{sw} and PEC_{sed} for 6-CNA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×37.5 g a.s./ha, BBCH 65-79)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw,twa} (µg/L)**	21d-PEC _{sw,twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	2.0886 -	RunOff/Drain.	2.0836	2.0735	1.8380 -
Step 2						
N-Europe	Jun. - Sep.	0.0326	RunOff/Drain.	0.0325	0.0324	0.0287
S-Europe	(Summer)	0.0489	RunOff/Drain.	0.0488	0.0486	0.0431

* Single applications marked

** TWA-interval as required by ecotox

DFA

Table 8.9-86: FOCUS Step 1, 2 (spring) PEC_{sw} and PEC_{sed} for DFA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 30-49)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	5.0657 -	RunOff/Drain.	5.0164	4.9202	0.3435 -
Step 2						
N-Europe	Mar. - May	0.2807	RunOff/Drain.	0.2779	0.2726	0.0190
S-Europe	(Spring)	0.5411	RunOff/Drain.	0.5358	0.5256	0.0367

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-87: FOCUS Step 1, 2 (summer) PEC_{sw} and PEC_{sed} for DFA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 30-49)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	5.0657 -	RunOff/Drain.	5.0164	4.9202	0.3435 -
Step 2						
N-Europe	Jun. - Sep.	0.2807	RunOff/Drain.	0.2779	0.2726	0.0190
S-Europe	(Summer)	0.4109	RunOff/Drain.	0.4069	0.3991	0.0279

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-88: FOCUS Step 1, 2 (autumn) PEC_{sw} and PEC_{sed} for DFA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 30-49)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	5.0657 -	RunOff/Drain.	5.0164	4.9202	0.3435 -
Step 2						
N-Europe	Oct. - Feb.	0.6714	RunOff/Drain.	0.6648	0.6521	0.0455
S-Europe	(Autumn)	0.5411	RunOff/Drain.	0.5358	0.5256	0.0367

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-89: FOCUS Step 1, 2 (spring) PEC_{sw} and PEC_{sed} for DFA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 30-49)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	5.0657 -	RunOff/Drain.	5.0164	4.9202	0.3435 -
Step 2						
N-Europe	Mar. - May	0.2807	RunOff/Drain.	0.2779	0.2726	0.0190
S-Europe	(Spring)	0.5411	RunOff/Drain.	0.5358	0.5256	0.0367

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-90: FOCUS Step 1, 2 (spring) PEC_{sw} and PEC_{sed} for DFA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 50-59)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	5.0657 -	RunOff/Drain.	5.0164	4.9202	0.3435 -
Step 2						
N-Europe	Mar. - May	0.2373	RunOff/Drain.	0.2349	0.2304	0.0161
S-Europe	(Spring)	0.4543	RunOff/Drain.	0.4499	0.4412	0.0308

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-91: FOCUS Step 1, 2 (summer) PEC_{sw} and PEC_{sed} for DFA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 50-59)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	5.0657 -	RunOff/Drain.	5.0164	4.9202	0.3435 -
Step 2						
N-Europe	Jun. - Sep.	0.2373	RunOff/Drain.	0.2349	0.2304	0.0161
S-Europe	(Summer)	0.3458	RunOff/Drain.	0.3424	0.3358	0.0234

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-92: FOCUS Step 1, 2 (autumn) PEC_{sw} and PEC_{sed} for DFA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 50-59)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	5.0657 -	RunOff/Drain.	5.0164	4.9202	0.3435 -
Step 2						
N-Europe	Oct. - Feb.	0.5628	RunOff/Drain.	0.5573	0.5467	0.0382
S-Europe	(Autumn)	0.4543	RunOff/Drain.	0.4499	0.4412	0.0308

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-93: FOCUS Step 1, 2 (spring) PEC_{sw} and PEC_{sed} for DFA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 50-59)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	5.0657 -	RunOff/Drain.	5.0164	4.9202	0.3435 -
Step 2						
N-Europe	Mar. - May	0.2373	RunOff/Drain.	0.2349	0.2304	0.0161
S-Europe	(Spring)	0.4543	RunOff/Drain.	0.4499	0.4412	0.0308

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-94: FOCUS Step 1, 2 (spring) PEC_{sw} and PEC_{sed} for DFA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×37.5 g a.s./ha, BBCH 65-79)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	3.3771 -	RunOff/Drain.	3.3443	3.2802	0.2290 -
Step 2						
N-Europe	Mar. - May	0.1582	RunOff/Drain.	0.1566	0.1536	0.0107
S-Europe	(Spring)	0.3029	RunOff/Drain.	0.2999	0.2942	0.0205

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-95: FOCUS Step 1, 2 (summer) PEC_{sw} and PEC_{sed} for DFA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×37.5 g a.s./ha, BBCH 65-79)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	3.3771 -	RunOff/Drain.	3.3443	3.2802	0.2290 -
Step 2						
N-Europe	Jun. - Sep.	0.1582	RunOff/Drain.	0.1566	0.1536	0.0107
S-Europe	(Summer)	0.2305	RunOff/Drain.	0.2283	0.2239	0.0156

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-96: FOCUS Step 1, 2 (spring) PEC_{sw} and PEC_{sed} for DFA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×37.5 g a.s./ha, BBCH 65-79)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	3.3771 -	RunOff/Drain.	3.3443	3.2802	0.2290 -
Step 2						
N-Europe	Mar. - May	0.1582	RunOff/Drain.	0.1566	0.1536	0.0107
S-Europe	(Spring)	0.3029	RunOff/Drain.	0.2999	0.2942	0.0205

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-97: FOCUS Step 1, 2 (summer) PEC_{sw} and PEC_{sed} for DFA following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×37.5 g a.s./ha, BBCH 65-79)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	3.3771 -	RunOff/Drain.	3.3443	3.2802	0.2290 -
Step 2						
N-Europe	Jun. - Sep.	0.1582	RunOff/Drain.	0.1566	0.1536	0.0107
S-Europe	(Summer)	0.2305	RunOff/Drain.	0.2283	0.2239	0.0156

* Single applications marked

** TWA-interval as required by ecotox

BYI 02960-succinamide

Table 8.9-98: FOCUS Step 1, 2 (spring) PEC_{sw} and PEC_{sed} for BYI 02960-succinamide following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 30-49)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw,twa} (µg/L)**	21d-PEC _{sw,twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	16.211 -	RunOff/Drain.	16.172	16.094	<0.001 -
Step 2						
N-Europe S-Europe	Mar. - May (Spring)	1.2562 2.1308	RunOff/Drain. RunOff/Drain.	1.2532 2.1256	1.2471 2.1154	<0.0001 <0.0001

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-99: FOCUS Step 1, 2 (summer) PEC_{sw} and PEC_{sed} for BYI 02960-succinamide following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 30-49)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw,twa} (µg/L)**	21d-PEC _{sw,twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	16.211 -	RunOff/Drain.	16.172	16.094	<0.001 -
Step 2						
N-Europe S-Europe	Jun. - Sep. (Summer)	1.2562 1.6935	RunOff/Drain. RunOff/Drain.	1.2532 1.6894	1.2471 1.6813	<0.0001 <0.0001

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-100: FOCUS Step 1, 2 (autumn) PEC_{sw} and PEC_{sed} for BYI 02960-succinamide following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 30-49)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw,twa} (µg/L)**	21d-PEC _{sw,twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	16.211 -	RunOff/Drain.	16.172	16.094	<0.001 -
Step 2						
N-Europe S-Europe	Oct. - Feb. (Autumn)	2.5681 2.1308	RunOff/Drain. RunOff/Drain.	2.5618 2.1256	2.5495 2.1154	<0.0001 <0.0001

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-101: FOCUS Step 1, 2 (spring) PEC_{sw} and PEC_{sed} for BYI 02960-succinamide following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 30-49)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw,twa} (µg/L)**	21d-PEC _{sw,twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	16.211 -	RunOff/Drain.	16.172	16.094	<0.001 -
Step 2						
N-Europe S-Europe	Mar. - May (Spring)	1.2562 2.1308	RunOff/Drain. RunOff/Drain.	1.2532 2.1256	1.2471 2.1154	<0.0001 <0.0001

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-102: FOCUS Step 1, 2 (spring) PEC_{sw} and PEC_{sed} for BYI 02960-succinamide following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 50-59)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	16.211 -	RunOff/Drain.	16.172	16.094	<0.001 -
Step 2						
N-Europe	Mar. - May	1.1105	RunOff/Drain.	1.1078	1.1024	<0.0001
S-Europe	(Spring)	1.8393	RunOff/Drain.	1.8348	1.8260	<0.0001

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-103: FOCUS Step 1, 2 (summer) PEC_{sw} and PEC_{sed} for BYI 02960-succinamide following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 50-59)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	16.211 -	RunOff/Drain.	16.172	16.094	<0.001 -
Step 2						
N-Europe	Jun. - Sep.	1.1105	RunOff/Drain.	1.1078	1.1024	<0.0001
S-Europe	(Summer)	1.4749	RunOff/Drain.	1.4713	1.4642	<0.0001

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-104: FOCUS Step 1, 2 (autumn) PEC_{sw} and PEC_{sed} for BYI 02960-succinamide following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 50-59)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	16.211 -	RunOff/Drain.	16.172	16.094	<0.001 -
Step 2						
N-Europe	Oct. - Feb.	2.2037	RunOff/Drain.	2.1983	2.1877	<0.0001
S-Europe	(Autumn)	1.8393	RunOff/Drain.	1.8348	1.8260	<0.0001

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-105: FOCUS Step 1, 2 (spring) PEC_{sw} and PEC_{sed} for BYI 02960-succinamide following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 50-59)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	16.211 -	RunOff/Drain.	16.172	16.094	<0.001 -
Step 2						
N-Europe	Mar. - May	1.1105	RunOff/Drain.	1.1078	1.1024	<0.0001
S-Europe	(Spring)	1.8393	RunOff/Drain.	1.8348	1.8260	<0.0001

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-106: FOCUS Step 1, 2 (spring) PEC_{sw} and PEC_{sed} for BYI 02960-succinamide following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×37.5 g a.s./ha, BBCH 65-79)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	10.807 -	RunOff/Drain.	10.781	10.729	<0.001 -
Step 2						
N-Europe S-Europe	Mar. - May (Spring)	0.7403 1.2262	RunOff/Drain. RunOff/Drain.	0.7385 1.2232	0.7350 1.2173	<0.0001 <0.0001

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-107: FOCUS Step 1, 2 (summer) PEC_{sw} and PEC_{sed} for BYI 02960-succinamide following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×37.5 g a.s./ha, BBCH 65-79)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	10.807 -	RunOff/Drain.	10.781	10.729	<0.001 -
Step 2						
N-Europe S-Europe	Jun. - Sep. (Summer)	0.7403 0.9833	RunOff/Drain. RunOff/Drain.	0.7385 0.9809	0.7350 0.9761	<0.0001 <0.0001

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-108: FOCUS Step 1, 2 (spring) PEC_{sw} and PEC_{sed} for BYI 02960-succinamide following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×37.5 g a.s./ha, BBCH 65-79)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	10.807 -	RunOff/Drain.	10.781	10.729	<0.001 -
Step 2						
N-Europe S-Europe	Mar. - May (Spring)	0.7403 1.2262	RunOff/Drain. RunOff/Drain.	0.7385 1.2232	0.7350 1.2173	<0.0001 <0.0001

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-109: FOCUS Step 1, 2 (summer) PEC_{sw} and PEC_{sed} for BYI 02960-succinamide following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×37.5 g a.s./ha, BBCH 65-79)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	10.807 -	RunOff/Drain.	10.781	10.729	<0.001 -
Step 2						
N-Europe S-Europe	Jun. - Sep. (Summer)	0.7403 0.9833	RunOff/Drain. RunOff/Drain.	0.7385 0.9809	0.7350 0.9761	<0.0001 <0.0001

* Single applications marked

** TWA-interval as required by ecotox

BYI 02960-azabicyclosuccinamide

Table 8.9-110: FOCUS Step 1, 2 (spring) PEC_{sw} and PEC_{sed} for BYI 02960-azabicyclosuccinamide following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 30-49)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw,twa} (µg/L)**	21d-PEC _{sw,twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	9.9666 -	RunOff/Drain.	9.9425	9.8945	<0.001 -
Step 2						
N-Europe S-Europe	Mar. - May (Spring)	0.7723 1.3100	RunOff/Drain. RunOff/Drain.	0.7705 1.3068	0.7668 1.3005	<0.0001 <0.0001

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-111: FOCUS Step 1, 2 (summer) PEC_{sw} and PEC_{sed} for BYI 02960-azabicyclosuccinamide following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 30-49)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw,twa} (µg/L)**	21d-PEC _{sw,twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	9.9666 -	RunOff/Drain.	9.9425	9.8945	<0.001 -
Step 2						
N-Europe S-Europe	Jun. - Sep. (Summer)	0.7723 1.0412	RunOff/Drain. RunOff/Drain.	0.7705 1.0387	0.7668 1.0336	<0.0001 <0.0001

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-112: FOCUS Step 1, 2 (autumn) PEC_{sw} and PEC_{sed} for BYI 02960-azabicyclosuccinamide following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 30-49)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw,twa} (µg/L)**	21d-PEC _{sw,twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	9.9666 -	RunOff/Drain.	9.9425	9.8945	<0.001 -
Step 2						
N-Europe S-Europe	Oct. - Feb. (Autumn)	1.5789 1.3100	RunOff/Drain. RunOff/Drain.	1.5750 1.3068	1.5674 1.3005	<0.0001 <0.0001

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-113: FOCUS Step 1, 2 (spring) PEC_{sw} and PEC_{sed} for BYI 02960-azabicyclosuccinamide following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 30-49)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw,twa} (µg/L)**	21d-PEC _{sw,twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	9.9666 -	RunOff/Drain.	9.9425	9.8945	<0.001 -
Step 2						
N-Europe S-Europe	Mar. - May (Spring)	0.7723 1.3100	RunOff/Drain. RunOff/Drain.	0.7705 1.3068	0.7668 1.3005	<0.0001 <0.0001

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-114: FOCUS Step 1, 2 (spring) PEC_{sw} and PEC_{sed} for BYI 02960-azabicyclosuccinamide following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 50-59)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	9.9666 -	RunOff/Drain.	9.9425	9.8945	<0.001 -
Step 2						
N-Europe S-Europe	Mar. - May (Spring)	0.6827 1.1308	RunOff/Drain. RunOff/Drain.	0.6811 1.1281	0.6778 1.1226	<0.0001 <0.0001

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-115: FOCUS Step 1, 2 (summer) PEC_{sw} and PEC_{sed} for BYI 02960-azabicyclosuccinamide following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×56.25 g a.s./ha, BBCH 50-59)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	9.9666 -	RunOff/Drain.	9.9425	9.8945	<0.001 -
Step 2						
N-Europe S-Europe	Jun. - Sep. (Summer)	0.6827 0.9068	RunOff/Drain. RunOff/Drain.	0.6811 0.9046	0.6778 0.9002	<0.0001 <0.0001

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-116: FOCUS Step 1, 2 (autumn) PEC_{sw} and PEC_{sed} for BYI 02960-azabicyclosuccinamide following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 50-59)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	9.9666 -	RunOff/Drain.	9.9425	9.8945	<0.001 -
Step 2						
N-Europe S-Europe	Oct. - Feb. (Autumn)	1.3548 1.1308	RunOff/Drain. RunOff/Drain.	1.3515 1.1281	1.3450 1.1226	<0.0001 <0.0001

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-117: FOCUS Step 1, 2 (spring) PEC_{sw} and PEC_{sed} for BYI 02960-azabicyclosuccinamide following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×56.25 g a.s./ha, BBCH 50-59)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	9.9666 -	RunOff/Drain.	9.9425	9.8945	<0.001 -
Step 2						
N-Europe S-Europe	Mar. - May (Spring)	0.6827 1.1308	RunOff/Drain. RunOff/Drain.	0.6811 1.1281	0.6778 1.1226	<0.0001 <0.0001

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-118: FOCUS Step 1, 2 (spring) PEC_{sw} and PEC_{sed} for BYI 02960-azabicyclosuccinamide following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×37.5 g a.s./ha, BBCH 65-79)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	6.6444 -	RunOff/Drain.	6.6283	6.5963	<0.001 -
Step 2						
N-Europe S-Europe	Mar. - May (Spring)	0.4552 0.7539	RunOff/Drain. RunOff/Drain.	0.4541 0.7520	0.4519 0.7484	<0.0001 <0.0001

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-119: FOCUS Step 1, 2 (summer) PEC_{sw} and PEC_{sed} for BYI 02960-azabicyclosuccinamide following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (spring) (2×37.5 g a.s./ha, BBCH 65-79)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	6.6444 -	RunOff/Drain.	6.6283	6.5963	<0.001 -
Step 2						
N-Europe S-Europe	Jun. - Sep. (Summer)	0.4552 0.6045	RunOff/Drain. RunOff/Drain.	0.4541 0.6030	0.4519 0.6001	<0.0001 <0.0001

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-120: FOCUS Step 1, 2 (spring) PEC_{sw} and PEC_{sed} for BYI 02960-azabicyclosuccinamide following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×37.5 g a.s./ha, BBCH 65-79)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	6.6444 -	RunOff/Drain.	6.6283	6.5963	<0.001 -
Step 2						
N-Europe S-Europe	Mar. - May (Spring)	0.4552 0.7539	RunOff/Drain. RunOff/Drain.	0.4541 0.7520	0.4519 0.7484	<0.0001 <0.0001

* Single applications marked

** TWA-interval as required by ecotox

Table 8.9-121: FOCUS Step 1, 2 (summer) PEC_{sw} and PEC_{sed} for BYI 02960-azabicyclosuccinamide following single/multiple application(s) of DLT+FPF EC 85 to oil seed rape (winter) (2×37.5 g a.s./ha, BBCH 65-79)

Scenario FOCUS	Waterbody	Max PEC _{sw} (µg/L)*	Dominant entry route	7d-PEC _{sw, twa} (µg/L)**	21d-PEC _{sw, twa} (µg/L)**	Max PEC _{sed} (µg/kg)*
Step 1	-	6.6444 -	RunOff/Drain.	6.6283	6.5963	<0.001 -
Step 2						
N-Europe S-Europe	Jun. - Sep. (Summer)	0.4552 0.6045	RunOff/Drain. RunOff/Drain.	0.4541 0.6030	0.4519 0.6001	<0.0001 <0.0001

* Single applications marked

** TWA-interval as required by ecotox

zRMS comments:

The input parameters considered by the Applicant in surface water modelling for flupyradifurone and its metabolites presented in Table 8.9-49 are in line with EU agreed endpoints reported in EFSA Journal 2015;13(2):4020.

As indicated in the commenting box in point 8.9.2, the application data assumed in simulations were agreed by the zRMS.

Step 4 simulations were performed in line with recommendations of the FOCUS work group on landscape and mitigation factors (2007).

It is noted that initially, TSCF of 0.5 was used in simulations for the parent, in line with decision taken during the EU review. This has been questioned by the zRMS since according to the most up-to-date versions of the FOCUS guidance documents, in Tier 1 simulations the TSCF value must be set to 0 for all compounds, regardless if they are systemic or not. The Applicant provided the position paper by Hammel (2020, M-755019-01-1) with justification for consideration of the TSCF of 0.5, however zRMS maintains its position that without substance specific data, the TSCF should be set to 1. For detailed discussion on arguments provided by Hammel (2020) and zRMS position regarding this issue, please refer to commenting box in point 8.8.2.2 of this document.

After the commenting period, despite the zRMS concerns regarding consideration of TSCF of 0.5, it was decided to retain the results of surface water modelling performed with consideration of TSCF of 0.5 for information of concerned Member States that do accept consideration of the Briggs equation. Since according to Hammel (2020) the TSCF of 0.683 may be calculated for flupyradifurone using Briggs equation, results based on TSCF of 0.5 represent worst case. Please note that they were not independently validated by the zRMS in additional surface water modelling and for this reason results for TSCF of 0.5 are given in grey letters.

Since consideration of TSCF of 0.5 in surface water modelling for flupyradifurone was not agreed by the zRMS, results of calculations obtained with this refined parameter are struck through in tables above.

Surface water modelling was independently validated by the zRMS using the same input parameters. Obtained values were in good agreement with those obtained by the Applicant and therefore surface water exposure reported in the following tables may be used in the aquatic risk assessment:

- Tables 8.9-50 to 8.9-61 (Step 1+2 for the parent),
- Tables 8.9-61A to 8.9-61F (Step 3 for the parent, TSCF = 0),
- Tables 8.9-73A to 8.9-73L (Step 4 for the parent, TSCF = 0),
- Tables 8.9-74 to 8.9-121 (Step 1+2 for metabolites).

Simulations performed for applications in winter oilseed rape are considered protective for application of the product in spring OSR in Central Zone scenarios not defined for this crop.

Please note that additional surface water modelling may be required by the Member States that do not accept simulations performed according to FOCUS recommendations.

8.9.2.3 PEC_{sw}/sed of DLT+FPF EC 85

PEC_{sw} and PEC_{sed} for formulations are based on Ganzelmeier data covering the respective crop (arable crops) and the number of applications. All loadings are considered to occur in a single pseudo-application reaching the standard static ditch (width 1 m, depth 30 cm, sediment depth 5 cm, and sediment density 0.8 kg/L). Since no degradation data is available for the product, no TWA concentrations can be calculated.

Table 8.9-122: PEC_{sw} via spray drift for DLT+FPF EC 85 following application to OSR (summer/winter) (2 × 0.75 L product/ha)

PEC _{sw} (µg/L)	Distance (m)				
	1	5	10	15	20
0% drift reduction	13.768	2.719	1.388	0.926	0.694
50% drift reduction	6.884	1.359	0.694	0.463	0.347
75% drift reduction	3.442	0.680	0.347	0.231	0.174
90% drift reduction	1.377	0.272	0.139	0.093	0.069

Table 8.9-123: PEC_{sed} via spray drift for DLT+FPF EC 85 following application to OSR (summer/winter) (2 × 0.75 L product/ha)

PEC _{sed} (µg/kg)	Distance (m)				
	1	5	10	15	20
0% drift reduction	103.262	20.392	10.413	6.942	5.207
50% drift reduction	51.631	10.196	5.207	3.471	2.603
75% drift reduction	25.816	5.098	2.603	1.736	1.302
90% drift reduction	10.326	2.039	1.041	0.694	0.521

Table 8.9-124: PEC_{sw} via spray drift for DLT+FPF EC 85 following application to OSR (summer/winter) (2 × 0.5 L product/ha)

PEC _{sw} (µg/L)	Distance (m)				
	1	5	10	15	20
0% drift reduction	9.179	1.813	0.926	0.617	0.463
50% drift reduction	4.589	0.906	0.463	0.309	0.231
75% drift reduction	2.295	0.453	0.231	0.154	0.116
90% drift reduction	0.918	0.181	0.093	0.062	0.046

Table 8.9-125: PEC_{sed} via spray drift for DLT+FPF EC 85 following application to OSR (summer/winter) (2 × 0.5 L product/ha)

PEC _{sed} (µg/kg)	Distance (m)				
	1	5	10	15	20
0% drift reduction	68.842	13.595	6.942	4.628	3.471
50% drift reduction	34.421	6.797	3.471	2.314	1.736
75% drift reduction	17.210	3.399	1.736	1.157	0.868
90% drift reduction	6.884	1.359	0.694	0.463	0.347

zRMS comments:

The surface water exposure to formulation DLT+FPF EC 85 was validated by the zRMS using the Spray Drift Calculator. Obtained results were much lower than these reported in Tables 8.9-122 and 8.9-124 above. Although methods for calculation of the PEC_{sw} for the formulation by the Applicant are not clear, reported values may be used in the risk assessment as representing worst case.

It should be, however, noted that currently the formulation PEC_{sw} is not used in the combined risk assessment for aquatic organisms. Instead, in line with EFSA aquatic guidance (2013), the PEC_{mix} being the sum of PEC_{sw} for particular active compounds is considered.

During the commenting period the Applicant clarified the methodology used for calculation of the formulation PEC_{sw} values. The following information was provided in the Reporting Table:

The zRMS mentioned that the method for calculation of the PEC_{sw} of the formulation by the Applicant are not clear thus the Applicant would like to clarify that Inverse modelling suggests that the drift rate for field crops at 1 m distance was used and the 2 applications were treated as only one application with 1.5 kg product/ha. The drift calculator in SWASH averages over the width of water body (1 m) which effectively uses a mean value for distances of 1 m (field-side edge of water body) and 2 m (field-averted edge of water body) which produces a lower PEC_{sw}. If 2 applications with 750g/ha are considered instead of 1 application with 1500g/ha, the drift PEC_{sw} gets lower. Thus, the applicant's calculation is the worst case (as also considered by the zRMS)

zRMS agrees with the above clarifications. It should be, however, noted that the Spray Drift Calculator implemented in FOCUS SWASH is a commonly agreed tool for calculation of surface water exposure to the formulated product. Nevertheless, as already indicated in the initial zRMS comment, formulation PEC_{sw} calculated by the Applicant represent worst case and may be thus agreed. It should be also kept in mind that in line with the current approach in the combined risk assessment, PEC_{mix} value expressed in terms of the active compounds is being used instead of PEC_{sw} calculated for the whole formulation.

Sediment exposure was not validated by the zRMS since partitioning of the formulation to the sediment is not expected (this will be relevant for particular active compounds and their metabolites).

8.10 Fate and behaviour in air (KCP 9.3, KCP 9.3.1)

Fate and behaviour of deltamethrin in air

The fate of deltamethrin in air has been evaluated; full details are provided in the respective EU reference and related documents and summarised in the EU Review Report (6504/VI/99-final). No additional studies have been performed.

Table 8.10-1: Summary of atmospheric degradation and behaviour

Compound	Deltamethrin	Evaluated on EU level y/n/Reference
Direct photolysis in air	Not studied - no data required	Y/ EU Review Report (6504/VI/99-final)
Quantum yield of direct phototransformation	Not studied - no data required	Y/ EU Review Report (6504/VI/99-final)
Photochemical oxidative degradation in air	DT ₅₀ (h): 16 h (derived by the Atkinson model AOPWIN version 1.80 for OH (24-h) concentration of 0.5×10^6 OH/cm ³)	Y/ EU Review Report (6504/VI/99-final)
Volatilisation	No data required since vapour pressure (Pa) at 25°C is 1.24×10^{-8} (negligible volatilisation expected) Henry's Law Constant (Pa m ³ /mol) at 25°C: 3.1×10^{-2}	Y/ EU Review Report (6504/VI/99-final)
Metabolites	No data	Y/ EU Review Report (6504/VI/99-final)

The vapour pressure of the active substance deltamethrin is $< 10^{-5}$ Pa. Hence the active substance deltamethrin is regarded as non-volatile. Therefore exposure of adjacent surface waters and terrestrial ecosystems by the active substance deltamethrin due to volatilization with subsequent deposition is not expected.

zRMS comments:

Provided above information is in line with EU agreed data reported in EU Review Report (6504/VI/99-final).

Taking into account the low vapour pressure ($< 10^{-5}$ Pa) and DT₅₀ in air < 2 days, deltamethrin is not expected to be subject to volatilisation and the long- or short-range transport. Based on that, the contamination of the atmosphere with deltamethrin from the intended uses of DLT+FPF EC 85 is considered to be negligible.

Fate and behaviour of flupyradifurone in air

Table 8.10-2: Summary of atmospheric degradation and behaviour

Compound	Flupyradifurone	Evaluated on EU level y/n/Reference
Direct photolysis in air	Not studied - no data requested	Y/ EFSA Journal 2015;13(2):4020
Quantum yield of direct phototransformation	1.38×10^{-4} mol/Einstein (in pure water)	Y/ EFSA Journal 2015;13(2):4020
Photochemical oxidative degradation in air	DT ₅₀ (h): 4.4, derived by the Atkinson model (AOPWIN version 1.92a). OH (12h) concentration assumed = 1.5×10^6 OH/cm ³ *	Y/ EFSA Journal 2015;13(2):4020 DAR Vol. 3, B8
Volatilisation	Vapour pressure (Pa) at 20°C: 9.1×10^{-7} Henry's Law Constant (Pa m ³ /mol) at 20°C: 8.2×10^{-8}	Y/ EFSA Journal 2015;13(2):4020
Metabolites	No data	Y/ EFSA Journal 2015;13(2):4020

* In the EFSA LoEP there is an error (typo) in the OH (12h): the assumed concentration is incorrectly stated to be 1.5×10^{-6} OH/cm³

The vapour pressure at 20 °C of the active substance flupyradifurone is $< 10^{-5}$ Pa. Hence the active substance flupyradifurone is regarded as non-volatile from soil and plant surfaces. Therefore exposure of adjacent surface waters and terrestrial ecosystems by the active substance flupyradifurone due to

volatilization with subsequent deposition is not expected.

zRMS comments:

Provided above information is in line with EU agreed data reported in EFSA Journal 2015;13(2):4020.

Taking into account the low vapour pressure ($<10^{-5}$ Pa) and DT_{50} in air <2 days, flupyradifurone is not expected to be subject to volatilisation and the long- or short-range transport. Based on that, contamination of the atmosphere with flupyradifurone from the intended uses of DLT+FPF EC 85 is considered to be negligible.

Appendix 1 Lists of data considered in support of the evaluation

List of data submitted by the applicant and relied on

Data Point	Author(s)	Year	Title Company Report No. Source GLP or GEP status published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner	Remarks
KCA 7.1.4 / 01	Dornhagen, J.	2012	AE F108565 (Br2CA): Vapour pressure Report No.: 20110093.01, Edition Number: M-438493-01-1 Siemens AG, Frankfurt am Main, Germany GLP/GEP: Yes unpublished	No	Yes	Not available for last Annex I inclusion; new data requirement for a metabolite	Bayer	Study relied on, but not evaluated by the zRMS (already agreed at the zonal level for other Bayer formulations)
KCA 7.1.4 / 02	Wiche, A.; Bogdoll, B.	2012	AE F108565 (Br2CA): Solubility in water at pH 5, pH 7 and pH 9 Report No.: PA10/073, Edition Number: M-435779-01-1 Bayer CropScience AG, Frankfurt am Main, Germany GLP/GEP: Yes unpublished	No	Yes	Not available for last Annex I inclusion; new data requirement for a metabolite	Bayer	Study relied on, but not evaluated by the zRMS (already agreed at the zonal level for other Bayer formulations)
KCP 8.8/01	Lamshoeft, M., Gao, Z., Ressler, H., Schriever, C., Sur, R., Sweeney P., Webb, S., Zillgens, B., Reitz, M.U.	2018	Evaluation of a novel test design to determine uptake of chemicals by plant roots Science of the Total Environment 613-614 (2018) 10-19 GLP/GEP: Not applicable published	No	No		Public data	Article used in evaluation of acceptability of the TSCF refinement
KCP 8.8/02	Schriever, C., Lamshoeft, M.	2020	Lipophilicity matters - A new look at experimental plant uptake data from literature Science of the Total Environment 713 (2020) 136667 GLP/GEP: Not applicable published	No	No		Public data	Article used in evaluation of acceptability of the TSCF refinement

Data Point	Author(s)	Year	Title Company Report No. Source GLP or GEP status published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner	Remarks
KCP 9.1.3 / 01	Schaefer, D.; Porschewski, R.	2019	Deltamethrin (DLT) and metabolite: PECsoil EUR - Use in oil seed rape in Europe Report No.: EnSa-19-0101, Edition Number: M-658045-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	N		Bayer	
KCP 9.1.3 / 02	Schaefer, D.; Porschewski, R.	2019	Deltamethrin (DLT) and metabolite: PECsoil EUR - Use in oil seed rape in Europe Report No.: EnSa-19-0151, Edition Number: M-658046-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	N		Bayer	
KCP 9.1.3 / 03	Hammel, K.; Porschewski, R.	2019	Flupyradifurone (FPF) and metabolites: PECsoil EUR - Use in oil seed rape in Europe Report No.: EnSa-19-0102, Edition Number: M-657222-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	N		Bayer	
KCP 9.1.3 / 04	Hammel, K.; Porschewski, R.	2019	Flupyradifurone (FPF) and metabolites: PECsoil EUR - Use in oil seed rape in Europe Report No.: EnSa-19-0150, Edition Number: M-657224-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	N		Bayer	
KCP 9.1.3 / 05	Hammel, K.; Porschewski, R.	2018	Flupyradifurone (FPF): Core PECsoil EUR - Modelling core info document for soil risk assessment in Europe Report No.: EnSa-17-0510, Edition Number: M-613928-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	N		Bayer	
KCP 9.2.4.1 / 07	Hammel, K.; Garside, C.	2018	Statement: Implementation of aged sorption parameters for exposure assessment of flupyradifurone - Additional information on applicability following the release of the EFSA opinion in August 2018 Report No.: EnSa-18-0986, Edition Number: M-642729-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	N		Bayer	

Data Point	Author(s)	Year	Title Company Report No. Source GLP or GEP status published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner	Remarks
KCP 9.2.4.1 / 12	Schaefer, D.; Tamazashvili, A.	2020	Deltamethrin (DLT) and metabolite - PECgw FOCUS PEARL, PELMO - Use in oil seed rape in Europe Report No.: EnSa-20-0771, Edition Number: M-755312-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	N		Bayer	
KCP 9.2.4.1 / 13	Hammel, K.; Lyu, A.	2021	Flupyradifurone (FPF) and metabolites - PECgw FOCUS PEARL, PELMO, MACRO EUR - Use in oil seed rape in Europe Report No.: EnSa-21-0091, Edition Number: M-763308-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	N		Bayer	
KCP 9.2.4.1 / 14	Hammel, K.; Lyu, A.	2021	Flupyradifurone (FPF) and metabolites - PECgw FOCUS PEARL, PELMO, MACRO EUR - Use in oil seed rape in Europe Report No.: EnSa-21-0092, Edition Number: M-763310-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	N		Bayer	
KCP 9.2.4.1 / 15	Hammel, K.; Lyu, A.	2021	Flupyradifurone (FPF) and metabolites - PECgw FOCUS PEARL, PELMO, MACRO EUR - Use in oil seed rape in Europe Report No.: EnSa-21-0093, Edition Number: M-763313-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	N		Bayer	
KCP 9.2.4.1 / 16	Hammel, K.; Lyu, A.	2021	Flupyradifurone (FPF) and metabolites - PECgw FOCUS PEARL, PELMO, MACRO EUR using tier 2 (TDS) - Use in oil seed rape in Europe Report No.: EnSa-21-0094, Edition Number: M-763315-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	N		Bayer	
KCP 9.2.4.1 / 17	Hammel, K.; Lyu, A.	2021	Flupyradifurone (FPF) and metabolites - PECgw FOCUS PEARL, PELMO, MACRO EUR using tier 2 (TDS) - Use in oil seed rape in Europe Report No.: EnSa-21-0095, Edition Number: M-763317-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	N		Bayer	

Data Point	Author(s)	Year	Title Company Report No. Source GLP or GEP status published or not	Vertebrate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner	Remarks
KCP 9.2.4.1 / 18	Hammel, K.; Lyu, A.	2021	Flupyradifurone (FPF) and metabolites - PECgw FOCUS PEARL, PELMO, MACRO EUR using tier 2 (TDS) - Use in oil seed rape in Europe Report No.: EnSa-21-0096, Edition Number: M-763319-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	N		Bayer	
KCP 9.2.5 / 10	Schaefer, D.; Tamazashvili, A.	2020	Deltamethrin (DLT) and metabolite: PECsw,sed FOCUS EUR - Use in oil seed rape in Europe Report No.: EnSa-20-0772, Edition Number: M-755102-03-1 Bayer AG, Crop Science Division, Monheim, Germany ... amended: 2020-11-05 GLP/GEP: No unpublished	No	N		Bayer	
KCP 9.2.5 / 11	Hammel, K.; Lyu, A.	2021	Flupyradifurone (FPF): PECsw,sed FOCUS EUR - Use in winter and spring oilseed rape in Europe Report No.: EnSa-21-0097, Edition Number: M-763320-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	N		Bayer	
KCP 9.2.5 / 12	Hammel, K.; Lyu, A.	2021	Flupyradifurone (FPF): PECsw,sed FOCUS EUR - Use in winter and spring oilseed rape in Europe Report No.: EnSa-21-0098, Edition Number: M-763321-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	N		Bayer	
KCP 9.2.5 / 13	Hammel, K.; Lyu, A.	2021	Flupyradifurone (FPF): PECsw,sed FOCUS EUR - Use in winter and spring oilseed rape in Europe Report No.: EnSa-21-0099, Edition Number: M-763322-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	N		Bayer	

List of data submitted or referred to by the applicant and relied on, but already evaluated at EU peer review

Please note that all data mentioned as part of DAR, RAR, or EFSA journals are considered as relied on.

zRMS comments:

The list below was not validated by the zRMS. For details of active substance studies evaluated at the EU level, please refer to the respective EU documents.

Deltamethrin

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCA 7.1.1 / 01	Baedelt, H.; Idstein, H.; Krebs, B.	1990	Deltamethrin emulsifiable concentrate 25 g/l: Investigation of degradation in the soil under outdoor conditions. Hoechst AG, Frankfurt am Main, Germany Bayer Report No.: A71035 Edition Number: M-127756-01-2 Date: 1990-09-20 GLP/GEP: No, unpublished ... also filed: KCA 7.1.2.2.1 / 02	No	Bayer
KCA 7.1.1 / 02	Schäfer, D.; Mikolasch, B.	2019	Deltamethrin (DLT) - Kinetic evaluation of the dissipation in soil under field conditions for trigger purposes Bayer Report No.: EnSa-19-0022 Edition Number: M-646884-01-1 Date: 2019-01-15 GLP/GEP: No, unpublished	No	Bayer
KCA 7.1.1.1 / 01	Wang, W. W.	1991	Aerobic soil metabolism of 14C-deltamethrin XenoBiotics Laboratories, Inc., Plainsboro, NJ, USA Bayer Report No.: A47917 Edition Number: M-136659-01-1 Date: 1991-06-21 GLP/GEP: Yes, unpublished ... also filed: KCA 7.1.2.1.1 / 01	No	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCA 7.1.1.1 / 02	Hascoet, M.	1978	Degradation study of decamethrin (Decis) in the soil. Institut National de la Recherche Agronomique, France Bayer Report No.: A71057 Edition Number: M-149536-01-2 Date: 1978-09-04 GLP/GEP: No, unpublished ... also filed: KCA 7.1.2.1.1 / 02	No	Bayer
KCA 7.1.1.1 / 03	Chapman, R. A.; Tu, C. M.; Harris, C. R.; Cole, C.	1981	Persistence of five pyrethroid insecticides in sterile and natural, mineral and organic soil. Journal: Bulletin of Environmental Contamination and Toxicology Volume: 26 Pages: 513-519 Year: 1981 Report No.: A22300 Edition Number: M-095422-01-1 GLP/GEP: n.a., published ... also filed: KCA 7.1.2.1.1 / 03	No	published
KCA 7.1.1.1 / 04	Kaufman, D. D.; Kayser, A. J.; Russell, B.; Barnett, E. A.	1979	The effect of soil temperature on the degradation of 14C-cyano-decamethrin in soil. USDA, United States Department of Agriculture, USA Bayer Report No.: A71051 Edition Number: M-149530-01-1 Date: 1979-01-01 GLP/GEP: Yes, unpublished ... also filed: KCA 7.1.2.1.1 / 04	No	Bayer
KCA 7.1.1.1 / 05	Kaufman, D. D.; Kayser, A. J.; Barnett, E. A.; Russell, B.	1979	Degradation of 14C-phenoxy- and 14C-cyano-decamethrin in soil. USDA, United States Department of Agriculture, USA Bayer Report No.: A71064 Edition Number: M-149541-01-1 Date: 1979-01-01 GLP/GEP: No, unpublished ... also filed: KCA 7.1.2.1.1 / 05	No	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCA 7.1.1.1 / 06	Kaufman, D. D.; Kayser, A. J.; Russell, B.; Barnett, E. A.	1980	Degradation of 14C-cyano-, 14C-phenoxy- and 14C-vinyl-decamethrin in flooded soils. USDA, United States Department of Agriculture, USA Bayer Report No.: A71061 Edition Number: M-149538-01-1 Date: 1980-01-01 GLP/GEP: No, unpublished ... also filed: KCA 7.1.1.3 / 03 KCA 7.1.2.1.1 / 06	No	Bayer
KCA 7.1.1.1 / 07	Kaufman, D. D.; Kayser, A. J.; Barnett, E. A.; Daniels, P. W.; Russell, B. A.	1978	Preliminary soil metabolism investigations with decamethrin. USDA, United States Department of Agriculture, USA Bayer Report No.: A12524 Edition Number: M-063775-01-1 Date: 1978-01-01 GLP/GEP: No, unpublished ... also filed: KCA 7.1.2 / 01 KCA 7.1.2.1.1 / 08 KCA 7.1.3.2 / 02	No	Bayer
KCA 7.1.1.2 / 01	Wang, W. W.	1991	Anaerobic soil metabolism of 14C-deltamethrin XenoBiotics Laboratories, Inc., Plainsboro, NJ, USA Bayer Report No.: A47918 Report includes Trial Nos.: XBL89098 Edition Number: M-136665-01-1 Date: 1991-07-30 GLP/GEP: Yes, unpublished ... also filed: KCA 7.1.2.1.3 / 01	No	Bayer
KCA 7.1.1.3 / 01	Wang, W. W.; Reynolds, J. L.	1991	Soil photolysis of (14)C-deltamethrin XenoBiotics Laboratories, Inc., Plainsboro, NJ, USA Bayer Report No.: A97641 Edition Number: M-175053-01-1 Date: 1991-07-29 GLP/GEP: No, unpublished	No	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCA 7.1.1.3 / 02	Wang, W. W.; Reynolds, J. L.	1991	Soil photolysis of 14C-deltamethrin. XenoBiotics Laboratories, Inc., Plainsboro, NJ, USA Bayer Report No.: A47919 Edition Number: M-136671-01-1 Date: 1991-07-29 GLP/GEP: Yes, unpublished	No	Bayer
KCA 7.1.1.3 / 03	Kaufman, D. D.; Kayser, A. J.; Russell, B.; Barnett, E. A.	1980	Degradation of 14C-cyano-, 14C-phenoxy- and 14C-vinyl-decamethrin in flooded soils. USDA, United States Department of Agriculture, USA Bayer Report No.: A71061 Edition Number: M-149538-01-1 Date: 1980-01-01 GLP/GEP: No, unpublished ... also filed: KCA 7.1.1.1 / 06 KCA 7.1.2.1.1 / 06	No	Bayer
KCA 7.1.1.3 / 04	Kerhoas, L.; Dubroca, J.	1980	Degradation study of decamethrin in the soil. Institut National de la Recherche Agronomique, France Bayer Report No.: A71059 Edition Number: M-149537-01-2 Date: 1980-12-01 GLP/GEP: No, unpublished ... also filed: KCA 7.1.2.1.1 / 07	No	Bayer
KCA 7.1.2 / 01	Kaufman, D. D.; Kayser, A. J.; Barnett, E. A.; Daniels, P. W.; Russell, B. A.	1978	Preliminary soil metabolism investigations with decamethrin. USDA, United States Department of Agriculture, USA Bayer Report No.: A12524 Edition Number: M-063775-01-1 Date: 1978-01-01 GLP/GEP: No, unpublished ... also filed: KCA 7.1.1.1 / 07 KCA 7.1.2.1.1 / 08 KCA 7.1.3.2 / 02	No	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCA 7.1.2 / 02	John, B. M.; Feyerabend, M.	1997	Calculation of the half-life times of deltamethrin and becisthemic acid in soil using TOPFIT 2.0 Deltamethrin - 14C-labelled Hoechst Schering AgrEvo GmbH, Frankfurt am Main, Germany Bayer Report No.: A74227 Edition Number: M-152477-01-1 Date: 1997-10-21 GLP/GEP: No, unpublished ... also filed: KCA 7.1.2.1.1 / 09	No	Bayer
KCA 7.1.2 / 03	Buerstell, H.; Ulrich, C.; Werner, H. J.	1993	Deltamethrin - emulsifiable concentrate (25 g deltamethrin / l product) (Code Hoe 032640 00 EC03 A122) Investigation of the volatility of Deltamethrin in the field following a single application of the above formulation on soil (Guideline: Hoechst AG, Frankfurt am Main, Germany Bayer Report No.: A54564 Edition Number: M-132706-01-2 Date: 1993-12-13 GLP/GEP: Yes, unpublished ... also filed: KCA 7.2.1 / 04	No	Bayer
KCA 7.1.2.1.1 / 01	Wang, W. W.	1991	Aerobic soil metabolism of 14C-deltamethrin XenoBiotics Laboratories, Inc., Plainsboro, NJ, USA Bayer Report No.: A47917 Edition Number: M-136659-01-1 Date: 1991-06-21 GLP/GEP: Yes, unpublished ... also filed: KCA 7.1.1.1 / 01	No	Bayer
KCA 7.1.2.1.1 / 02	Hascoet, M.	1978	Degradation study of decamethrin (Decis) in the soil. Institut National de la Recherche Agronomique, France Bayer Report No.: A71057 Edition Number: M-149536-01-2 Date: 1978-09-04 GLP/GEP: No, unpublished ... also filed: KCA 7.1.1.1 / 02	No	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCA 7.1.2.1.1 / 03	Chapman, R. A.; Tu, C. M.; Harris, C. R.; Cole, C.	1981	Persistence of five pyrethroid insecticides in sterile and natural, mineral and organic soil. Journal: Bulletin of Environmental Contamination and Toxicology Volume: 26 Pages: 513-519 Year: 1981 Report No.: A22300 Edition Number: M-095422-01-1 GLP/GEP: n.a., published ... also filed: KCA 7.1.1.1 / 03	No	published
KCA 7.1.2.1.1 / 04	Kaufman, D. D.; Kayser, A. J.; Russell, B.; Barnett, E. A.	1979	The effect of soil temperature on the degradation of 14C-cyano-decamethrin in soil. USDA, United States Department of Agriculture, USA Bayer Report No.: A71051 Edition Number: M-149530-01-1 Date: 1979-01-01 GLP/GEP: Yes, unpublished ... also filed: KCA 7.1.1.1 / 04	No	Bayer
KCA 7.1.2.1.1 / 05	Kaufman, D. D.; Kayser, A. J.; Barnett, E. A.; Russell, B.	1979	Degradation of 14C-phenoxy- and 14C-cyano-decamethrin in soil. USDA, United States Department of Agriculture, USA Bayer Report No.: A71064 Edition Number: M-149541-01-1 Date: 1979-01-01 GLP/GEP: No, unpublished ... also filed: KCA 7.1.1.1 / 05	No	Bayer
KCA 7.1.2.1.1 / 06	Kaufman, D. D.; Kayser, A. J.; Russell, B.; Barnett, E. A.	1980	Degradation of 14C-cyano-, 14C-phenoxy- and 14C-vinyl-decamethrin in flooded soils. USDA, United States Department of Agriculture, USA Bayer Report No.: A71061 Edition Number: M-149538-01-1 Date: 1980-01-01 GLP/GEP: No, unpublished ... also filed: KCA 7.1.1.1 / 06 KCA 7.1.1.3 / 03	No	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCA 7.1.2.1.1 / 07	Kerhoas, L.; Dubroca, J.	1980	Degradation study of decamethrin in the soil. Institut National de la Recherche Agronomique, France Bayer Report No.: A71059 Edition Number: M-149537-01-2 Date: 1980-12-01 GLP/GEP: No, unpublished ... also filed: KCA 7.1.1.3 / 04	No	Bayer
KCA 7.1.2.1.1 / 08	Kaufman, D. D.; Kayser, A. J.; Barnett, E. A.; Daniels, P. W.; Russell, B. A.	1978	Preliminary soil metabolism investigations with decamethrin. USDA, United States Department of Agriculture, USA Bayer Report No.: A12524 Edition Number: M-063775-01-1 Date: 1978-01-01 GLP/GEP: No, unpublished ... also filed: KCA 7.1.1.1 / 07 KCA 7.1.2 / 01 KCA 7.1.3.2 / 02	No	Bayer
KCA 7.1.2.1.1 / 09	John, B. M.; Feyerabend, M.	1997	Calculation of the half-life times of deltamethrin and becisthemic acid in soil using TOPFIT 2.0 Deltamethrin - 14C-labelled Hoechst Schering AgrEvo GmbH, Frankfurt am Main, Germany Bayer Report No.: A74227 Edition Number: M-152477-01-1 Date: 1997-10-21 GLP/GEP: No, unpublished ... also filed: KCA 7.1.2 / 02	No	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCA 7.1.2.1.1 / 10	Hardy, I. A. J.	2013	Deltamethrin: Kinetic modelling evaluation of data from aerobic soil degradation studies to derive trigger and modelling endpoints Battelle UK Ltd., Ongar, Essex, United Kingdom Bayer Report No.: VC/11/026A Edition Number: M-462053-01-1 Date: 2013-07-10 GLP/GEP: No, unpublished ... also filed: KCA 7.1.2.1.2 / 03	No	Bayer
KCA 7.1.2.1.1 / 11	Gu, X. Z.; Zhang, G. Y.; Chen, L.; Dai, R. L.; Yu, Y. C.	2007	Persistence and dissipation of synthetic pyrethroid pesticides in red soils from the Yangtze River Delta area Journal: Environ. Geochem. Health, Volume 30, Issue 1, Page 67-77, Publication Year 2008 Year: 2008 Report No.: M-460924-01-1 GLP/GEP: n.a., published	No	published
KCA 7.1.2.1.2 / 01	Stroech, K.; Junge, T.	2013	[Gemdimethyl-14C]AE F108565 (Br2CA): Degradation in four aerobic soils Bayer Report No.: EnSa-13-0193 Edition Number: M-455519-01-1 Date: 2013-06-06 GLP/GEP: Yes, unpublished	No	Bayer
KCA 7.1.2.1.2 / 02	Frische, K.; Hellstern, J.	2011	AE F109036: Aerobic degradation in three European soils Eurofins Agrosience Services GmbH, Niefern-Oeschelbronn, Germany Bayer Report No.: S11-01624 Edition Number: M-413119-01-1 Date: 2011-07-29 GLP/GEP: Yes, unpublished	No	Bayer
KCA 7.1.2.1.2 / 03	Hardy, I. A. J.	2013	Deltamethrin: Kinetic modelling evaluation of data from aerobic soil degradation studies to derive trigger and modelling endpoints Battelle UK Ltd., Ongar, Essex, United Kingdom Bayer Report No.: VC/11/026A Edition Number: M-462053-01-1 Date: 2013-07-10 GLP/GEP: No, unpublished ... also filed: KCA 7.1.2.1.1 / 10	No	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCA 7.1.2.1.3 / 01	Wang, W. W.	1991	Anaerobic soil metabolism of 14C-deltamethrin XenoBiotics Laboratories, Inc., Plainsboro, NJ, USA Bayer Report No.: A47918 Report includes Trial Nos.: XBL89098 Edition Number: M-136665-01-1 Date: 1991-07-30 GLP/GEP: Yes, unpublished ... also filed: KCA 7.1.1.2 / 01	No	Bayer
KCA 7.1.2.2.1 / 01	Mayasich, J. M.; Czarnecki, J. J.	1991	Determination of the dissipation and mobility of alpha-R-, cis-, and trans-deltamethrin, and Br2CA residues in a Minnesota corn field. EN-CAS Analytical Laboratories, Winston-Salem, NC, USA Bayer Report No.: A71264 Edition Number: M-149730-01-1 Date: 1991-10-21 GLP/GEP: Yes, unpublished	No	Bayer
KCA 7.1.2.2.1 / 02	Baedelt, H.; Idstein, H.; Krebs, B.	1990	Deltamethrin emulsifiable concentrate 25 g/l: Investigation of degradation in the soil under outdoor conditions. Hoechst AG, Frankfurt am Main, Germany Bayer Report No.: A71035 Edition Number: M-127756-01-2 Date: 1990-09-20 GLP/GEP: No, unpublished ... also filed: KCA 7.1.1 / 01	No	Bayer
KCA 7.1.3.1.1 / 01	Smith, A. M.	1990	Determination of the adsorption and desorption coefficients of deltamethrin Bionomics Laboratories, USA Bayer Report No.: A47159 Edition Number: M-135594-01-1 Date: 1990-06-29 GLP/GEP: Yes, unpublished	No	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCA 7.1.3.1.1 / 02	Christensen, K. P.	1993	Deltamethrin: Determination of the sorption and desorption properties. Springborn Laboratories, Inc. (SLS), USA Bayer Report No.: A73876 Edition Number: M-152148-01-1 Date: 1993-10-13 GLP/GEP: Yes, unpublished	No	Bayer
KCA 7.1.3.1.1 / 03	Hellpointner, E.	2019	EU approval renewal of the active substance deltamethrin - EFSA request for additional information - Authority letter dated 2018-12-21 - Reference JT/JS/al (2018) - out-20561504 - Answer provided by Bayer AG - Request 68: Tables such that basic tests on the quality of adsorption endpoints can be performed Bayer Report No.: M-647639-01-1 Date: 2019-01-25 GLP/GEP: n.a., unpublished	No	Bayer
KCA 7.1.3.1.2 / 01	Wang, W. W.	1991	Adsorption and desorption of 14C-Br2CA in five soils XenoBiotics Laboratories, Inc., Plainsboro, NJ, USA Bayer Report No.: A72145 Edition Number: M-150487-01-1 Date: 1991-12-16 GLP/GEP: Yes, unpublished	No	Bayer
KCA 7.1.3.1.2 / 02	Reynolds, J. L.	1992	Adsorption and desorption of 14C-m-phenoxybenzoic acid in four soils. XenoBiotics Laboratories, Inc., Plainsboro, NJ, USA Bayer Report No.: A71037 Edition Number: M-149517-01-1 Date: 1992-11-18 GLP/GEP: Yes, unpublished	No	Bayer
KCA 7.1.3.2 / 01	Erzgraeber, B.	1999	Investigation of the leaching of deltamethrin and its metabolite Br2CA under "worst case" conditions using the simulation model PELMO 3.00 Code: AE F032640, AE F108565 Hoechst Schering AgrEvo GmbH, Frankfurt am Main, Germany Bayer Report No.: C006117 Edition Number: M-193342-01-1 Date: 1999-11-26 GLP/GEP: No, unpublished	No	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCA 7.1.3.2 / 02	Kaufman, D. D.; Kayser, A. J.; Barnett, E. A.; Daniels, P. W.; Russell, B. A.	1978	Preliminary soil metabolism investigations with decamethrin. USDA, United States Department of Agriculture, USA Bayer Report No.: A12524 Edition Number: M-063775-01-1 Date: 1978-01-01 GLP/GEP: No, unpublished ... also filed: KCA 7.1.1.1 / 07 KCA 7.1.2 / 01 KCA 7.1.2.1.1 / 08	No	Bayer
KCA 7.1.3.2 / 03	Hascoet, M.; Jamet, P.	1977	Laboratory Leaching Soil Study with DECAMETHRIN (RU 22974) Institut National de la Recherche Agronomique, France Bayer Report No.: A20240 Edition Number: M-149491-01-2 Date: 1977-09-20 GLP/GEP: No, unpublished	No	Bayer
KCA 7.1.3.2 / 04	Kaufman, D. D.; Russell, B. A.; Kayser, A. J.	1980	Movement of decamethrin, cypermethrin, permethrin and selected degradation products in soils. USDA, United States Department of Agriculture, USA Bayer Report No.: A71012 Edition Number: M-149493-01-1 Date: 1980-01-01 GLP/GEP: No, unpublished	No	Bayer
KCA 7.2.1 / 01	Giddings, J. M.	1999	A review of field studies on the fate and effects of deltamethrin and tralomethrin in aquatic ecosystems Springborn Laboratories, Inc. (SLS), USA Bayer Report No.: C002977 Edition Number: M-185344-01-1 Date: 1999-03-12 GLP/GEP: n.a., unpublished ... also filed: KCA 8.2 / 04	No	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCA 7.2.1 / 02	Heusel, R.	1999	Comments to the ECCO groups on the draft monograph for deltamethrin. Section B-8 ecotoxicology Hoechst Schering AgrEvo GmbH, Frankfurt am Main, Germany Bayer Report No.: C003084 Edition Number: M-185587-01-1 Date: 1999-03-19 GLP/GEP: n.a., unpublished ... also filed: KCA 8.2 / 05	No	Bayer
KCA 7.2.1 / 03	Buerkle, W. L.	1993	Deltamethrin, Hoe 032640, RU 22974: Testing the volatility of 14C-labelled active ingredient in the formulated product Decis fluessig EC03 in a wind-tunnel after application to leaves of dwarf bean plants Hoechst AG, Frankfurt am Main, Germany Bayer Report No.: A53755 Edition Number: M-132365-02-2 Date: 1993-10-06 ... amended: 1993-12-07 GLP/GEP: No, unpublished ... also filed: KCA 7.3 / 03	No	Bayer
KCA 7.2.1 / 04	Buerstell, H.; Ulrich, C.; Werner, H. J.	1993	Deltamethrin - emulsifiable concentrate (25 g deltamethrin / l product) (Code Hoe 032640 00 EC03 A122) Investigation of the volatility of Deltamethrin in the field following a single application of the above formulation on soil (Guideline: Hoechst AG, Frankfurt am Main, Germany Bayer Report No.: A54564 Edition Number: M-132706-01-2 Date: 1993-12-13 GLP/GEP: Yes, unpublished ... also filed: KCA 7.1.2 / 03	No	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCA 7.2.1 / 05	Buerstell, H.; Ulrich, C.; Werner, H. J.	1993	Deltamethrin - emulsifiable concentrate (25 g deltamethrin / l product) - (Code Hoe 032640 00 EC03 A122) Investigation of the volatility of Deltamethrin in the field following a single application of the above formulation in field biens as Hoechst AG, Frankfurt am Main, Germany Bayer Report No.: A54563 Edition Number: M-132707-01-2 Date: 1993-12-13 GLP/GEP: Yes, unpublished	No	Bayer
KCA 7.2.1 / 06	Wicke, H.	1998	Assessment of exposure to operators after application in greenhouse and risk assessment Deltamethrin emulsifiable concentrate 25 g/L Code: AE F032640 00 EC03 C3 Hoechst Schering AgrEvo GmbH, Frankfurt am Main, Germany Bayer Report No.: C000315 Edition Number: M-180457-01-1 Date: 1998-07-23 GLP/GEP: n.a., unpublished	No	Bayer
KCA 7.2.1.1 / 01	[REDACTED]	1991	Tralomethrin and deltamethrin - Comparative environmental fate during an aquatic microcosm test. [REDACTED] Report No.: A47913 Edition Number: M-136641-01-1 Date: 1991-09-27 GLP/GEP: Yes, unpublished	Yes	Bayer
KCA 7.2.1.1 / 02	Maurer, T.; Schaefer, D.	2002	Additional information on hydrolysis of deltamethrin at pH8 and contribution of hydrolysis to the overall dissipation of deltamethrin from surface/natural water bodies Code: AE F032640 Aventis CropScience GmbH, Frankfurt am Main, Germany Bayer Report No.: C018813 Edition Number: M-206738-01-1 Date: 2002-01-21 GLP/GEP: No, unpublished ... also filed: KCA 2.4 / 02 KCA 7.2.1.2 / 04	No	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCA 7.2.1.1 / 03	Smith, A. M.	1990	Determination of aqueous hydrolysis rate constant and half-life of deltamethrin. Bionomics Laboratories, USA Bayer Report No.: A45079 Edition Number: M-129026-01-1 Date: 1990-07-02 GLP/GEP: Yes, unpublished ... also filed: KCA 2.8 / 02	No	Bayer
KCA 7.2.1.2 / 01	Wang, W. W.; Reynolds, J. L.	1991	Aqueous photolysis of 14C-deltamethrin XenoBiotics Laboratories, Inc., Plainsboro, NJ, USA Bayer Report No.: A47960 Edition Number: M-136754-01-1 Date: 1991-07-18 GLP/GEP: Yes, unpublished ... also filed: KCA 2.8 / 03	No	Bayer
KCA 7.2.1.2 / 02	Bowman, B. T.; Carpenter, M.	1987	Determination of photodegradation of 14C-deltamethrin in aqueous solution ABC Laboratories, Inc., Columbia, MO, USA Bayer Report No.: A41919 Edition Number: M-124981-01-1 Date: 1987-06-25 GLP/GEP: Yes, unpublished	No	Bayer
KCA 7.2.1.2 / 03	Ruzo, L. O.; Holmstead, R. L.; Casida, J. E.	1977	Pyrethroid Photochemistry: Decamethrin Journal: Journal of Agricultural and Food Chemistry Volume: 25 Issue: 6 Pages: 1385-1394 Year: 1977 Report No.: A27135 Edition Number: M-099952-01-1 GLP/GEP: n.a., published	No	published

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCA 7.2.1.2 / 04	Maurer, T.; Schaefer, D.	2002	Additional information on hydrolysis of deltamethrin at pH8 and contribution of hydrolysis to the overall dissipation of deltamethrin from surface/natural water bodies Code: AE F032640 Aventis CropScience GmbH, Frankfurt am Main, Germany Bayer Report No.: C018813 Edition Number: M-206738-01-1 Date: 2002-01-21 GLP/GEP: No, unpublished ... also filed: KCA 2.4 / 02 KCA 7.2.1.1 / 02	No	Bayer
KCA 7.2.2.1 / 01	Wuethrich, V.	1994	Ready biodegradability: "Manometric respirometry test" for deltamethrin. RCC, Research and Consulting Company Ltd., Switzerland Bayer Report No.: A71006 Edition Number: M-149487-01-1 Date: 1994-07-01 GLP/GEP: Yes, unpublished ... also filed: KCA 7.2.2.3 / 01	No	Bayer
KCA 7.2.2.2 / 01	Wang, Q.; Liu, Q.; Li, J.; Chi, H.; Wang, J.	2011	Residual elimination and kinetics of low concentration of deltamethrin in water. Journal: Nongye Huanjing Kexue Xuebao, Volume 26, Issue 5, Page 1725-1728, Publication Year 2007 Year: 2007 Report No.: M-461213-01-2 GLP/GEP: n.a., published	No	published
KCA 7.2.2.3 / 01	Wuethrich, V.	1994	Ready biodegradability: "Manometric respirometry test" for deltamethrin. RCC, Research and Consulting Company Ltd., Switzerland Bayer Report No.: A71006 Edition Number: M-149487-01-1 Date: 1994-07-01 GLP/GEP: Yes, unpublished ... also filed: KCA 7.2.2.1 / 01	No	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCA 7.2.2.3 / 02	Muir, D. C. G.; Rawn, G. P.; Townsend, B. E.; Lockhart, W. L.; Greenhalgh, R.	1985	Bioconcentration of cypermethrin, deltamethrin, fenvalerate and permethrin by Chironomus tentans in sediment and water Journal: Environmental Toxicology and Chemistry Volume: 4 Pages: 51-61 Year: 1985 Report No.: A41920 Edition Number: M-124982-01-1 GLP/GEP: n.a., published ... also filed: KCA 8.2.8 / 01	No	published
KCA 7.2.2.3 / 03	Muttzall, P. I.	1993	Water / sediment biodegradation of (benzyl-14C) Deltamethrin. TNO, Netherlands Bayer Report No.: A50953 Edition Number: M-131938-01-1 Date: 1993-05-24 GLP/GEP: Yes, unpublished	No	Bayer
KCA 7.2.2.3 / 04	Hellpointner, E.; Menke, U.; Weuthen, M.	2012	[gem-dimethyl-14C]deltamethrin: Aerobic aquatic metabolism Bayer Report No.: EnSa-12-0181 Edition Number: M-434820-01-1 Date: 2012-07-05 GLP/GEP: Yes, unpublished	No	Bayer
KCA 7.2.2.3 / 05	Hardy, I. A. J.	2013	Kinetic modelling analysis of deltamethrin from a water/ sediment study Battelle UK Ltd., Ongar, Essex, United Kingdom Bayer Report No.: VC/11/015A Edition Number: M-461952-01-1 Date: 2013-07-10 GLP/GEP: No, unpublished	No	Bayer
KCA 7.2.2.3 / 06	Hardy, I. A. J.	2013	Kinetic modelling analysis of deltamethrin from two water/ sediment studies Battelle UK Ltd., Ongar, Essex, United Kingdom Bayer Report No.: VC/11/015B Edition Number: M-462042-01-1 Date: 2013-07-10 GLP/GEP: No, unpublished	No	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCA 7.2.2.3 / 07	Meyer, B.; Jones, R.; Moore, S.; Lam, C.	2013	Laboratory Degradation Rates of 11 Pyrethroids under Aerobic and Anaerobic Conditions Publisher: American Chemical Society Journal: Journal of Agricultural and Food Chemistry Ahead of Print Year: 2013 Report No.: M-462374-01-1 GLP/GEP: n.a., published	No	published
KCA 7.2.2.4 / 01	[REDACTED]	2005	Biological effects and fate of deltamethrin EW 015 in outdoor mesocosm ponds [REDACTED] Report No.: HBF/BT 07 Edition Number: M-246137-01-1 Date: 2005-02-24 GLP/GEP: Yes, unpublished	Yes	Bayer
KCA 7.3 / 01	Meichsner, C.	1999	Calculation of the indirect photolysis reaction using the incremental method of Atkinson and the Program AOPWIN, Version 1.80 Deltamethrin InfraServ GmbH & Co Hoechst KG, Frankfurt am Main, Germany Bayer Report No.: C002214 Edition Number: M-184105-01-1 Date: 1999-01-19 GLP/GEP: No, unpublished ... also filed: KCA 2.14 / 03	No	Bayer
KCA 7.3 / 02	Ruedel, H.; Waymann, B.	1993	Testing for volatility of 14C-deltamethrin (formulated as the product Decis fluessig EC): Volatilisation from plant surfaces volatilisation from soil. Fraunhofer Institut fuer Umweltchemie und Oekotoxikologie, Schmallenberg, Germany Bayer Report No.: A53910 Edition Number: M-131700-01-2 Date: 1993-04-23 GLP/GEP: Yes, unpublished	No	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCA 7.3 / 03	Buerkle, W. L.	1993	Deltamethrin, Hoe 032640, RU 22974: Testing the volatility of 14C-labelled active ingredient in the formulated product Decis fluessig EC03 in a wind-tunnel after application to leaves of dwarf bean plants Hoechst AG, Frankfurt am Main, Germany Bayer Report No.: A53755 Edition Number: M-132365-02-2 Date: 1993-10-06 ... amended: 1993-12-07 GLP/GEP: No, unpublished ... also filed: KCA 7.2.1 / 03	No	Bayer
KCA 7.5 / 01	Légrand, M. F.; Costentin, E.; Bruchet, A.	1991	Occurrence of 38 pesticides in various French surface and ground waters. Journal: Environmental Technology Volume: 12 Pages: 985;986 Year: 1991 Report No.: A47899 Edition Number: M-136600-01-1 GLP/GEP: n.a., published	No	published
KCA 7.5 / 02	Goncalves, C.; Alpendurada, M.	2004	Assessment of pesticide contamination in soil samples from an intensive horticulture area, using ultrasonic extraction and gas chromatography-mass spectrometry Journal: Talanta, Volume 65, Issue 5, Page 1179-1189, Publication Year 2005 Year: 2005 Report No.: M-460866-01-1 GLP/GEP: n.a., published	No	published
KCA 7.5 / 03	Fernandez-Alvarez, M.; Llompert, M.; Lamas, J.; Lores, M.; Garcia-Jares, C.; Cela, R.; Dagnac, T.	2008	Simultaneous determination of traces of pyrethroids, organochlorines and other main plant protection agents in agricultural soils by headspace solid-phase microextraction-gas chromatography Publisher: Elsevier B.V. Journal: J. Chromatogr., A, Volume 1188, Issue 2, Page 154-163, Publication Year 2008 Year: 2008 Report No.: M-455938-01-1 GLP/GEP: n.a., published	No	published

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCA 7.5 / 04	Rocha, M. J.; Ribeiro, M. F. T.; Cruzeiro, C.; Figueiredo, F.; Rocha, E.	2012	Development and validation of a GC-MS method for determination of 39 common pesticides in estuarine water - targeting hazardous amounts in the douro river estuary Journal: Int. J. Environ. Anal. Chem. Volume: 92 Issue: 14 Pages: 1587-1608 Year: 2012 Report No.: M-457780-01-1 GLP/GEP: n.a., published	No	published
KCA 7.5 / 05	Tsochatzis, E. D.; Tzimou-Tsitouridou, R.; Menkissoglu-Spiroudi, U.; Karpouzas, D. G.; Papageorgiou, M.	2012	Development and validation of an HPLC-DAD method for the simultaneous determination of most common rice pesticides in paddy water systems Journal: Int. J. Environ. Anal. Chem. Volume: 92 Issue: 5 Pages: 548-560 Year: 2012 Report No.: M-457791-01-1 GLP/GEP: n.a., published	No	published
KCA 7.5 / 06	Kronvang, B.; Laubel, A.; Larsen, S. E.; Friberg, N.	2003	Pesticides and heavy metals in Danish streambed sediment Journal: Hydrobiologia, Volume 494, Page 93-101, Publication Year 2003 Year: 2003 Report No.: M-460841-01-1 GLP/GEP: n.a., published	No	published
KCA 7.5 / 07	Badach, H.; Nazimek, T.; Kaminska, I. A.	2007	Pesticide content in drinking water samples collected from orchard areas in central Poland Journal: Ann. Agric. Environ. Med., Volume 14, Issue 1, Page 109-114, Publication Year 2007 Year: 2007 Report No.: M-458077-01-1 GLP/GEP: n.a., published	No	published
KCA 7.5 / 08	Hart, E.; Pastor, A.; Yusa, V.; Coscolla, C.	2013	GC-MS characterization of contemporary pesticides in PM10 of Valencia Region, Spain. Journal: Atmos. Environ., Volume 62, Page 118-129, Publication Year 2012 Year: 2012 Report No.: M-462167-01-1 GLP/GEP: n.a., published	No	published
KCA 7.5 / 09	Gonzalez, F.; Granero, A.; Glass, C.; Frenich, A.; Vidal, J.	2004	Screening method for pesticides in air by gas chromatography/tandem mass spectrometry Publisher: John Wiley & Sons, Ltd. Journal: Rapid Commun. Mass Spectrom., Volume 18, Issue 5, Page 537-543, Publication Year 2004 Year: 2004 Report No.: M-455826-01-1 GLP/GEP: n.a., published	No	published

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KCA 7.5 / 10	Schummer, C.; Mothiron, E.; Appenzeller, B. M. R.; Rizet, A. L.; Wennig, R.; Millet, M.	2010	Temporal variations of concentrations of currently used pesticides in the atmosphere of Strasbourg, France Journal: Environ. Pollut. (Oxford, U. K.), Volume 158, Issue 2, Page 576-584, Publication Year 2010 Year: 2010 Report No.: M-457521-01-1 GLP/GEP: n.a., published	No	published

Flupyradifurone

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KIIA 7.1.1 /01	Menke, U.	2011	[Pyridinylmethyl-14C]BYI 02960: Aerobic soil metabolism/degradation and time-dependent sorption in soils Bayer CropScience, Report No.: MEF-07/334, Edition Number: M-414615-01-2 EPA MRID No.: 48843674 Date: 2011-08-05 GLP/GEP: yes, unpublished ...also filed: KIIA 7.2.1 /01 ...also filed: KIIA 7.4.1 /03	N	Bayer
KIIA 7.1.1 /02	Menke, U.; Unold, M.	2011	[Furanone-4-14C]BYI 02960: Aerobic soil metabolism/degradation Bayer CropScience, Report No.: MEF-10/804, Edition Number: M-411625-01-2 EPA MRID No.: 48843676 Date: 2011-07-28 GLP/GEP: yes, unpublished ...also filed: KIIA 7.2.1 /02	N	Bayer
KIIA 7.1.1 /03	Ripperger, R. J.	2011	[Furanone-4-14C]BYI 02960: Aerobic soil metabolism in two US soils Bayer CropScience LP, Stilwell, KS, USA Bayer CropScience, Report No.: MERVP037-2, Edition Number: M-405497-03-1 EPA MRID No.: 48843677 Date: 2011-01-14 ...Amended: 2012-01-05 GLP/GEP: yes, unpublished ...also filed: KIIA 7.2.1 /03	N	Bayer
KIIA 7.1.1 /04	Menke, U.; Unold, M.	2011	[Ethyl-1-14C]BYI 02960: Aerobic soil metabolism Bayer CropScience, Report No.: MEF-10/858, Edition Number: M-414981-01-1 EPA MRID No.: 48843679 Date: 2011-09-08 GLP/GEP: yes, unpublished ...also filed: KIIA 7.2.1 /04	N	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KIIA 7.1.1 /05	Menke, U.; Unold, M.	2011	[Pyridine-2,6-14C]BYI 02960: Aerobic soil metabolism Bayer CropScience, Report No.: MEF-10/880, Edition Number: M-411693-01-2 EPA MRID No.: 48843681 Date: 2011-07-28 GLP/GEP: yes, unpublished ...also filed: KIIA 7.2.1 /05	N	Bayer
KIIA 7.1.1 /06	Shepherd, J. J.	2011	[Pyridine-2,6-14C]BYI 02960: Aerobic soil metabolism in two US soils Bayer CropScience LP, Stilwell, KS, USA Bayer CropScience, Report No.: MERV038-1, Edition Number: M-413425-02-1 EPA MRID No.: 48843682 Date: 2011-09-06 ...Amended: 2012-01-05 GLP/GEP: yes, unpublished ...also filed: KIIA 7.2.1 /06 ...also filed: KIIA 7.2.3 /04	N	Bayer
KIIA 7.1.2 /01	Menke, U.; Unold, M.	2012	[Furanone-4-14C] and [Ethyl-1-14C] and [Pyridine-2,6-14C]BYI 02960: Anaerobic Soil Metabolism Bayer CropScience, Report No.: MEF-11/514, Edition Number: M-421504-01-2 EPA MRID No.: 48843686 Date: 2012-01-03 GLP/GEP: yes, unpublished	N	Bayer
KIIA 7.1.2 /02	Mislankar, S. G.; Woodard, D.	2012	[Pyridine-2,6-14C]BYI 02960: Anaerobic soil metabolism Bayer CropScience LP, Stilwell, KS, USA Bayer CropScience, Report No.: MERV094, Edition Number: M-421993-01-1 Date: 2012-01-10 GLP/GEP: yes, unpublished	N	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KIIA 7.1.2 /03	Woodard, D.	2012	[Pyridine-2,614C]BYI 02960: Anaerobic soil metabolism in Springfield, Nebraska (USA) soil Bayer CropScience LP, Stilwell, KS, USA Bayer CropScience, Report No.: MERV006, Edition Number: M-424987-01-1 Date: 2012-02-14 GLP/GEP: yes, unpublished	N	Bayer
KIIA 7.1.3 /01	Menke, U.; Unold, M.	2011	[Pyridinylmethyl-14C]BYI 02960 and [furanone-4-14C]BYI 02960: Phototransformation on soil Bayer CropScience, Report No.: MEF-10/351, Edition Number: M-405776-01-2 EPA MRID No.: 48843672 Date: 2011-03-24 GLP/GEP: yes, unpublished	N	Bayer
KIIA 7.2.1 /01	Menke, U.	2011	[Pyridinylmethyl-14C]BYI 02960: Aerobic soil metabolism/degradation and time-dependent sorption in soils Bayer CropScience, Report No.: MEF-07/334, Edition Number: M-414615-01-2 EPA MRID No.: 48843674 Date: 2011-08-05 GLP/GEP: yes, unpublished ...also filed: KIIA 7.1.1 /01 ...also filed: KIIA 7.4.1 /03	N	Bayer
KIIA 7.2.1 /02	Menke, U.; Unold, M.	2011	[Furanone-4-14C]BYI 02960: Aerobic soil metabolism/degradation Bayer CropScience, Report No.: MEF-10/804, Edition Number: M-411625-01-2 EPA MRID No.: 48843676 Date: 2011-07-28 GLP/GEP: yes, unpublished ...also filed: KIIA 7.1.1 /02	N	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KIIA 7.2.1 /03	Ripperger, R. J.	2011	[Furanone-4-14C]BYI 02960: Aerobic soil metabolism in two US soils Bayer CropScience LP, Stilwell, KS, USA Bayer CropScience, Report No.: MERVP037-2, Edition Number: M-405497-03-1 EPA MRID No.: 48843677 Date: 2011-01-14 ...Amended: 2012-01-05 GLP/GEP: yes, unpublished ...also filed: KIIA 7.1.1 /03	N	Bayer
KIIA 7.2.1 /04	Menke, U.; Unold, M.	2011	[Ethyl-1-14C]BYI 02960: Aerobic soil metabolism Bayer CropScience, Report No.: MEF-10/858, Edition Number: M-414981-01-1 EPA MRID No.: 48843679 Date: 2011-09-08 GLP/GEP: yes, unpublished ...also filed: KIIA 7.1.1 /04	N	Bayer
KIIA 7.2.1 /05	Menke, U.; Unold, M.	2011	[Pyridine-2,6-14C]BYI 02960: Aerobic soil metabolism Bayer CropScience, Report No.: MEF-10/880, Edition Number: M-411693-01-2 EPA MRID No.: 48843681 Date: 2011-07-28 GLP/GEP: yes, unpublished ...also filed: KIIA 7.1.1 /05	N	Bayer
KIIA 7.2.1 /06	Shepherd, J. J.	2011	[Pyridine-2,6-14C]BYI 02960: Aerobic soil metabolism in two US soils Bayer CropScience LP, Stilwell, KS, USA Bayer CropScience, Report No.: MERVP038-1, Edition Number: M-413425-02-1 EPA MRID No.: 48843682 Date: 2011-09-06 ...Amended: 2012-01-05 GLP/GEP: yes, unpublished ...also filed: KIIA 7.1.1 /06 ...also filed: KIIA 7.2.3 /04	N	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KIIA 7.2.3 /01	Lowden, P.; Oddy, A. M.; Jones, M. K.	1997	Rate of degradation of the acid metabolite, (14C)-IC-O in three soils NI-25 Rhone-Poulenc Agriculture Ltd., Ongar, Essex, United Kingdom Bayer CropScience, Report No.: C007660, Edition Number: M-196378-01-1 Date: 1997-08-14 GLP/GEP: yes, unpublished	N	Bayer
KIIA 7.2.3 /04	Shepherd, J. J.	2011	[Pyridine-2,6-14C]BYI 02960: Aerobic soil metabolism in two US soils Bayer CropScience LP, Stilwell, KS, USA Bayer CropScience, Report No.: MERV038-1, Edition Number: M-413425-02-1 EPA MRID No.: 48843682 Date: 2011-09-06 ...Amended: 2012-01-05 GLP/GEP: yes, unpublished ...also filed: KIIA 7.1.1 /06 ...also filed: KIIA 7.2.1 /06	N	Bayer
KIIA 7.3.1 /01	Heinemann, O.	2011	Determination of the residues of BYI 02960 in/on soil after spraying of BYI 02960 SL 200 in the field in Germany, Italy, Spain and the United Kingdom Bayer CropScience, Report No.: 09-2702, Report includes Trial Nos.: 09-2702-01 09-2702-02 09-2702-03 09-2702-05 09-2702-06 09-2702-07 Edition Number: M-414245-01-1 Date: 2011-09-13 GLP/GEP: yes, unpublished	N	Bayer
KIIA 7.4.1 /01	Menke, U.; Telscher, M.	2008	[Pyridinylmethyl-14C]BYI 02960: Adsorption to and desorption from soils Bayer CropScience, Report No.: MEF-08/261, Edition Number: M-327492-01-2 EPA MRID No.: 48843662 Date: 2008-12-17 GLP/GEP: yes, unpublished	N	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KIIA 7.4.1 /02	Stroech, K.	2010	[Pyridinylmethyl-14C]BYI 02960: Adsorption/desorption on two soils Bayer CropScience LP, Stilwell, KS, USA Bayer CropScience, Report No.: MERVP017, Edition Number: M-363541-01-1 EPA MRID No.: 48843663 Date: 2010-01-29 GLP/GEP: yes, unpublished	N	Bayer
KIIA 7.4.1 /03	Menke, U.	2011	[Pyridinylmethyl-14C]BYI 02960: Aerobic soil metabolism/degradation and time-dependent sorption in soils Bayer CropScience, Report No.: MEF-07/334, Edition Number: M-414615-01-2 EPA MRID No.: 48843674 Date: 2011-08-05 GLP/GEP: yes, unpublished ...also filed: KIIA 7.1.1 /01 ...also filed: KIIA 7.2.1 /01	N	Bayer
KIIA 7.4.2 /01	Liu, A. C.	1997	Soil adsorption/desorption study 6-chloronicotinic acid (Acetamiprid metabolite) Rhone-Poulenc Ag Company, RTP, NC, USA Bayer CropScience, Report No.: C007666, Edition Number: M-196394-01-1 Date: 1997-09-15 GLP/GEP: yes, unpublished	N	Bayer
KIIA 7.4.2 /02	Menke, U.; Unold, M.	2011	[1-14C]BYI 02960-DFA (BCS-AB60481): Adsorption to and desorption from five soils Bayer CropScience, Report No.: MEF-10/538, Edition Number: M-413836-01-2 EPA MRID No.: 48843665 Date: 2011-08-26 GLP/GEP: yes, unpublished	N	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KIIA 7.4.3 /01	de Souza, T. J. T.	2012	Amendment no 001 to final report - Mobility of [Pyridine-2,6-14C]-BYI 02960 in Brazilian soils - Soil columns leaching method Bioensaios Analises e Consultoria Ambiental S/C Ltda., Viamao, Brazil Bayer CropScience, Report No.: 2301-LIX-344-11, Edition Number: M-424966-02-2 Date: 2012-02-08 ...Amended: 2012-06-05 GLP/GEP: yes, unpublished	N	Bayer
KIIA 7.4.9 /01	Smeykal, H.	2008	BYI 02960, pure substance: Vapour pressure - Final report Siemens AG, Frankfurt am Main, Germany Bayer CropScience, Report No.: 20080615.01, Edition Number: M-309853-01-1 Date: 2008-10-10 GLP/GEP: yes, unpublished ...also filed: KIIA 2.3.1 /01	N	Bayer
KIIA 7.5 /01	Mislankar, S.; Woodard, D.	2011	BYI-02960: Hydrolytic degradation Bayer CropScience LP, Stilwell, KS, USA Bayer CropScience, Report No.: MERVP019, Edition Number: M-398952-01-1 Date: 2011-01-07 GLP/GEP: yes, unpublished ...also filed: KIIA 2.9.1 /01	N	Bayer
KIIA 7.6 /01	Hall, L. R.	2011	Phototransformation of [14C]BYI 02960 in aqueous pH 7 buffer - amended report Bayer CropScience LP, Stilwell, KS, USA Bayer CropScience, Report No.: MERVP042-1, Edition Number: M-418426-02-1 Date: 2011-11-28 ...Amended: 2012-03-05 GLP/GEP: yes, unpublished ...also filed: KIIA 2.9.2 /01 ...also filed: KIIA 2.9.4 /01	N	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KIIA 7.6 /02	Heinemann, O.	2011	BYI 02960: Determination of the quantum yield and assessment of the environmental half-life of the direct photo-degradation in water Bayer CropScience, Report No.: MEF-11/554, Edition Number: M-414756-01-2 EPA MRID No.: 48843668 Date: 2011-09-26 GLP/GEP: yes, unpublished ...also filed: KIIA 2.9.3 /01 ...also filed: KIIA 2.9.4 /02	N	Bayer
KIIA 7.6 /03	Hall, L. R.	2011	Phototransformation of [14C]BYI 02960 in natural water Bayer CropScience LP, Stilwell, KS, USA Bayer CropScience, Report No.: MERVP020, Edition Number: M-415368-01-1 Date: 2011-08-16 GLP/GEP: yes, unpublished	N	Bayer
KIIA 7.8.2 /01	Xu, T.	2012	[Pyridine-2,6-14C]BYI 02960: Anaerobic aquatic metabolism in two water/sediment systems Bayer CropScience LP, Stilwell, KS, USA Bayer CropScience, Report No.: MERVP027, Edition Number: M-422616-01-1 Date: 2012-01-17 GLP/GEP: yes, unpublished	N	Bayer
KIIA 7.8.3 /01	Hellpointner, E.; Unold, M.	2012	[Pyridine-2,6-14C]BYI 02960: Aerobic aquatic metabolism Bayer CropScience, Report No.: MEF-11/907, Edition Number: M-422359-01-1 EPA MRID No.: 48843690 Date: 2012-01-12 GLP/GEP: yes, unpublished	N	Bayer
KIIA 7.8.3 /02	Unold, M.; Menke, U.	2012	[Furanone-4-14C] and [ethyl-1-14C]BYI 02960: Aerobic aquatic metabolism Bayer CropScience, Report No.: MEF-10/730, Edition Number: M-426504-01-1 EPA MRID No.: 48843692 Date: 2012-02-16 GLP/GEP: yes, unpublished	N	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KIIA 7.8.3 /03	Hellpointner, E.; Unold, M.	2012	[1-14C]BYI 02960-DFA (BCS-AB60481): Aerobic aquatic degradation Bayer CropScience, Report No.: M-422371-01-1 , Edition Number: M-422371-01-1 EPA MRID No.: 48843691 Date: 2012-01-12 GLP/GEP: yes, unpublished	N	Bayer
KIIA 7.8.3 /04	Bruns, E.	2012	Fate of BYI 02960 (tech.) in outdoor microcosm ponds simulating actual exposure conditions in agricultural use Bayer CropScience, Report No.: EBRVP109, Edition Number: M-427167-01-1 Date: 2012-03-20 GLP/GEP: yes, unpublished	N	Bayer
KIIA 7.13 /01	Bogdoll, B.; Strunk, B.	2011	BCS-CC98193 (BYI 02960-DFEAF): Water solubility at pH 5, pH 7 and pH 9 (flask method) Bayer CropScience, Report No.: PA11/018, Edition Number: M-415753-01-1 Date: 2011-10-04 GLP/GEP: yes, unpublished	N	Bayer
KIIA 7.13 /02	Wiche, A.; Ziemer, F.	2011	BCS-CR74729 (BYI 02960-succinamide): Water solubility at pH 5, pH 7 and pH 9 (flask method) Bayer CropScience, Report No.: PA11/078, Edition Number: M-416651-01-1 Date: 2011-11-04 GLP/GEP: yes, unpublished	N	Bayer
KIIA 7.13 /03	Ziemer, F.; Strunk, B.	2011	BCS-CU93236 (BYI 02960-azabicyclosuccinamide Na-salt): Water solubility at pH 5, pH 7 and pH 9 (flask method) Bayer CropScience, Report No.: PA11/094, Edition Number: M-417069-01-1 Date: 2011-11-09 GLP/GEP: yes, unpublished	N	Bayer
KIIA 7.13 /04	Bogdoll, B.; Strunk, B.	2011	Difluoroacetic acid (BCS-AA56716): Miscibility with distilled water and solubility in water in a pH range of 1.6 to 13 Bayer CropScience, Report No.: PA10/042, Edition Number: M-418554-01-1 Date: 2011-11-29 GLP/GEP: yes, unpublished	N	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KIIA 7.13 /05	Kenji, M.	2001	Solubility of IC-0 in water Nisso Chemical Analysis Serv. Co., Ltd., Japan Nippon Soda, Report No.: C016679, Edition Number: M-202871-01-1 Date: 2001-09-27 GLP/GEP: yes, unpublished	N	Bayer
KIIA 7.13 /06	Eyrich, U.; Ziemer, F.	2011	BCS-CR74729 (BYI 02960-succinamide): Partition coefficients 1-octanol / water at pH 5, pH 7 and pH 9 (shake flask method) Bayer CropScience, Report No.: PA11/079, Edition Number: M-416883-01-1 Date: 2011-11-04 GLP/GEP: yes, unpublished	N	Bayer
KIIA 7.13 /07	Eyrich, U.; Ziemer, F.	2011	BCS-CU93236 (BYI 02960-azabicyclosuccinamide Na-salt): Partition coefficients 1-octanol / water at pH 5, pH 7 and pH 9 (shake flask method) Bayer CropScience, Report No.: PA11/093, Edition Number: M-416656-01-1 Date: 2011-11-04 GLP/GEP: yes, unpublished	N	Bayer
KIIA 7.13 /08	Eyrich, U.; Ziemer, F.	2011	Difluoroacetic acid (BCS-AA56716): Partition coefficients 1-octanol / water at pH 5, pH 7 and pH 9 (shake flask method) Bayer CropScience, Report No.: PA10/043, Edition Number: M-416624-01-1 Date: 2011-11-04 GLP/GEP: yes, unpublished	N	Bayer
KIIA 7.13 /09	Shirou, H.	2001	Partition coefficient (n-octanol/water) of IC-0 Nisso Chemical Analysis Serv. Co., Ltd., Japan Nippon Soda, Report No.: C017442, Edition Number: M-204285-01-1 Date: 2001-11-16 GLP/GEP: yes, unpublished	N	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
KIIA 7.13 /10	Wiche, A.; Bogdoll, B.	2011	BCS-CC98193 (BYI 02960-DFEAF): Dissociation constant in water Bayer CropScience, Report No.: PA11/021, Edition Number: M-415757-01-1 Date: 2011-10-04 GLP/GEP: yes, unpublished	N	Bayer
KIIA 7.13 /11	Winkler, S.	2011	Difluoro acetic acid (BCS-AA56716): Determination of the dissociation constant in water Siemens AG, Frankfurt am Main, Germany Bayer CropScience, Report No.: 20100366.02, Edition Number: M-418626-01-1 Date: 2011-11-18 GLP/GEP: yes, unpublished	N	Bayer
KIIA 7.13 /12	Kenji, M.	2001	Dissociation constant of IC-0 Nisso Chemical Analysis Serv. Co., Ltd., Japan Nippon Soda, Report No.: C016811, Edition Number: M-203097-01-1 Date: 2001-10-17 GLP/GEP: yes, unpublished	N	Bayer
KIIA 7.13 /13	Dornhagen, J.	2011	BCS-CC98193 (BYI 02960-DFEAF): Vapour pressure Siemens AG, Frankfurt am Main, Germany Bayer CropScience, Report No.: 20110091.01, Edition Number: M-420457-01-1 Date: 2011-11-07 GLP/GEP: yes, unpublished	N	Bayer
KIIA 7.13 /14	Smeykal, H.	2011	Difluoroacetic acid (BCS-AA56716): Vapour pressure Siemens AG, Frankfurt am Main, Germany Bayer CropScience, Report No.: 20100366.01, Edition Number: M-418553-01-1 Date: 2011-11-24 GLP/GEP: yes, unpublished	N	Bayer

List of data submitted by the applicant and not relied on

Data Point	Author(s)	Year	Title Company Report No. Source GLP or GEP status published or not	Vertebrate study Y/N	Owner	Reason for rejection
KCA 7.1.2.1.1 / 01	Schaefer, D.; Mikolasch, B.	2004	Kinetic evaluation of soil laboratory studies with deltamethrin and its metabolites D-COOH, Br2CA and mPBacid to determine input parameters for model calculations Report No.: C044585, Edition Number: M-236281-01-1 Bayer CropScience AG, Monheim, Germany GLP/GEP: No unpublished	No	Bayer	Kinetic re-evaluation not necessary since sufficient information available from the EU review.
KCA 7.1.2.2.1 / 01	Schaefer, D.	2003	Kinetic evaluation of Deltamethrin field dissipation studies to determine input parameters for the calculation of PEC values in soil Code:AE F032640 Report No.: C036884, Edition Number: M-221665-01-1 Bayer CropScience AG, Monheim, Germany GLP/GEP: No unpublished	No	Bayer	Kinetic re-evaluation not necessary since sufficient information available from the EU review.
KCP 9.2.4.1 / 01	Schaefer, D.; Porschewski, R.	2019	Deltamethrin (DLT) and metabolite: PECgw FOCUS PEARL, PELMO, MACRO EUR - Use in oil seed rape in Europe Report No.: EnSa-19-0092, Edition Number: M-658039-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	Bayer	Calculations based on new active substance data, not agreed by the zRMS.
KCP 9.2.4.1 / 02	Schaefer, D.; Porschewski, R.	2019	Deltamethrin (DLT) and metabolite: PECgw FOCUS PEARL, PELMO, MACRO EUR - Use in oil seed rape in Europe Report No.: EnSa-19-0093, Edition Number: M-658043-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	Bayer	Calculations based on new active substance data, not agreed by the zRMS.
KCP 9.2.4.1 / 03	Schaefer, D.; Porschewski, R.	2019	Deltamethrin (DLT) and metabolite: PECgw FOCUS PEARL, PELMO, MACRO EUR - Use in oil seed rape in Europe Report No.: EnSa-19-0094, Edition Number: M-658042-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	Bayer	Calculations based on new active substance data, not agreed by the zRMS.
KCP 9.2.4.1 / 04	Hammel, K.; Porschewski, R.	2019	Flupyradifurone (FPF) and metabolites: PECgw FOCUS PEARL, PELMO, MACRO EUR - Use in oil seed rape in Europe Report No.: EnSa-19-0089, Edition Number: M-657208-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	Bayer	Calculations based on TSCF of 0.5, not agreed by the zRMS.

Data Point	Author(s)	Year	Title Company Report No. Source GLP or GEP status published or not	Vertebrate study Y/N	Owner	Reason for rejection
KCP 9.2.4.1 / 05	Hammel, K.; Porschewski, R.	2019	Flupyradifurone (FPF) and metabolites: PECgw FOCUS PEARL, PELMO, MACRO EUR - Use in oil seed rape in Europe Report No.: EnSa-19-0090, Edition Number: M-657210-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	Bayer	Calculations based on TSCF of 0.5, not agreed by the zRMS.
KCP 9.2.4.1 / 06	Hammel, K.; Porschewski, R.	2019	Flupyradifurone (FPF) and metabolites: PECgw FOCUS PEARL, PELMO, MACRO EUR - Use in oil seed rape in Europe Report No.: EnSa-19-0091, Edition Number: M-657212-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	Bayer	Calculations based on TSCF of 0.5, not agreed by the zRMS.
KCP 9.2.4.1 / 08	Hammel, K.; Porschewski, R.	2019	Flupyradifurone (FPF) and metabolites: PECgw FOCUS PEARL, PELMO, MACRO EUR using tier 2 (TDS) - Use in oil seed rape in Europe Report No.: EnSa-19-0119, Edition Number: M-657217-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	Bayer	Calculations based on TSCF of 0.5, not agreed by the zRMS.
KCP 9.2.4.1 / 09	Hammel, K.; Porschewski, R.	2019	Flupyradifurone (FPF) and metabolites: PECgw FOCUS PEARL, PELMO, MACRO EUR using tier 2 (TDS) - Use in oil seed rape in Europe Report No.: EnSa-19-0120, Edition Number: M-657219-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	Bayer	Calculations based on TSCF of 0.5, not agreed by the zRMS.
KCP 9.2.4.1 / 10	Hammel, K.; Porschewski, R.	2019	Flupyradifurone (FPF): Core PECgw EUR - Modelling core info document for groundwater risk assessment in Europe Report No.: EnSa-17-0508, Edition Number: M-613915-02-1 Bayer AG, Crop Science Division, Monheim, Germany ... amended: 2019-02-22 GLP/GEP: No unpublished	No	Bayer	Calculations based on TSCF of 0.5, not agreed by the zRMS.
KCP 9.2.4.1 / 11 ... also filed: KCP 9.2.5 / 09	Hammel, K.	2020	Statement: Applicability of TSCF = 0.5 (plant uptake factor) for the active flupyradifurone for exposure modelling (PECgw, PECsw) Report No.: M-755019-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: n.a. unpublished	No	Bayer	Consideration of TSCF of 0.5 not agreed by the zRMS (see point 8.8.2.2 of this document for details)

Data Point	Author(s)	Year	Title Company Report No. Source GLP or GEP status published or not	Vertebrate study Y/N	Owner	Reason for rejection
KCP 9.2.5 / 01	Schaefer, D.; Srinivasan, P.	2019	Deltamethrin (DLT) and metabolite: PECsw,sed FOCUS EUR - Use in winter and spring oilseed rape in Europe Report No.: EnSa-19-0098, Edition Number: M-658044-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	Bayer	Calculations based on new active substance data, not agreed by the zRMS.
KCP 9.2.5 / 02	Schaefer, D.; Srinivasan, P.	2019	Deltamethrin (DLT) and metabolite: PECsw,sed FOCUS EUR - Use in winter and spring oilseed rape in Europe Report No.: EnSa-19-0099, Edition Number: M-658048-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	Bayer	Calculations based on new active substance data, not agreed by the zRMS.
KCP 9.2.5 / 03	Schaefer, D.; Srinivasan, P.	2019	Deltamethrin (DLT) and metabolite: PECsw,sed FOCUS EUR - Use in winter and spring oilseed rape in Europe Report No.: EnSa-19-0100, Edition Number: M-658049-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	Bayer	Calculations based on new active substance data, not agreed by the zRMS.
KCP 9.2.5 / 04	Schad, T.; Zerbe, P.	2016	Deltamethrin (DLT) core PECsw EUR - Modelling core info document for surface water risk assessment in Europe Report No.: EnSa-16-0250, Edition Number: M-553324-02-1 Bayer CropScience AG, Monheim, Germany ... amended: 2016-05-20 GLP/GEP: No unpublished	No	Bayer	Calculations based on new active substance data, not agreed by the zRMS.
KCP 9.2.5 / 05	Hammel, K.; Srinivasan, P.	2019	Flupyradifurone (FPF) and metabolites: PECsw,sed FOCUS EUR - Use in winter and spring oilseed rape in Europe Report No.: EnSa-19-0095, Edition Number: M-657234-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	Bayer	Calculations based on TSCF of 0.5, not agreed by the zRMS.
KCP 9.2.5 / 06	Hammel, K.; Srinivasan, P.	2019	Flupyradifurone (FPF) and metabolites: PECsw,sed FOCUS EUR - Use in winter and spring oilseed rape in Europe Report No.: EnSa-19-0096, Edition Number: M-657241-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	Bayer	Calculations based on TSCF of 0.5, not agreed by the zRMS.

Data Point	Author(s)	Year	Title Company Report No. Source GLP or GEP status published or not	Vertebrate study Y/N	Owner	Reason for rejection
KCP 9.2.5 / 07	Hammel, K.; Srinivasan, P.	2019	Flupyradifurone (FPF) and metabolites: PEC _{sw} , sed FOCUS EUR - Use in winter and spring oilseed rape in Europe Report No.: EnSa-19-0097, Edition Number: M-657360-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: No unpublished	No	Bayer	Calculations based on TSCF of 0.5, not agreed by the zRMS.
KCP 9.2.5 / 08	Hammel, K.; Porschewski, R.	2019	Flupyradifurone (FPF): Core PEC _{sw} EUR - Modelling core info document for surface water risk assessment in Europe Report No.: EnSa-17-0509, Edition Number: M-613927-02-1 Bayer AG, Crop Science Division, Monheim, Germany ... amended: 2019-02-22 GLP/GEP: No unpublished	No	Bayer	Calculations based on TSCF of 0.5, not agreed by the zRMS.
KCP 9.2.5 / 09 ... also filed: KCP 9.2.4.1 / 11	Hammel, K.	2020	Statement: Applicability of TSCF = 0.5 (plant uptake factor) for the active flupyradifurone for exposure modelling (PEC _{gw} , PEC _{sw}) Report No.: M-755019-01-1 Bayer AG, Crop Science Division, Monheim, Germany GLP/GEP: n.a. unpublished	No	Bayer	Consideration of TSCF of 0.5 not agreed by the zRMS (see point 8.8.2.2 of this document for details)

List of data relied on not submitted by the applicant but necessary for evaluation

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Vertebrate study Y/N	Owner
There were no data relied on and not submitted by the Applicant.					

Appendix 2 Detailed evaluation of the new Annex II studies

A 2.1 KCA 7.1 Fate and behaviour in soil

A 2.1.1 KCA 7.1.1 Route of degradation in soil

A 2.1.1.1 KCA 7.1.1.1 Aerobic degradation

A 2.1.1.2 KCA 7.1.1.2 Anaerobic degradation

A 2.1.1.3 KCA 7.1.1.3 Soil photolysis

A 2.1.2 KCA 7.1.2 Rate of degradation in soil

A 2.1.2.1 KCA 7.1.2.1 Laboratory studies

A 2.1.2.1.1 KCA 7.1.2.1.1 Aerobic degradation of the active substance

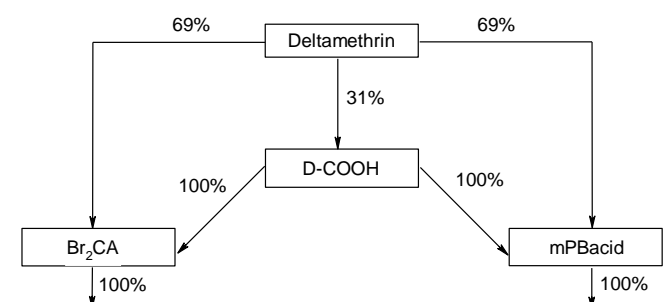
Comments of zRMS:	The study was not validated by the zRMS since sufficient information was available from the EU review and kinetic re-evaluation of laboratory studies on degradation of deltamethrin in soil was not necessary.
-------------------	---

Reference:	KCA 7.1.2.1.1/01
Title:	Kinetic evaluation of soil laboratory studies with deltamethrin and its metabolites D-COOH, Br ₂ CA and mPBacid to determine input parameters for model calculations
Report:	Schaefer, D.; Mikolasch, B.; 2004; C044585; M-236281-01-1
Guideline(s):	--
Deviations:	--
GLP/GEP:	no
Acceptability:	Not validated, not required to finalise the exposure assessment.
Duplication (if vertebrate study):	

Materials and methods:

Experimental data from laboratory soil degradation studies were used to quantify the degradation kinetics of deltamethrin in soil; data from laboratory soil degradation studies were used to quantify the degradation kinetics of the deltamethrin metabolites deltamethrin-COOH (AE 0035100), Br₂CA (AE F108565) and mPBacid (AE F109036) in soil. The kinetic evaluation was conducted with the ACSL Optimize software package (ACSL, 1996). The objective was to determine first order soil DT₅₀ values as input parameters for simulation models. In all cases the chemical reactions could be well described by first order kinetics and all kinetics parameter passed a significance test. The first order DT₅₀ values were calculated for study conditions and normalised to a reference temperature of 25°C and the reference soil moisture (field capacity), using the standard procedures described in FOCUS (2000).

Figure 1: Degradation pathway of deltamethrin applied to the calculations



Results and discussions:

The figure summarised for deltamethrin and Br₂CA listed in Table 1 below differ slightly from the values included in the list of end-points due to the re-evaluation. Since there were no obvious relations between study conditions and DT₅₀ values, multiple values from the same soil were geometrically averaged. The kinetic evaluation also indicated that on average 31% of the initial degradation of deltamethrin occurs via oxidation of the nitrile group (forming deltamethrin COOH), while 69% occurs via ester cleavage (forming Br₂CA and mPBacid).

Table 1: Kinetics evaluation of the degradation deltamethrin and its metabolites in aerobic soil at study conditions and referenced at 25°C and reference soil moisture (field capacity)

Soil	First Order DT ₅₀ at Study Conditions (days)				First Order DT ₅₀ at 25 °C and Field Capacity (days)			
	Deltamethrin ^A	D-COOH	Br ₂ CA	mPBacid	Deltamethrin	D-COOH	Br ₂ CA	mPBacid
Casa Grand (n=2)	17.7	-	12.3	-	16.7	-	11.6	-
Dubbs (n=13)	18.4	8.5 ^B	1.4	0.9	17.6	4.5	0.9	0.9
Hagerstown (n=4)	12.7	-	0.8	0.7	11.0	-	0.7	0.6
Memphis (n=4)	26.5				26.5			
Geometric mean	18.2		2.0	0.8	17.1	4.5	2.0	0.8

^A Studies conducted at 25°C

^B Including 2 values from studies at 10°C

n = number of data sets per soil

note: DT₅₀ values are the geometric means from multiple values for the same soil at different study conditions.

Conclusion:

It can be concluded that deltamethrin and its main metabolites are rapidly degraded in soil under laboratory conditions. For deltamethrin a first order DT₅₀ values ranging from 11.0 to 26.5 days normalised to 25°C and field capacity resulted. The geometric mean DT₅₀ of 17.1 days can be used to characterise the soil degradation of deltamethrin in FOCUS calculations.

- A 2.1.2.1.2 KCA 7.1.2.1.2 Aerobic degradation of metabolites, breakdown and reaction products
- A 2.1.2.1.3 KCA 7.1.2.1.3 Anaerobic degradation of the active substance
- A 2.1.2.1.4 KCA 7.1.2.1.4 Anaerobic degradation of metabolites, breakdown and reaction products
- A 2.1.2.2 KCA 7.1.2.2 Field studies

A 2.1.2.2.1 KCA 7.1.2.2.1 Soil dissipation studies

Comments of zRMS:	The study was not validated by the zRMS since sufficient information was available from the EU review and kinetic re-evaluation of field dissipation studies on degradation of deltamethrin in soil was not necessary.
-------------------	--

Reference:	KCA 7.1.2.2.1/01
Title:	Kinetic evaluation of Deltamethrin field dissipation studies to determine input parameters for the calculation of PEC values in soil Code:AE F032640
Report:	Schaefer, D.; 2003; C036884; M-221665-01-1
Guideline(s):	--
Deviations:	--
GLP/GEP:	no
Acceptability:	Not validated, not required to finalise the exposure assessment.
Duplication (if vertebrate study):	

Materials and methods:

This report describes a kinetics re-evaluation of field dissipation data for deltamethrin. The re-evaluation was necessary, as existing evaluations were based on the “Timme-Frehse” log-linear fitting approach (in the original study reports), which is no longer recommended for kinetic evaluations and was considered to deliver unreliable DT₅₀ values by the Rapporteur Member State Sweden (KEMI) during the review of deltamethrin under EU directive 91/414. The reason for this consideration given by the RMS Sweden was the poor goodness of fit of the DT₅₀ estimations. Therefore, the RMS Sweden based the DT₅₀ estimation on visual inspection of the dissipation curves (EU Monograph on deltamethrin; KEMI, 1998).

The objective of this re-evaluation was therefore to derive reliable input parameters for the calculation of soil PEC values. The EU Monograph on deltamethrin and EU Review Report on deltamethrin were fully taken into account.

The kinetics evaluation was based on experimental data from two deltamethrin field dissipation studies at four sites in Germany and at one site in the U.S. evaluated in the Monograph.

Results and discussions:

First order kinetics allowed an adequate description of the soil dissipation of deltamethrin, with an acceptable curve fit ($r^2 > 0.8$) for four of the five sites (only exception: test site Stelle). The first order DT₅₀ values for the field dissipation of deltamethrin ranged from 8 to 28 days and the first order DT₉₀ values ranged from 25 to 94 days. These results are in good agreement with the laboratory data.

Table 2: Results of the kinetic evaluation of the field dissipation studies with deltamethrin: Kinetic parameters and r^2 values (as a measure of the goodness of fit)

Site	Initial concentration c_0 (µg/kg)	Dissipation rate k (1/d)	r^2
Minnesota (USA)	11.000	0.0417	0.808
Stelle (Germany)	12.001	0.0292	0.563
Bornheim (Germany)	13.550	0.0409	0.934
Gersthofen (Germany)	21.003	0.0920	0.986
Hattersheim (Germany)	11.539	0.0245	0.976

Table 3: First-order DT₅₀ and DT₉₀ values for the field dissipation of deltamethrin at the five test sites

Site	DT ₅₀ of deltamethrin (days)	DT ₉₀ of deltamethrin (days)
Minnesota (USA)	16.6	55.3
Stelle (Germany)	23.7	78.8
Bornheim (Germany)	17.0	56.3
Gersthofen (Germany)	7.5	25.0
Hattersheim (Germany)	28.3	94.0

Conclusion:

The calculated first order DT_{50} values for the field dissipation of deltamethrin ranged from 8 to 28 days. This is very similar to the DT_{50} values observed in laboratory studies (range 18 to 35 days, with a mean of 26 days).

It is concluded that the worst case field half life of 28.3 days provides a conservative description of the soil dissipation of deltamethrin and is an appropriate input parameter for the calculation of PEC_{soil} .

A 2.1.2.2.2 KCA 7.1.2.2.2 Soil accumulation studies

A 2.1.3 KCA 7.1.3 Adsorption and desorption in soil

A 2.1.3.1 KCA 7.1.3.1 Adsorption and desorption

A 2.1.3.1.1 KCA 7.1.3.1.1 Adsorption and desorption of the active substance

A 2.1.3.1.2 KCA 7.1.3.1.2 Adsorption and desorption of metabolites, breakdown and reaction products

A 2.1.3.2 KCA 7.1.3.2 Aged sorption

A 2.1.4 KCA 7.1.4 Mobility in soil

Comments of zRMS:	The study was not validated by the zRMS, but its results were considered for purposes of the exposure assessment as being already agreed in the course of the zonal evaluation of another deltamethrin formulation of the same Applicant (Decis 15 EW evaluated by BE as the zRMS in 2018). Furthermore, the study was also agreed by the RMS in the course of the ongoing EU renewal process of deltamethrin (LoEP amended in 2019 is available on EFSA DMS).
-------------------	--

Reference:	KCA 7.1.4/01
Title:	AE F108565 (Br2CA): Vapour pressure
Report:	Dornhagen, J.; 2012; 20110093.01; M-438493-01-1
Guideline(s):	European Commission Regulation (EC) No. 440/2008, A.4.; OECD Test Guideline 104; EPA Product Properties Test Guideline OPPTS 830.7950
Deviations:	not specified
GLP/GEP:	yes
Acceptability:	Not validated by the zRMS for DLT+FPF EC 85, but results considered in exposure assessment as being already agreed at the zonal level as well as in the course of the ongoing EU renewal process.
Duplication (if vertebrate study):	

Performance of the test:

In this study, the vapour pressure of the metabolite Br2CA was determined.

Before starting the vapour pressure measurement, the thermal stability was determined by differential scanning calorimetry (DSC). The test item was degassed under vacuum at approximately 10^{-5} hPa at 30 ± 5 °C for 17 hours before the determination of vapor pressure.

For measurement, the test item is filled into a furnace in the chamber from which the sample evaporates. The temperature of the cell with the test item is controlled by a surrounding heater. The vapour forms a molecular jet of defined geometry limited by an orifice. The molecular jet can be interrupted by a shutter between the orifice of the cell and the plate of the balance. The vapour jet is condensed on a plate cooled down below -100 °C by a surrounding copper baffle which is in contact with liquid nitrogen. The plate forms one end of an ultra-micro balance. Using the shutter between the orifice and the balance, the increase of mass during an elapsed time period is recorded.

Results:

The DSC measurement in a closed glass crucible showed an endothermic effect in the temperature range of approx. 120–145 °C followed by an exothermal effect in the temperature range of approx. 200–275 °C releasing an energy of 495 J/g.

The vapour pressure was measured in the temperature range of 19 °C to 74 °C. Above 33 °C a vapour pressure could be measured. The following vapour pressure values for the test item AE F108565 (Br2CA) were interpolated (value at 50 °C) and extrapolated (values at 20 °C and 25 °C) from the experimental data of the test item (vapour pressure balance method):

T / °C	p / hPa	p / Pa
20	2.3×10^{-3}	2.3×10^{-3}
25	4.8×10^{-3}	4.8×10^{-3}
50	1.3×10^{-3}	1.3×10^{-3}

Comments of zRMS:	The study was not validated by the zRMS, but its results were considered for purposes of the exposure assessment as being already agreed in the course of the zonal evaluation of another deltamethrin formulation of the same Applicant (Decis 15 EW evaluated by BE as the zRMS in 2018). Furthermore, the study was also agreed by the RMS in the course of the ongoing EU renewal process of deltamethrin (LoEP amended in 2019 is available on EFSA DMS).
-------------------	--

Reference:	KCA 7.1.4/02
Title:	AE F108565 (Br2CA): Solubility in water at pH 5, pH 7 and pH 9
Report:	Wiche, A.; Bogdoll, B.; 2012; PA10/073; M-435779-01-1
Guideline(s):	European Commission Council Regulation (EC) No 440/2008, Annex, Part A, method A.6.; OECD-Guideline 105; EPA Product Properties Test Guideline OPPTS 830.7840
Deviations:	not specified
GLP/GEP:	yes
Acceptability:	Not validated by the zRMS for DLT+FPF EC 85, but results considered in exposure assessment as being already agreed at the zonal level as well as in the course of the ongoing EU renewal process.
Duplication (if vertebrate study):	

Materials and methods:

The water solubility C_s of the test item Br2CA at pH 5, pH 7 and pH 9 was determined according to the "flask method", described in the European Commission Council Regulation (EC) No 440/2008, Annex, Part A, method A.6., OECD-guideline 105 and EPA Product Properties Test Guideline OPPTS 830.7840.

For determination of the water solubility, following buffer solutions were used:

pH 5 (citrate buffer)

21.0 g of citric acid monohydrate were dissolved in 200 mL of sodium hydroxide solution ($c = 1$ mol/L). This solution was filled up to a volume of 1000 mL with double distilled water. 3.6 mL of sodium hydroxide solution ($c = 1$ mol/L) were added to 964 mL of this solution and filled up to a volume of 1000 mL with double distilled water. The solution was adjusted to pH 5.0 with hydrochloric acid.

pH 7 (phosphate buffer)

8.0 g of sodium dihydrogen phosphate were dissolved in 1000 mL of double distilled water. 11.9 g of di-sodium hydrogen phosphate were dissolved in 1000 mL of double distilled water. 389 mL of sodium dihydrogen phosphate solution were added to 611 mL of di-sodium hydrogen phosphate solution. The solution was adjusted to pH 7.0 with phosphoric acid.

pH 9 (borate buffer)

10.05 g of sodium tetraborate were added to 4.6 mL hydrochloric acid ($c = 1 \text{ mol/L}$) and filled up to a volume of 1000 mL with double distilled water. The solution was adjusted to pH 9.0 with hydrochloric acid.

Results:

The concentration of Br2CA was quantified by HPLC analyses.

The data used analytical method (HPLC method, reversed phase) was found to be valid. It complies with all criteria according to SANCO/3029/99 rev. 4 and is suitable for the determination of AE F108565 (BR2CA).

The results of the solubility measurements are given in the following table:

Target pH	Final pH	C_s Solubility at 20°C	RSD
pH 5	5.0 ¹⁾	0.131 g/L	3.3 %
pH 7	7.0 ²⁾	9.0 g/L	1.8 %
pH 9	9.1 ²⁾	> 240 g/L	

¹⁾ measured pH of the saturated solution, resulting from 3 experiments

²⁾ measured pH of the saturated solution, resulting from 2 experiments each

A 2.1.4.1 KCA 7.1.4.1 Column leaching studies

A 2.1.4.1.1 KCA 7.1.4.1.1 Column leaching of the active substance

A 2.1.4.1.2 KCA 7.1.4.1.2 Column leaching of metabolites, breakdown and reaction products

A 2.1.4.2 KCA 7.1.4.2. Lysimeter studies

A 2.1.4.3 KCA 7.1.4.3 Field leaching studies

A 2.2 KCA 7.2 Fate and behaviour in water and sediment

A 2.2.1 KCA 7.2.1 Route and rate of degradation in aquatic systems (chemical and photochemical degradation)

A 2.2.1.1 KCA 7.2.1.1 Hydrolytic degradation

A 2.2.1.2 KCA 7.2.1.2 Direct photochemical degradation

A 2.2.1.3 KCA 7.2.1.3 Indirect photochemical degradation

A 2.2.2 KCA 7.2.2 Route and rate of biological degradation in aquatic systems

A 2.2.2.1 KCA 7.2.2.1 "Ready biodegradability"

A 2.2.2.2 KCA 7.2.2.2 Aerobic mineralisation in surface water

A 2.2.2.3 KCA 7.2.2.3 Water/sediment study

A 2.2.2.4 KCA 7.2.2.4 Irradiated water/sediment study

A 2.2.3 KCA 7.2.3 Degradation in the saturated zone

A 2.3	KCA 7.3 Fate and behaviour in air
A 2.3.1	KCA 7.3.1 Route and rate of degradation in air
A 2.3.2	KCA 7.3.2 Transport via air
A 2.3.3	KCA 7.3.3 Local and global effects
A 2.4	KCA 7.4 Definition of the residue
A 2.4.1	KCA 7.4.1 Definition of the residue for risk assessment
A 2.4.2	KCA 7.4.2 Definition of the residue for monitoring
A 2.5	KCA 7.5 Monitoring data

Appendix 3 Additional information provided by the applicant (e.g. detailed modelling data)

A 3.1 8.7 Predicted Environmental Concentrations in soil (PECsoil) (KCP 9.1.3)

Deltamethrin and relevant metabolite(s)

Comments of zRMS:	Please, refer to point 8.7.2.1 of this document for details of the zRMS evaluation of soil exposure calculations provided by the Applicant.
-------------------	---

Reference:	KCP 9.1.3/01
Title:	Deltamethrin (DLT) and metabolite: PECsoil EUR - Use in oil seed rape in Europe
Report:	Schaefer, D.; Porschewski, R.; 2019; EnSa-19-0101; M-658045-01-1
Guideline(s):	none
Deviations:	none
GLP/GEP:	no
Acceptability:	Acceptable with minor corrections (see point 8.7.2.1 for details)
Duplication (if vertebrate study):	

Reference:	KCP 9.1.3/02
Title:	Deltamethrin (DLT) and metabolite: PECsoil EUR - Use in oil seed rape in Europe
Report:	Schaefer, D.; Porschewski, R.; 2019; EnSa-19-0151; M-658046-01-1
Guideline(s):	none
Deviations:	none
GLP/GEP:	no
Acceptability:	Acceptable with minor corrections (see point 8.7.2.1 for details)
Duplication (if vertebrate study):	

Flupyradifurone and relevant metabolite(s)

Comments of zRMS:	Please, refer to point 8.7.2.2 of this document for details of the zRMS evaluation of soil exposure calculations provided by the Applicant.
-------------------	---

Reference:	KCP 9.1.3/03
Title:	Flupyradifurone (FPF) and metabolites: PECsoil EUR - Use in oil seed rape in Europe
Report:	Hammel, K.; Porschewski, R.; 2019; EnSa-19-0102; M-657222-01-1
Guideline(s):	none
Deviations:	none
GLP/GEP:	no
Acceptability:	Acceptable with some corrections (see point 8.7.2.2 for details)
Duplication (if vertebrate study):	

Reference:	KCP 9.1.3/04
Title:	Flupyradifurone (FPF) and metabolites: PECsoil EUR - Use in oil seed rape in Europe
Report:	Hammel, K.; Porschewski, R.; 2019; EnSa-19-0150; M-657224-01-1
Guideline(s):	none
Deviations:	none
GLP/GEP:	no
Acceptability:	Acceptable with some corrections (see point 8.7.2.2 for details)
Duplication (if vertebrate study):	

Reference:	KCP 9.1.3/05
Title:	Flupyradifurone (FPF): Core PECsoil EUR - Modelling core info document for soil risk assessment in Europe
Report:	Hammel, K.; Porschewski, R.; 2018; EnSa-17-0510; M-613928-01-1
Guideline(s):	not applicable
Deviations:	none
GLP/GEP:	no
Acceptability:	Acceptable with some corrections (see point 8.7.2.2 for details)
Duplication (if vertebrate study):	

A 3.2 8.8 Predicted Environmental Concentrations in groundwater (PECgw) (KCP 9.2.4.1)

Deltamethrin and relevant metabolite(s)

Comments of zRMS:	Groundwater modelling assessment provided in documents below was based on new active substance data which was not agreed by the zRMS since sufficient information was available from the EU review. For details of the zRMS evaluation, please refer to point 8.8.2.1 of this document.
-------------------	---

Reference:	KCP 9.2.4.1/01
Title:	Deltamethrin (DLT) and metabolite: PECgw FOCUS PEARL, PELMO, MACRO EUR - Use in oil seed rape in Europe
Report:	Schaefer, D.; Porschewski, R.; 2019; EnSa-19-0092; M-658039-01-1
Guideline(s):	none
Deviations:	none
GLP/GEP:	no
Acceptability:	Unacceptable
Duplication (if vertebrate study):	

Reference:	KCP 9.2.4.1/02
Title:	Deltamethrin (DLT) and metabolite: PECgw FOCUS PEARL, PELMO, MACRO EUR - Use in oil seed rape in Europe
Report:	Schaefer, D.; Porschewski, R.; 2019; EnSa-19-0093; M-658043-01-1
Guideline(s):	none
Deviations:	none
GLP/GEP:	no
Acceptability:	Unacceptable
Duplication (if vertebrate study):	

Reference:	KCP 9.2.4.1/03
Title:	Deltamethrin (DLT) and metabolite: PECgw FOCUS PEARL, PELMO, MACRO EUR - Use in oil seed rape in Europe
Report:	Schaefer, D.; Porschewski, R.; 2019; EnSa-19-0094; M-658042-01-1
Guideline(s):	none
Deviations:	none
GLP/GEP:	no
Acceptability:	Unacceptable
Duplication (if vertebrate study):	

Flupyradifurone and relevant metabolite(s)

Comments of zRMS:	Groundwater modelling provided in documents below was performed with consideration of TSCF of 0.5 for the parent, which was not agreed by the zRMS. For details of the zRMS evaluation, please refer to point 8.8.2.2 of this document.
-------------------	---

Reference:	KCP 9.2.4.1/04
Title:	Flupyradifurone (FPF) and metabolites: PECgw FOCUS PEARL, PELMO, MACRO EUR - Use in oil seed rape in Europe
Report:	Hammel, K.; Porschewski, R.; 2019; EnSa-19-0089; M-657208-01-1
Guideline(s):	none
Deviations:	none
GLP/GEP:	no
Acceptability:	Unacceptable
Duplication (if vertebrate study):	

Reference:	KCP 9.2.4.1/05
Title:	Flupyradifurone (FPF) and metabolites: PECgw FOCUS PEARL, PELMO, MACRO EUR - Use in oil seed rape in Europe
Report:	Hammel, K.; Porschewski, R.; 2019; EnSa-19-0090; M-657210-01-1
Guideline(s):	none
Deviations:	none
GLP/GEP:	no
Acceptability:	Unacceptable
Duplication (if vertebrate study):	

Reference:	KCP 9.2.4.1/06
Title:	Flupyradifurone (FPF) and metabolites: PECgw FOCUS PEARL, PELMO, MACRO EUR - Use in oil seed rape in Europe
Report:	Hammel, K.; Porschewski, R.; 2019; EnSa-19-0091; M-657212-01-1
Guideline(s):	none
Deviations:	none
GLP/GEP:	no
Acceptability:	Unacceptable
Duplication (if vertebrate study):	

Comments of zRMS:	<p>Statement provided in document below was not checked by the zRMS since consideration of the time dependent sorption parameters (TDS) in higher tier groundwater modelling for flupyradifurone has been already agreed for one of the formulations of the same Applicant (Flupyradifurone FS 480) during the interzonal evaluation performed by Finland as the izRMS (for details, see final Core Assessment, Part B, Section 8 of September 2019). The same approach is fully applicable for evaluation of DLT+FPF EC 85.</p> <p>Furthermore it is noted that the dataset considered by the Applicant was validated by the PPR-panel during preparation of the <i>Scientific Opinion about the Guidance of the Chemical Regulation Directorate (UK) on how aged sorption studies for pesticides should be conducted, analysed and used in regulatory assessments</i> (EFSA Journal 2018;16(8):5382.</p>
-------------------	--

Reference:	KCP 9.2.4.1/07
Title:	Statement: Implementation of aged sorption parameters for exposure assessment of flupyradifurone - Additional information on applicability following the release of the EFSA opinion in August 2018
Report:	Hammel, K.; Garside, C.; 2018; EnSa-18-0986; M-642729-01-1
Guideline(s):	None
Deviations:	--
GLP/GEP:	no
Acceptability:	Document not validated, but consideration of TDS parameters considered acceptable.
Duplication (if vertebrate study):	

Comments of zRMS:	Tier 2 groundwater modelling provided in documents below was performed with consideration of TSCF of 0.5 for the parent, which was not agreed by the zRMS. For details of the zRMS evaluation, please refer to point 8.8.2.2 of this document.
-------------------	--

Reference:	KCP 9.2.4.1/08
Title:	Flupyradifurone (FPF) and metabolites: PECgw FOCUS PEARL, PELMO, MACRO EUR using tier 2 (TDS) - Use in oil seed rape in Europe
Report:	Hammel, K.; Porschewski, R.; 2019; EnSa-19-0119; M-657217-01-1
Guideline(s):	none
Deviations:	none
GLP/GEP:	no
Acceptability:	Unacceptable
Duplication (if vertebrate study):	

Reference:	KCP 9.2.4.1/09
Title:	Flupyradifurone (FPF) and metabolites: PECgw FOCUS PEARL, PELMO, MACRO EUR using tier 2 (TDS) - Use in oil seed rape in Europe
Report:	Hammel, K.; Porschewski, R.; 2019; EnSa-19-0120; M-657219-01-1
Guideline(s):	none
Deviations:	none
GLP/GEP:	no
Acceptability:	Unacceptable
Duplication (if vertebrate study):	

Reference:	KCP 9.2.4.1/10
Title:	Flupyradifurone (FPF): Core PECgw EUR - Modelling core info document for groundwater risk assessment in Europe
Report:	Hammel, K.; Porschewski, R.; 2019; EnSa-17-0508; M-613915-02-1
Guideline(s):	none
Deviations:	none
GLP/GEP:	no
Acceptability:	Unacceptable
Duplication (if vertebrate study):	

Comments of zRMS:	Consideration of TSCF of 0.5 was not agreed by the zRMS. For detailed discussion regarding this parameters and evaluation of the statement by Hammel (2020), please refer to point 8.8.2.2 of this document.
-------------------	--

Reference:	KCP 9.2.4.1/11
Title:	Statement: Applicability of TSCF = 0.5 (plant uptake factor) for the active flupyradifurone for exposure modelling (PEC _{gw} , PEC _{sw})
Report:	Hammel, K.; 2020; M-755019-01-1
Guideline(s):	--
Deviations:	--
GLP/GEP:	not applicable
Acceptability:	Unacceptable (see point 8.8.2.2 for details)
Duplication (if vertebrate study):	

Deltamethrin and relevant metabolite(s)

Comments of zRMS:	Please, refer to point 8.8.2.1 of this document for details of the zRMS evaluation of groundwater modelling provided by the Applicant.
-------------------	--

Reference:	KCP 9.2.4.1/12
Title:	Deltamethrin (DLT) and metabolite - PEC _{gw} FOCUS PEARL, PELMO - Use in oil seed rape in Europe
Report:	Schaefer, D.; Tamazashvili, A.; 2020; EnSa-20-0771; M-755312-01-1
Guideline(s):	not applicable
Deviations:	None
GLP/GEP:	no
Acceptability:	Acceptable
Duplication (if vertebrate study):	

Flupyradifurone and relevant metabolite(s) – Additional calculations

Comments of zRMS:	Please, refer to point 8.8.2.2 of this document for details of the zRMS evaluation of groundwater modelling provided by the Applicant.
-------------------	--

Report:	KCP 9.2.4.1/13; Hammel, K.; Lyu, A.; 2021; M-763308-01-1
Title:	Flupyradifurone (FPF) and metabolites - PEC _{gw} FOCUS PEARL, PELMO, MACRO EUR - Use in oil seed rape in Europe
Report No.:	EnSa-21-0091
Document No.:	M-763308-01-1
Guideline(s):	not applicable
Guideline deviation(s):	None
GLP/GEP:	no
Acceptability:	Acceptable with some corrections (see point 8.8.2.2 for details)
Duplication (if vertebrate study):	

Report:	KCP 9.2.4.1/14; Hammel, K.; Lyu, A.; 2021; M-763310-01-1
Title:	Flupyradifurone (FPF) and metabolites - PECgw FOCUS PEARL, PELMO, MACRO EUR - Use in oil seed rape in Europe
Report No.:	EnSa-21-0092
Document No.:	M-763310-01-1
Guideline(s):	not applicable
Guideline deviation(s):	None
GLP/GEP:	no
Acceptability:	Acceptable with some corrections (see point 8.8.2.2 for details)
Duplication (if vertebrate study):	

Report:	KCP 9.2.4.1/15; Hammel, K.; Lyu, A.; 2021; M-763313-01-1
Title:	Flupyradifurone (FPF) and metabolites - PECgw FOCUS PEARL, PELMO, MACRO EUR - Use in oil seed rape in Europe
Report No.:	EnSa-21-0093
Document No.:	M-763313-01-1
Guideline(s):	not applicable
Guideline deviation(s):	None
GLP/GEP:	no
Acceptability:	Acceptable with some corrections (see point 8.8.2.2 for details)
Duplication (if vertebrate study):	

Report:	KCP 9.2.4.1/16; Hammel, K.; Lyu, A.; 2021; M-763315-01-1
Title:	Flupyradifurone (FPF) and metabolites - PECgw FOCUS PEARL, PELMO, MACRO EUR using tier 2 (TDS) - Use in oil seed rape in Europe
Report No.:	EnSa-21-0094
Document No.:	M-763315-01-1
Guideline(s):	not applicable
Guideline deviation(s):	None
GLP/GEP:	no
Acceptability:	Acceptable with some corrections (see point 8.8.2.2 for details)
Duplication (if vertebrate study):	

Report:	KCP 9.2.4.1/17; Hammel, K.; Lyu, A.; 2021; M-763317-01-1
Title:	Flupyradifurone (FPF) and metabolites - PECgw FOCUS PEARL, PELMO, MACRO EUR using tier 2 (TDS) - Use in oil seed rape in Europe
Report No.:	EnSa-21-0095
Document No.:	M-763317-01-1
Guideline(s):	not applicable
Guideline deviation(s):	None
GLP/GEP:	no
Acceptability:	Acceptable with some corrections (see point 8.8.2.2 for details)
Duplication (if vertebrate study):	

Report:	KCP 9.2.4.1/18; Hammel, K.; Lyu, A.; 2021; M-763319-01-1
Title:	Flupyradifurone (FPF) and metabolites - PECgw FOCUS PEARL, PELMO, MACRO EUR using tier 2 (TDS) - Use in oil seed rape in Europe
Report No.:	EnSa-21-0096
Document No.:	M-763319-01-1
Guideline(s):	not applicable
Guideline deviation(s):	None
GLP/GEP:	no
Acceptability:	Acceptable with some corrections (see point 8.8.2.2 for details)
Duplication (if vertebrate study):	

A 3.3 8.9 Predicted Environmental Concentrations in surface water (PEC_{sw}) (KCP 9.2.5)

Deltamethrin and relevant metabolite(s)

Comments of zRMS:	Surface water modelling provided in documents below was based on new active substance data which was not agreed by the zRMS since sufficient information was available from the EU review. For details of the zRMS evaluation, please refer to point 8.9.2.1 of this document.
-------------------	--

Reference:	KCP 9.2.5/01
Title:	Deltamethrin (DLT) and metabolite: PEC _{sw} ,sed FOCUS EUR - Use in winter and spring oilseed rape in Europe
Report:	Schaefer, D.; Srinivasan, P.; 2019; EnSa-19-0098; M-658044-01-1
Guideline(s):	none
Deviations:	none
GLP/GEP:	no
Acceptability:	Unacceptable
Duplication (if vertebrate study):	

Reference:	KCP 9.2.5/02
Title:	Deltamethrin (DLT) and metabolite: PEC _{sw} ,sed FOCUS EUR - Use in winter and spring oilseed rape in Europe
Report:	Schaefer, D.; Srinivasan, P.; 2019; EnSa-19-0099; M-658048-01-1
Guideline(s):	none
Deviations:	none
GLP/GEP:	no
Acceptability:	Unacceptable
Duplication (if vertebrate study):	

Reference:	KCP 9.2.5/03
Title:	Deltamethrin (DLT) and metabolite: PEC _{sw} ,sed FOCUS EUR - Use in winter and spring oilseed rape in Europe
Report:	Schaefer, D.; Srinivasan, P.; 2019; EnSa-19-0100; M-658049-01-1
Guideline(s):	none
Deviations:	none
GLP/GEP:	no
Acceptability:	Unacceptable
Duplication (if vertebrate study):	

Reference:	KCP 9.2.5/04
Title:	Deltamethrin (DLT) core PEC _{sw} EUR - Modelling core info document for surface water risk assessment in Europe
Report:	Schad, T.; Zerbe, P.; 2016; EnSa-16-0250; M-553324-02-1
Guideline(s):	none
Deviations:	none
GLP/GEP:	no
Acceptability:	Unacceptable
Duplication (if vertebrate study):	

Flupyradifurone and relevant metabolite(s)

Comments of zRMS:	Surface water modelling provided in documents below was performed with consideration of TSCF of 0.5 for the parent, which was not agreed by the zRMS. For details of the zRMS evaluation, please refer to point 8.9.2.2 of this document.
-------------------	---

Reference:	KCP 9.2.5/05
Title:	Flupyradifurone (FPF) and metabolites: PEC _{sw} ,sed FOCUS EUR - Use in winter and spring oilseed rape in Europe
Report:	Hammel, K.; Srinivasan, P.; 2019; EnSa-19-0095; M-657234-01-1
Guideline(s):	none
Deviations:	none
GLP/GEP:	no
Acceptability:	Unacceptable
Duplication (if vertebrate study):	

Reference:	KCP 9.2.5/06
Title:	Flupyradifurone (FPF) and metabolites: PEC _{sw} ,sed FOCUS EUR - Use in winter and spring oilseed rape in Europe
Report:	Hammel, K.; Srinivasan, P.; 2019; EnSa-19-0096; M-657241-01-1
Guideline(s):	none
Deviations:	none
GLP/GEP:	no
Acceptability:	Unacceptable
Duplication (if vertebrate study):	

Reference:	KCP 9.2.5/07
Title:	Flupyradifurone (FPF) and metabolites: PEC _{sw} ,sed FOCUS EUR - Use in winter and spring oilseed rape in Europe
Report:	Hammel, K.; Srinivasan, P.; 2019; EnSa-19-0097; M-657360-01-1
Guideline(s):	none
Deviations:	none
GLP/GEP:	no
Acceptability:	Unacceptable
Duplication (if vertebrate study):	

Reference:	KCP 9.2.5/08
Title:	Flupyradifurone (FPF): Core PEC _{sw} EUR - Modelling core info document for surface water risk assessment in Europe
Report:	Hammel, K.; Porschewski, R.; 2019; EnSa-17-0509; M-613927-02-1
Guideline(s):	none
Deviations:	none
GLP/GEP:	no
Acceptability:	Unacceptable
Duplication (if vertebrate study):	

Comments of zRMS:	Consideration of TSCF of 0.5 was not agreed by the zRMS. For detailed discussion regarding this parameters and evaluation of the statement by Hammel (2020), please refer to point 8.8.2.2 of this document.
-------------------	--

Reference:	KCP 9.2.5/09
Title:	Statement: Applicability of TSCF = 0.5 (plant uptake factor) for the active flupyradifurone for exposure modelling (PEC _{gw} , PEC _{sw})
Report:	Hammel, K.; 2020; M-755019-01-1
Guideline(s):	--
Deviations:	--
GLP/GEP:	not applicable
Acceptability:	Unacceptable
Duplication (if vertebrate study):	

Deltamethrin and relevant metabolite(s)

Comments of zRMS:	Please, refer to point 8.9.2.1 of this document for details of the zRMS evaluation of surface water modelling provided by the Applicant.
-------------------	--

Reference:	KCP 9.2.5/10
Title:	Deltamethrin (DLT) and metabolite: PEC _{sw} ,sed FOCUS EUR - Use in oil seed rape in Europe
Report:	Schaefer, D.; Tamazashvili, A.; 2020; EnSa-20-0772; M-755102-03-1
Guideline(s):	none
Deviations:	None
GLP/GEP:	no
Acceptability:	Acceptable
Duplication (if vertebrate study):	

Flupyradifurone and relevant metabolite(s) – Additional calculations

Comments of zRMS:	Please, refer to point 8.9.2.2 of this document for details of the zRMS evaluation of surface water modelling provided by the Applicant.
-------------------	--

Report:	KCP 9.2.5/11; Hammel, K.; Lyu, A.; 2021; M-763320-01-1
Title:	Flupyradifurone (FPF): PEC _{sw} ,sed FOCUS EUR - Use in winter and spring oilseed rape in Europe
Report No.:	EnSa-21-0097
Document No.:	M-763320-01-1
Guideline(s):	not applicable
Guideline deviation(s):	None
GLP/GEP:	no
Acceptability:	Acceptable
Duplication (if vertebrate study):	

Report:	KCP 9.2.5/12; Hammel, K.; Lyu, A.; 2021; M-763321-01-1
Title:	Flupyradifurone (FPF): PEC _{sw, sed} FOCUS EUR - Use in winter and spring oilseed rape in Europe
Report No.:	EnSa-21-0098
Document No.:	M-763321-01-1
Guideline(s):	not applicable
Guideline deviation(s):	None
GLP/GEP:	no
Acceptability:	Acceptable
Duplication (if vertebrate study):	

Report:	KCP 9.2.5/13; Hammel, K.; Lyu, A.; 2021; M-763322-01-1
Title:	Flupyradifurone (FPF): PEC _{sw, sed} FOCUS EUR - Use in winter and spring oilseed rape in Europe
Report No.:	EnSa-21-0099
Document No.:	M-763322-01-1
Guideline(s):	not applicable
Guideline deviation(s):	None
GLP/GEP:	no
Acceptability:	Acceptable
Duplication (if vertebrate study):	