FINAL REGISTRATION REPORT

Part A

Risk Management

Product code: JMD-HER 387 OD

Product name: Jockey 387 OD

Chemical active substances:
2,4-D, 250 g/L (as 2,4-D 2EHE, 377 g/L)
Iodosulfuron-methyl-sodium, 10 g/L

Central Zone

Zonal Rapporteur Member State: Poland

NATIONAL ASSESSMENT Poland

(authorization)

Applicant:

Pestila Spółka z ograniczoną odpowiedzialnością

Submission date: December 2022, March 2024

MS Finalisation date: January 2024; March 2024; August 2024, October 2024

Version history

When	What
12.2022	Submission date
01.2024	ZRMs evaluated dRR submitted by Applicant
03.2024	Final version of RR after commenting period
03.2024	List of data submitted or referred to by the applicant and relied on, but already evaluated at EU peer review updated by Applicant
08.2024	zRMS addition
08.2024	zRMS addition (ecotoxicology)
08.2024	zRMS updated fate (PECgw)
10.2024	Update PECgw by zRMS

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PART A
RISK MANAGEMENT

1 Details of the application

This document describes the acceptable used conditions required for the registration of JMD-HER 387 OD in Poland, containing 250 g/L of 2,4-D (as 2,4-D 2EHE, 377 g/L) and 10 g/L of iodosulfuron-methyl-sodium. This evaluation is required since the product is a new formulation and has not yet been authorised in Poland.

The risk assessment conclusions are based on the information, data and assessments provided in the Registration Report, Part B Sections 1-10 and Part C. The information, data and assessments provided in the Registration Report, Parts B includes assessment of further data or information as required at national registration by the EU review. It also includes assessment of data and information relating to JMD-HER 387 OD where that data has not been considered in the EU review. Otherwise, assessments for the safe use of JMD-HER 387 OD have been made using endpoints agreed in the EU review of 2,4-D and iodosulfuron-methyl-sodium.

This document describes the specific conditions of use and labelling required for Poland for the registration of JMD-HER 387 OD.

1.1 Application background

This application was submitted by Pestila Spółka z ograniczoną odpowiedzialnością.

This is the application for registration plant protection product under working name of JMD-HER 387 OD according to Article 33 of Regulation 1107/2009. JMD-HER 387 OD is an oil dispersion (OD), containing 250 g/L of 2,4-D (as 2,4-D 2EHE, 377 g/L) and 10 g/L of iodosulfuron-methyl-sodium to be used as a herbicide to protect winter and spring cereals.

1.2 Letters of Access

Letters of Access is submitted. See Appendix 3.

1.3 Justification for submission of tests and studies

Author	Year	Title Report number Source GLP Published	Justification for submitting
Section 1: Identity **Section 2: Physical and chemical properties,** **Section 4: Further information**			
Ciach J.	2021	JMD-HER 387 OD. Determination of physicochemical properties of preparation in an COEX bottle. Stage 1: Determination of physicochemical properties of initial preparation. Report No 002/DPL/2021	Regarding Commission Regulation (EU) No. 284/2013 of 1st of March 2013 it was assess that in case when the new recipe of the generic plant

		Pestila Spółka z ograniczoną odpowiedzialnością. GLP: Yes Published: No	protection product is developed it is necessary to generate physical and chemical properties in order to check if it fulfils FAO specification, is safe, stable etc. The range of studies performed for JMD-HER 387 OD are those recommended for OD formulation.
Buczkowski D.	2021	JMD-HER 387 OD Determination of explosive properties Report No BW-06/21 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry GLP: Yes Published: No	
Flasińska P.	2021	JMD-HER 387 OD Determination of flash point, auto-ignition temperature and oxidizing properties. Report No BC-11/21 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry GLP: Yes Published: No	
Ciach J.	2021	JMD-HER 387 OD. Determination of physicochemical properties of preparation in an COEX bottle. Stage 1: Determination of physicochemical properties of initial preparation. Stage 3: Determination of physicochemical properties of preparation stored at temperature 40±2°C for 8 weeks. Report No 002/DPL/2021 Pestila Spółka z ograniczoną odpowiedzialnością. GLP: Yes Published: No	
Ciach J.	2022	JMD-HER 387 OD. Determination of the surface tension and viscosity of the preparation in a COEX bottle. Report No 001/DPL/2022 Pestila Spółka z ograniczoną odpowiedzialnością. GLP: Yes Published: No	
Ciach J.	2021	JMD-HER 387 OD. Determination of active substrances content of preparation in an COEX bottle. Stage 1: Determination of active substrances content of initial preparation. Stage 2: Determination of physicochemical properties of the preparation stored at temperature 0±2°C for 7 days. Stage 3: Determination of active substrances content of preparation stored at temperature 40±2°C for 8 weeks. Report No 001/DPL/2021 Pestila Spółka z ograniczoną odpowiedzialnością. GLP: Yes Published: No	
Ciach J.	2021	JMD-HER 387 OD. Determination of active substrances content of preparation in an COEX bottle. Stage 1: Determination of active substrances content of initial preparation. Stage 2: Determination of physicochemical properties of the preparation stored at temperature 0±2°C for 7 days. Report No 001/DPL/2021 Pestila Spółka z ograniczoną odpowiedzialnością. GLP: Yes Published: No	
Wołoszynowska M.	2021	JMD-HER 387 OD Determination of physicochemical properties. Report No BA-05/21 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry GLP: Yes Published: No	
Pstuś J.	2022	Analysis of JMD-HER 387 OD before and after ageing tests to determine content of dioxins and furans. Report No K733/JP Selvita Services Sp. z o.o. GLP: Yes Published: No	

Ciach J.	2023	JMD-HER 387 OD. Determination of physicochemical properties of preparation in an COEX bottle. Stage 5: Determination of physicochemical properties of the preparation stored at temperature 20±2°C for 2 years. Report No 002/DPL/2021 Pestila Spółka z ograniczoną odpowiedzialnością GLP: Yes Published: No	
Ciach J.	2023	JMD-HER 387 OD. Determination of active substrances content of preparation in an COEX bottle. Stage 5: Determination of an active substance content in a preparation stored at temperature 20±2°C for 2 years. Report No 001/DPL/2021 Pestila Spółka z ograniczoną odpowiedzialnością. GLP: Yes Published: No	
Section 3: Efficacy Data and Information			
Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-01 GEP: Yes Published: No	In accordance with the requirements of Commission Regulation (EU) No. 284/2013 of 1st of March 2013 "*The data supplied must be sufficient to permit an evaluation of the plant protection product to be made*." Recipe for the JMD-HER 387 OD was developed in Pestila Spółka z ograniczoną odpowiedzialnością so it was necessary to confirm efficacy and selectivity.
Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-02 GEP: Yes Published: No	
Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-03 GEP: Yes Published: No	
Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-04 GEP: Yes Published: No	
Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-05 GEP: Yes Published: No	
Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-06 GEP: Yes Published: No	
Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-07	

		GEP: Yes Published: No	
Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-08 GEP: Yes Published: No	
Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-09 GEP: Yes Published: No	
Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-10 GEP: Yes Published: No	
Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-11 GEP: Yes Published: No	
Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-12 GEP: Yes Published: No	
Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-13 GEP: Yes Published: No	
Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-14 GEP: Yes Published: No	
Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-15 GEP: Yes Published: No	
Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-16 GEP: Yes Published: No	

Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-17 GEP: Yes Published: No	
Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-18 GEP: Yes Published: No	
Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-01 GEP: Yes Published: No	
Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-02 GEP: Yes Published: No	
Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-03 GEP: Yes Published: No	
Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-04 GEP: Yes Published: No	
Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in spring wheat. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-05 GEP: Yes Published: No	
Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in spring wheat. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-06 GEP: Yes Published: No	
Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in spring wheat. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-07 GEP: Yes Published: No	
Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in spring wheat. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland;	

		Report No.: S20-03828-08 GEP: Yes Published: No	
Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Germany 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-09 GEP: Yes Published: No	
Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Germany 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-10 GEP: Yes Published: No	
Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Germany 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-12 GEP: Yes Published: No	
Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter barley. Germany 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-14 GEP: Yes Published: No	
Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter barley. Germany 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-15 GEP: Yes Published: No	
Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter barley. Germany 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-16 GEP: Yes Published: No	
Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Czech Republic 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-17 GEP: Yes Published: No	
Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Czech Republic 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-18 GEP: Yes Published: No	
Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter barley. Czech Republic 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-19 GEP: Yes Published: No	

Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter barley. Czech Republic 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-20 GEP: Yes Published: No	
Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Romania. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-19 GEP: Yes Published: No	
Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Romania. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-20 GEP: Yes Published: No	
Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Romania. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-21 GEP: Yes Published: No	
Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Romania. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-22 GEP: Yes Published: No	
Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Romania. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-23 GEP: Yes Published: No	
Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Bulgaria 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03828-21 GEP: Yes Published: No	
Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Bulgaria 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03828-22 GEP: Yes Published: No	
Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Bulgaria 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03828-23 GEP: Yes Published: No	
Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Bulgaria 2021. Eurofins Agroscience Services Sp. z o.o., Poland;	

		Report No.: S21-03828-24 GEP: Yes Published: No	
Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Hungary 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03828-25 GEP: Yes Published: No	
Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Hungary 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03828-26 GEP: Yes Published: No	
Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Hungary 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03828-27 GEP: Yes Published: No	
Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Hungary 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03828-28 GEP: Yes Published: No	
Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-01 GEP: Yes Published: No	
Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-02 GEP: Yes Published: No	
Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-03 GEP: Yes Published: No	
Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-04 GEP: Yes Published: No	
Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-05 GEP: Yes Published: No	
Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-06 GEP: Yes Published: No	

Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-09 GEP: Yes Published: No	
Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-10 GEP: Yes Published: No	
Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-11 GEP: Yes Published: No	
Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-12 GEP: Yes Published: No	
Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-13 GEP: Yes Published: No	
Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-14 GEP: Yes Published: No	
Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-15 GEP: Yes Published: No	
Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-16 GEP: Yes Published: No	
Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter wheat. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-01 GEP: Yes Published: No	
Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter wheat. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-02 GEP: Yes Published: No	
Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter wheat. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-03 GEP: Yes Published: No	

Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter triticale. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-04 GEP: Yes Published: No	
Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter triticale. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-05 GEP: Yes Published: No	
Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter rye. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-09 GEP: Yes Published: No	
Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter rye. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-10 GEP: Yes Published: No	
Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in spring wheat. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-11 GEP: Yes Published: No	
Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in spring wheat. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-12 GEP: Yes Published: No	
Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in spring triticale. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-13 GEP: Yes Published: No	
Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in spring triticale. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-14 GEP: Yes Published: No	
Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter wheat. Germany 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-18 GEP: Yes Published: No	
Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter wheat. Germany 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-19 GEP: Yes Published: No	

Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter wheat. Czech Republic 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-22 GEP: Yes Published: No	
Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Romania. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: 20-03778-21 GEP: Yes Published: No	
Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Romania. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: 20-03778-22 GEP: Yes Published: No	
Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter wheat. Bulgaria 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-24 GEP: Yes Published: No	
Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter wheat. Romania 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-25 GEP: Yes Published: No	
Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter wheat. Romania 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-26 GEP: Yes Published: No	
Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter wheat. Romania 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-27 GEP: Yes Published: No	
Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter wheat. Hungary 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-28 GEP: Yes Published: No	
Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter wheat. Hungary 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-29 GEP: Yes Published: No	
Section 5: Analytical Methods			
Ciach J.	2021	JMD-HER 387 OD. Determination of active substrances content of preparation in an COEX bottle. Stage 1: Determination of active substrances content of initial preparation. Stage 2: Determination of physicochemical properties of the preparation stored at temperature 0±2°C for 7 days. Stage 3: Determination of active substrances content of preparation stored at temperature 40±2°C for 8 weeks. Report No 001/DPL/2021 Pestila Spółka z ograniczoną odpowiedzialnością.	Regarding Regulation 284/2013 of 1st of March 2013 it was assess that in case when the new recipe of the generic plant protection product is developed it is necessary to generate analytical methods for determination of active substances and relevant impurities in the formulation in

		GLP: Yes Published: No	order to check if it fulfils FAO specification, is safe, stable etc.
Wołoszynowska M.	2021	Determination of physicochemical properties. Report No BA-05/21 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry GLP: Yes Published: No	
Pstuś J.	2020	GC method for determination of dioxins and furans in JMD-HER 387 OD. Report No RVM/2022/48 Selvita Services Sp. z o.o. GLP: No Published: No	
Włodarczyk M.	2021	Validation of analytical method for the determination of active substances of the test item JMD-HER 387 OD in 50% sucrose solution Study code: 0005/0099/FA SORBOLAB Research Laboratory LLC GLP: Yes Published: No	
Włodarczyk M.	2021	Validation of analytical method for the determination of active substances in aqueous solution of the test item JMD-HER 387 OD Study code: 0005/0102/FA SORBOLAB Research Laboratory LLC GLP: Yes Published: No	
Section 6: Mammalian Toxicology			
[redacted]	2023	*IN VITRO* percutaneous dermal absorption study of 2,4-D 2-EHE, formulated as JMD-HER 387 OD through human skin Study code: AG-G1341 Eurofins Advinus Agrosciences Services India Private Limited GLP: Yes Published: No	In accordance with the requirements of Commission Regulation (EU) No. 284/2013 of 1st of March 2013 testing of the plant protection product shall be necessary where its toxicity cannot be predicted on the basis of data on the active substance.
Section 8: Environmental Fate			
Tabor E	2022	JMD-HER 387 OD Calculation of predicted environmental concentrations of 2,4-D and iodosulfuron-methyl-sodium in groundwater using the FOCUS groundwater scenarios (PEARL, PELMO, MACRO) Company Report No: EST/17/2022 Source: ESTICON Sp. z o.o., Poland GLP: No Published: No	Modelling of PECgw and PECsw according to EU and national requirements is always required.
Tabor E	2022	JMD-HER 387 OD Calculation of Predicted Environmental Concentrations of 2,4-D and iodosulfuron-methyl-sodium in surface water using the FOCUS scenarios (Steps 1, 2, 3 and 4) Company Report No: EST/18/2022 Source: ESTICON Sp. z o.o., Poland GLP: No Published: No	
Section 9: Ecotoxicology			
[redacted]	1984	Measurement of median lethal dose as a rapid indication of contaminant toxicity to fish Environmental Toxicology and Chemistry, Vol. 3, pp. 243-254, 1984 GLP: No Published: Yes	In accordance with the requirements of Commission Regulation (EU) No. 284/2013 of 1st of March 2013 testing of the plant protection product shall be necessary where its toxicity cannot be
Kühn, R. *et al.*	1989	Results of the harmful effects of selected water pollutants (ani-	

		lines, phenols, aliphatic compounds) to D*aphnia magna* Wat. Res. Vol. 23, No. 4, pp. 495-499, 1989 GLP: No Published: Yes	predicted on the basis of data on the active substance.
Czarnecka M	2021	JMD-HER 387 OD *Daphnia magna*, Acute Immobilisation Test Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study code: W-02-21 GLP: Yes Published: No	
Czarnecka M	2021	JMD-HER 387 OD *Chironomus* sp., Acute Immobilisation Test Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study code: W-01-21 GLP: Yes Published: No	
Cowgill, U. *et al.*	1989	Toxicity of nine benchmark chemicals to *Skeletonema costatum*, a marine diatom Environmenlal Toxicology and Chemisrry, Vol. 8, pp. 451-455, 1989 GLP: No Published: Yes	
Czarnecka M	2022	JMD-HER 387 OD *Raphidocelis subcapitata* SAG 61.81 (formerly *Pseudokirchneriella subcapitata*), Growth inhibition test Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study Code: W-03-21 GLP: Yes Published: No	
Czarnecka M	2021	JMD-HER 387 OD *Lemna gibba*, Growth Inhibition Test Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study Code: W-04-21 GLP: Yes Published: No	
Turek-Lipka T	2021	JMD-HER 387 OD Water-sediment *Myriophyllum spicatum* toxicity test Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study Code: W-05-21 GLP: Yes Published: No	
Meler, A	2021	Honeybees, Acute Oral Toxicity Test of the test item JMD-HER 387 OD according to OECD Guideline 213 SORBBOLAB Research Laboratory LLC, Poznań, Poland Study Code: 0005/0097/E GLP: Yes Published: No	
Orzechowska U	2021	Bumblebee, Acute Oral Toxicity Test of the test item JMD-HER 387 OD according to OECD guideline 247 SORBBOLAB Research Laboratory LLC, Poznań, Poland Study Code: 0005/0101/E GLP: Yes Published: No	
Meler, A	2021	Honeybees, Acute Contact Toxicity Test of the test item JMD-HER 387 OD according to OECD Guideline 214 SORBBOLAB Research Laboratory LLC, Poznań, Poland Study code: 0005/0098/E GLP: Yes Published: No	

Orzechowska U	2021	Bumblebee, Acute Contact Toxicity Test of the test item JMD-HER 387 OD according to OECD guideline 246 SORBBOLAB Research Laboratory LLC, Poznań, Poland Study code: 0005/0104/E GLP: Yes Published: No	
Orzechowska U	2021	Honey bee, chronic oral toxicity test of the test item JMD-HER 387 OD according to OECD 245 Guideline SORBBOLAB Research Laboratory LLC, Poznań, Poland Study code: 0005/0100/E GLP: Yes Published: No	
Orzechowska U	2021	Honey Bee Larval Toxicity Test following Repeated Exposure to the test item JMD-HER 387 OD according to OECD GD 239 ENV/JM/MONO(2016)34 SORBBOLAB Research Laboratory LLC, Poznań, Poland Study code: 0005/0103/E GLP: Yes Published: No	
Knapik M	2021	An extended laboratory test for evaluating the effects of JMD-HER 387 OD on the parasitic wasp, *Aphidius rhopalosiphi* (De Stefani-Perez); Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study Code: B-41-21 GLP: Yes Published: No	
Knapik M	2021	An extended laboratory test for evaluating the effects of JMD-HER 387 OD on the predatory mite, *Typhlodromus pyri* (Sch.); Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study Code: B-40-2 GLP: Yes Published: No	
Knapik M	2021	Amendment No. 1 to the Final Report An extended laboratory test for evaluating the effects of JMD-HER 387 OD on the predatory mite, Typhlodromus pyri (Sch.). Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study Code: B-40-2 GLP: Yes Published: No	
Knapik M	2021	An extended laboratory test for evaluating effects of JMD-HER 387 OD on the ladybird beetle, *Coccinella septempunctata* (L.) Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study code: B-39-21 GLP: Yes Published: No	
Mautino G	2023	Effects of JMD-HER 387 OD (2,4-D-2EH + iodosulfuronmethylsodi-um) on the rove beetle Aleochara bilineata – extended laboratory test SAGEA Centro di Saggio s.r.l. Study code: 1185.H.SAG22/r GLP: Yes Published: No	
Arendarczyk A	2021	JMD-HER 387 OD Earthworm reproduction test (*Eisenia andrei*) Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study code: G-03-21 GLP: Yes Published: No	
Gierbuszewska A	2021	JMD-HER 387 OD Collembolan (*Folsomia candida*) Reproduction Test Institute of Industrial Organic Chemistry, Branch Pszczyna,	

		Poland Study code: G-04-21 GLP: Yes Published: No	
Gierbuszewska A	2021	Predatory mite (*Hypoaspis (Geolaelaps) aculeifer*) reproduction test in soil Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study code: G-05-21 GLP: Yes Published: No	
Pieczka P	2021	JMD-HER 387 OD Soil Microorganisms: Nitrogen Transformation Test Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study code: G-06-21 GLP: Yes Published: No	
Pieczka P	2021	JMD-HER 387 OD Terrestrial Plant Test: Seedling Emergence and Seedling Growth Test Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study code: G-08-21 GLP: Yes Published: No	
Arendarczyk A	2021	JMD-HER 387 OD Terrestrial Plant Test: Vegetative Vigour Test Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study code: G-07-21 GLP: Yes Published: No	

1.4 Data protection claims

Data protection is claimed in accordance with Article 59 of Regulation (EC) No. 1107/2009 as provided for in the list of references in Appendix 4.

2 Details of the authorization decision

2.1 Product identity

Product code	JMD-HER 387 OD
Product name in MS	Will be provided on the label.
Authorization number	Not applicable.
Function	Herbicide.
Applicant	Pestila Spółka z ograniczoną odpowiedzialnością
Active substances (incl. content)	2,4-D, 250 g/L (as 2,4-D 2EHE, 377 g/L) iodosulfuron-methyl-sodium, 10 g/L
Formulation type	Oil dispersion [OD]
Packaging	bottles (HDPE/PA (COEX), fHDPE): 0.25L, 0.5L, 1L cannisters (HDPE/PA (COEX), fHDPE): 5L, 10L, 20L drums (HDPE/PA (COEX), fHDPE): 220L containers (HDPE/PA (COEX): 1000L professional

Coformulants of concern for national authorizations	Not applicable.
Restrictions related to identiy	Not applicable.
Mandatory tank mixtures	Not applicable.
Recommended tank mixtures	Not applicable.

2.2 Conclusion

The evaluation of the application for product **Jockey 387 OD** (product code: JMD-HER 387 OD) resulted in the decision to grant the authorization, in line to GAP table and label project.

Physical and chemical properties: Shelf-life: 2 years.

Efficacy: JMD-HER 387 OD can be granted in line to accepted GAP table.

Mammalian toxicology:
Classification of JMD-HER 387 OD according to the toxicological propertiess is: H302, H318, H317.No risk for operator when is equipped with work wear (arms, body and legs covered) and protective gloves during mixing/loading and during application.No health risk for the worker assuming the workwear (arms, body and legs covered) is used. The exposure of bystander and resident (children and adult) to 2,4-D and iodosulfuron-methyl-sodium contained in the formulation JMD-HER 387 OD causes no risk to human health if the product is used in accordance with the intended uses listed in the GAP Table.

From toxicology point of view:
The composition of the assessed product JMD-HER 387 OD has been verified in terms of Regulation 2023/574 of March 2023 and no neutral ingredients prohibited in plant protection products have been identified according in Annex III to Regulation (EC) No 1107/2009.

Metabolism and Residues
Proposed uses are accepted.
Comment:
In the case of the stability of iodosulfuron-methyl, the Applicant refers to the data contained in the Atlantis 12 OD Registration Report. The data protection of Atlantis 12 OD should be confirmed by the competent authority at national level before registration.
~~List of data submitted or referred to by the applicant and relied on, but already evaluated should be completed before registration (Appendix 1 in B7 and B5).~~ The list was completed.

Fate: Proposed uses are accepted.
Ecotoxicology: Proposed uses are accepted in line to accepted GAP table.
Conclusion for Poland:
Aquatic organisms
In case of Poland, it can be concluded that **Jockey 387 OD** used at the max. rate of 1 L/ha to protect cereals according to proposed GAP does not pose unacceptable risk to aquatic organisms under condition that 5m vegetated buffer strip is applied.
Non-target plants
1. To protect non-target plants respect an unsprayed buffer zone of 10m to non-agricultural land or apply 5m an unsprayed buffer zone to non-agricultural land with ~~75~~ 50 % drift reduction nozzles.

It was also verified whether the co-formulants contained in plant protection product Jockey 387 OD are listed in Annex III to Regulation (EC) No 1107/2009 and/or could be considered unacceptable based on the criteria indicated in the Annex to the Commission Implementing Regulation (EU) 2023/574 of 13 March 2023.

Based on the currently available MSDSs and other information provided by applicant or manufacturer of co-formulant, the product Jockey 387 OD does not contain any unacceptable co-formulant/ingredient listed in the Commission Regulation (EU) 2021/383 amending Annex III to Regulation (EC) No 1107/2009.
According to the current knowledge and available information none of the co-formulants in the plant protection product Jockey 387 OD meets the Annex to Regulation (EU) 2023/574 criteria for identification of co-formulants that are unacceptable for inclusion in a plant protection products. Taking this into account, none of the co-formulants/ingredients in this product is considered to be a candidate for inclusion in Annex III of Regulation (EU) 1107/2009.
Detailed assessment of co-formulants according to Article 3 of Regulation (EU)2023/574 can be found in dRR Part C and annex to Part C of this submission (section 1.2.2).

2.3 Substances of concern for national monitoring

There are no substances of concern for national monitoring.

2.4 Classification and labelling

2.4.1 Classification and labelling under Regulation (EC) No 1272/2008

The following classification is proposed in accordance with Regulation (EC) No 1272/2008:

Hazard class(es), categories:	**Acute Tox. 4, H302** **Eye Dam. 1, H318** **Skin Sens. 1, H317** Aquatic Acute 1, H400 **Aquatic Chronic 1, H410**

The following labelling information is derived from the classification and to be mentioned in the safety data sheet. The information which is determined for the **label is formatted bold:**

Hazard pictograms:	 **GHS05** **GHS07** **GHS09**
Signal word:	**Danger**
Hazard statement(s):	**H302 - Harmful if swallowed.** **H318 - Causes serious eye damage.** **H317 - May cause an allergic skin reaction.** H400 - Very toxic to aquatic life. **H410 - Very toxic to aquatic life with long lasting effects.**
Precautionary statement(s):	**P264 - Wash hands thoroughly after handling.** **P270 - Do not eat, drink or smoke when using this product.** **P280 - Wear protective gloves, protective clothing, eye protection, face protection.** **P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.** **P302+P352 - IF ON SKIN: Wash with plenty of water with soap.**

	P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. **P310 - Immediately call a POISON CENTER or doctor.** **P333+P313 - If skin irritation or rash occurs: Get medical advice or attention.** **P362+P364 - Take off contaminated clothing and wash it before reuse.** **P391 - Collect spillage**
Additional labelling phrases:	**SPe3 - To protect aquatic organisms respect an unsprayed vegetated buffer zone of 5m to surface water bodies.**
	SPe3 To protect non-target plants respect an unsprayed buffer zone of 10m to non-agricultural land or apply 5m an unsprayed buffer zone to non-agricultural land with ~~75~~ 50% **drift reduction nozzles.**

Special rule for labelling of plant protection product (PPP):	
EUH401	**To avoid risks to man and the environment, comply with the instructions for use.**
Further labelling statements under Regulation (EC) No 1272/2008:	
EUH208	

See Part C for justifications of the classification and labelling proposals.

2.4.1 Standard phrases under Regulation (EU) No 547/2011

SP1	Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).
SPe3	To protect aquatic organisms respect an unsprayed vegetated buffer zone of 5m to surface water bodies.
SPe3	To protect non-target plants respect an unsprayed buffer zone of 10m to non-agricultural land or apply 5m an unsprayed buffer zone to non-agricultural land with ~~75~~ 50% drift reduction nozzles.

2.4.2 Other phrases (according to Article 65 (3) of the Regulation (EU) No 1107/2009)

-	After the application of product, place warning boards in visible places around the field: " No unauthorized access to the area treated with plant protection products ". The boards should remain until the plants are harvested.
-	During spraying, a protection zone of at least 2-3 m away from residential buildings/habitats and bystanders should be used.

2.5 Risk management

2.5.1 Restrictions linked to the PPP

The authorization of the PPP is linked to the following conditions (mandatory labelling):

Operator protection:

-	Work wear (arms, body and legs covered) and protective gloves during mixing/loading and during application.
Worker protection:	
-	Workwear (arms, body and legs covered) and protective gloves.
Integrated pest management (IPM)/sustainable use:	
-	-
Environmental protection	
SP1	Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).
SPe3	To protect aquatic organisms respect an unsprayed vegetated buffer zone of 5m to surface water bodies.
SPe3	To protect non-target plants respect an unsprayed buffer zone of 10m to non-agricultural land or apply 5m an unsprayed buffer zone to non-agricultural land with ~~75~~ 50% drift reduction nozzles.
Other specific restrictions	
EUH401	To avoid risks to man and the environment, comply with the instructions for use.
-	After the application of product, place warning boards in visible places around the field: " No unauthorized access to the area treated with plant protection products ". The boards should remain until the plants are harvested.
-	During spraying, a protection zone of at least 2-3 m away from residential buildings/habitats and bystanders should be used.

The authorization of the PPP is linked to the following conditions (voluntary labelling):

Integrated pest management (IPM)/sustainable use:	
-	-

2.5.2 Specific restrictions linked to the intended uses

Some of the authorised uses are linked to the following conditions in addition to those listed under point 2.5.1 (mandatory labelling):

Integrated pest management (IPM)/sustainable use:		Relevant for use no.
-	-	-
Environmental protection:		Relevant for use no.
SP 1	Do not contaminate water with the product or its container (Do not clean application equipment near surface water/Avoid contamination via drains from farmyards and roads).	1, 2
SPe3	To protect aquatic organisms respect an unsprayed vegetated buffer zone of 5m to surface water bodies.	1, 2
SPe3	To protect non-target plants respect an unsprayed buffer zone of 10m to non-agricultural land or apply 5m an unsprayed buffer zone to non-agricultural land with ~~75~~ 50% drift reduction nozzles.	1, 2

2.6 Intended uses (only NATIONAL GAP)

GAP rev. 1, date: 2022-12-05

PPP (product name/code):	JMD-HER 387 OD	Formulation type:	OD [a, b]
Active substance 1:	2,4-D	Conc. of as 1:	377 g/L [c]
Active substance 2:	Iodosulfuron-methyl-sodium	Conc. of as 2:	10 g/L [c]
Safener:	n.a.	Conc. of safener:	n.a.[c]
Synergist:	n.a.	Conc. of synergist:	n.a. [c]
Applicant:	Pestila Spółka z ograniczoną odpowiedzialnością	Professional use:	☒
Zone(s):	Central Zone [d]	Non professional use:	☐
Verified by MS:	no		

Field of use: Herbicide

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, Fnp G, Gn, Gnp 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, other dose rate expression, dose range (min-max)
					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		
1	Poland	Winter wheat, Winter rye, Winter triticale	F	weeds (for details please refer to Section B0 and B3)	broadcast spraying	BBCH 23-31 Spring, post emergence	a) 1 b) 1	N/A	a) 1 L/ha b) 1 L/ha	a) 377 g 2,4-D and 10 g iodosulfuron-methyl-sodium b) 377 g 2,4-D and 10 g iodosulfuron-methyl-sodium	200-300	N/A	Recommended dose: 0.8 – 1.0 L/ha
2	Poland	Spring wheat, Spring triticale	F	weeds (for details please refer to Section B0 and B3)	broadcast spraying	BBCH 23-31 Spring, post emergence	a) 1 b) 1	N/A	a) 1 L/ha b) 1 L/ha	a) 377 g 2,4-D and 10 g iodosulfuron-methyl-sodium b) 377 g 2,4-D and 10 g iodosulfuron-methyl-sodium	200-300	N/A	Recommended dose: 0.8 – 1.0 L/ha

3	Bulgaria	Winter wheat	F	weeds (for details please refer to Section B0 and B3)	broadcast spraying	BBCH 23-31 Spring, post emergence	a) 1 b) 1	N/A	a) 1 L/ha b) 1 L/ha	a) 377 g 2,4-D and 10 g iodosulfuron-methyl-sodium b) 377 g 2,4-D and 10 g iodosulfuron-methyl-sodium	200-300	N/A	Recommended dose: 0.8 – 1.0 L/ha **Eff. section:** Use accepted, but list of accepted weed species and their sensitivity should be decided on cMS level.

Remarks table heading:

(a) e.g. wettable powder (WP), emulsifiable concentrate (EC), granule (GR)
(b) Catalogue of pesticide formulation types and international coding system CropLife International Technical Monograph n°2, 6th Edition Revised May 2008
(c) g/kg or g/l
(d) Select relevant
(e) Use number(s) in accordance with the list of all intended GAPs in Part B, Section 0 should be given in column 1
(f) No authorization possible for uses where the line is highlighted in grey, Use should be crossed out when the notifier no longer supports this use.

Remarks columns:

1 Numeration necessary to allow references
2 Use official codes/nomenclatures of EU Member States
3 For crops, the EU and Codex classifications (both) should be used; when relevant, the use situation should be described (e.g. fumigation of a structure)
4 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
5 Scientific names and EPPO-Codes of target pests/diseases/ weeds or, when relevant, the common names of the pest groups (e.g. biting and sucking insects, soil born insects, foliar fungi, weeds) and the developmental stages of the pests and pest groups at the moment of application must be named.
6 Method, e.g. high volume spraying, low volume spraying, spreading, dusting, drench
Kind, e.g. overall, broadcast, aerial spraying, row, individual plant, between the plants - type of equipment used must be indicated.
7 Growth stage at first and last treatment (BBCH Monograph, Growth Stages of Plants, 1997, Blackwell, ISBN 3-8263-3152-4), including where relevant, information on season at time of application
8 The maximum number of application possible under practical conditions of use must be provided.
9 Minimum interval (in days) between applications of the same product
10 For specific uses other specifications might be possible, e.g.: g/m³ in case of fumigation of empty rooms. See also EPPO-Guideline PP 1/239 Dose expression for plant protection products.
11 The dimension (g, kg) must be clearly specified. (Maximum) dose of a.s. per treatment (usually g, kg or L product / ha).
12 If water volume range depends on application equipments (e.g. ULVA or LVA) it should be mentioned under “application: method/kind”.
13 PHI - minimum pre-harvest interval
14 Remarks may include: Extent of use/economic importance/restrictions

3 Background of authorization decision and risk management

3.1 Physical and chemical properties (Part B, Section 2)

All studies have been performed in accordance with the current requirements and the results are deemed to be acceptable. The appearance of the product is that of white to beige liquid, with a specific odour. It is not explosive, has no oxidizing properties. The product is not flammable. It has a self-ignition temperature of 370°C. In aqueous solution, it has a pH value around 7.4 at 20°C. There is no effect of low and high temperature on the stability of the formulation, since after 7 days at 0°C and 8 weeks at 40°C, neither the active ingredient content nor the technical properties were changed. The stability data indicate a shelf life of at least 2 years at ambient temperature when stored in HDPE/PA (COEX).

Its technical characteristics are acceptable for an OD formulation.

Based on 2-years storage stability study shelf life is: 2 years.

The intended concentration of use is 0.33% to 0.5%.

No tank-mixing recommended.

3.2 Efficacy (Part B, Section 3)

3.3 Efficacy data

Preliminary studies: Preliminary range-finding tests were not submitted by the Applicant. The active substances of Jockey 387 OD (product code: JMD-HER 387 OD) – iodosulfuron-methyl-sodium and 2,4-D EHE, are registered and have been commonly used in agricultural practice for many years. So, many efficacy trials are available to evaluate the effectiveness of products containing those active compounds. **Preliminary tests were not necessary in this case in the opinion of Evaluator.**

In Poland this formulation is not registered yet. Applicant did not submitted justification to combine both active ingredients in Jockey 387 OD. However, in the opinion of ZRMs such justification in this case is not required. Expecially in case that the presented efficacy trials, of these two compounds (iodosulfuron methyl-sodium and 2,4-D EHE) demonstarted the activity against studied weeds in cereals (winter and spring). Jockey 387 OD demonstarted at least comparable control or even higher to the standard reference products used during trials (ex. Hoester super, Husar OD, Huzar active plus or Sekator Plus). Therefore, in the opinion of ZRMs the inclusion of proposed amount of iodosulfuron methyl-sodium (10 g/L) and 2,4-D EHE (377 g/L) in the formulation of Jockey 387 OD are fully justified.

2,4-D is generally formulated as an amine salt or an ester, each of which have their own advantages and tradeoffs. Generally, ester formulations are considered more efficacious, but more likely to drift off target, while amine salts are considered less efficacious but more stable.

Some general differences in amine and ester formulations include the following [Nelson et al. 2018]:

• Esters are absorbed more quickly than amines on broadleaf weeds and are more efficient under certain environmental conditions and for the control of certain plant species.

• Amine formulations of 2,4-D are essentially non-volatile, and pose less potential for vapor movement following application.

• Esters are absorbed more quickly by plants and therefore are less likely to be washed away by rain.

• Amines are often thought of as being less phytotoxic to crops than ester formulations, however, this is

not accurate for all crops and all situations.

In Jockey 387 OD 2,4-D is used idosulfuron methyl sodium (10 g/L) and 2,4-D EHE (377 g/L). Such a composition has a very good effectiveness against cereal weeds, as shown in the following section.

Minimum effective dose (MED): To provide information to establish the minimum effective dose, some of the trials conducted to demonstrate efficacy should include at least two lower dose(s) than recommended dose. However, in the appropriate research of efficacy were tested differ doses and to register was chosen the lowest effective, which is in accordance with EPPO 1/225 (2).

Jockey 387 OD (product code: JMD-HER 387 OD) containing iodosulfuron methyl sodium (10 g/L) and 2,4-D EHE (377 g/L) was tested at a range of dose rates, but to demonstrate minimum effective dose rate, the control obtained with Jockey 387 OD applied at different dose rates was evaluated in 36 eff. trials carried out on winter cereals and 13 eff. trials performed on spring cereals. Trials on winter cereals were conducted in three EPPO zones: Maritime 10 trials (DE-6, CZ-4), N-E EPPO zone 13 trials (PL) and S-E EPPO zone 13 trials (RO-5, BG-4, HU-4). Spring cereals were studied only in one EPPO zone – N-E in PL.

Following cerelas were studied during trials:

- *winter cereals* (36 trials): wheat – 28 trials (DE-3, CZ-2, PL-10, RO-5, BG-4 and RO-4), triticale -1 trial (PL), barley – 6 trials (PL-1, DE-3, CZ-2), rye – 1 trial (PL).
- *spring cereals* (13 trials): wheat – 10 trials (PL), triticale -1 trial (PL), barley – 1 trial (PL) and oat - 1 trial (PL).

Applicant would like to register Jockey 387 OD in PL and BG. So, in the opinion of Evaluator – results are presented correctly. For Poland trials are valid from N-E EPPO zone and neighbouring countries from other zone (ex. DE, CZ). So, they can be presented together in tables. For BG –valid trials are from S-E EPPO zone, so they were correctly presented separately by Applicant.

Trials submitted by Applicant are sufficient for Poland for MED dose for PL for winter and spring cereals and for BG for winter cereals.

The applicant has proposed doses of Jockey 387 OD (product code: JMD-HER 387 OD) that reflect those of currently authorised iodosulfuron methyl-sodium and 2,4-D EHE OD products across the EU.

Following weed species were studied during trials:

- ***winter cereals****:*

✓ assessment for PL (trials from PL, DE and CZ): APESV (10), BRSNW (1), CAPBP (9), CENCY (5), DESSO (1), GALAP (13), GERMO (1), GERPU (1), LAMAM (6), LAMPU (9), MATCH (4), MATIN (12), PAPRH (12), POLCO (2), SINAR (1), STEME (12), THLAR (8), VERAR (1), VERHE (7), VERPE (12) and VIOAR (16).

To determine the minimum effective dose for the control of weeds in winter cereals by Jockey 387 OD, the Applicant presented data from 23 field trials. Jockey 387 OD was tested at three different doses: 0,6 L/ha (60% of the target dose rate), 0,8 L/ha (80% of the target dose rate) and 1,0 L/ha (full target rate). A clear dose response was observed for studied weeds. In the opinion of ZRMs also dose 0,8 L/ha should be recommended as an effective for use in the case of lower infestation the field by weeds.

✓ assessment for BG (trials from BG, RO and HU): ANTAR (2), APESV (2), CAPBP (5), CHEAL (1), CIRAR (1), CNSOR (2), CONAR (3), GALAP (6), LAMAM (2), LAMPU (5), PAPRH (6), SINAR (2), STEME (2), VERHE (5), VERPE (4), VIOAR (1) and XANST (2).

To determine the minimum effective dose for the control of weeds in winter cereals by Jockey 387 OD, the Applicant presented data from 13 field trials. Jockey 387 OD was tested at three different doses: 0.6 L/ha (60% of the target dose rate); 0,8 L/ha (80% of the target dose) and 1,0 L/ha (full target dose). A clear dose response was observed during trials. In the opinion of ZRM also dose 0.8 L/ha should be recommended as an effective for use in the case of lower infestation the field by weeds.

- ***spring cereals****:*

- ✓ assessment for PL (trials from PL): AMARE (1), APESV (4), BRSNW (3), CAPBP (4), CENCY (1), CHEAL (13), CIRAR (1), GALAP (4), GASPA (1), GERPU (3), LAMAM (3), LAMPU (2), MATIN (6), PAPRH (4), POLAV (2), POLCO (4), SINAR (1), STEME (6), THLAR (2), VERHE (1), VERPE (3) and VIOAR (8).
- ✓ Assessment for BG: lack of trials carried out on spring cereals in Maritime EPPO zone. Also, use on spring cereals is not included in GAP table. So, spring cereals can be registered only in PL (N-E EPPO zone).

To determine the minimum effective dose for the control of weeds in spring cereals by Jockey 387 OD, the Applicant presented data from 13 field trials. Jockey 387 OD was tested at three different doses: 0,6 L/ha (60% of the target dose rate), 0,8 L/ha (80% of the target dose rate) and 1,0 L/ha (full target rate). A clear dose response was observed for studied weeds. In the opinion of ZRMs also dose 0,8 L/ha should be recommended as an effective for use in the case of lower infestation the field by weeds.
Summary: On the basis on the submitted trials (49) for Jockey 387 OD against weeds on winter and spring cereals is recommended to use a dose of 0.8 L/ha (in the case of lower infestation) and 1.0 L/ha.

Efficacy: All details about efficacy methodology used during efficacy trials are presented above by Applicant. Submitted reports from field trials (49 in total: 13 trials carried out on spring cereals and 36 on winter cerelas) include a detailed data on soil and field conditions, agro-technological procedures, forecrop as well as meteorological conditions and technical details of the spraying etc.

Applicant properly presented efficacy results. As, Applicant wish to register Jockey 387 OD in PL (N-E EPPO zone) and BG (S-E EPPO zone) – results were presented separately for S-E EPPO zone and together for N-E and DE and CZ (from Maritime EPPO zone) as a valid for the Polish assessment.

Only trials with greater than 4-5 weeds/m^2 or over 2% ground cover should be taken for assessment. According to EPPO PP 1/226 at least 6 fully supportive results for major weeds and 2 trials for minor weeds should be required. Therefore, based on knowledge of major/minor status of weeds in each country, weeds with insufficient results should be excluded. Considering comparable results in all zones, it is recommended to take into account results from all zones to get more reliable set of data. The results should be adjusted to known efficacy from long term use of iodosulfuron-methyl-sodium and 2,4-D EHE standard products by cMS. Therefore, the sufficiency of results should be considered on the national level based on importance of weed in their country. Also, concerned Member States will need to consider the relevance of the submitted formulation comparability data in relation to the current authorized uses for the reference product in their own Member State. The evaluation was conducted in accordance with Uniform Principles.

In Poland, no PPP with iodosulfuron methyl-sodium and 2,4-D EHE is registered. Jockey 387 OD will be the first on the Polish market in this formulation and composition. So, acording to Polish rules for major weeds – at least 6 trials are required and for minor weeds – at least 3 weeds.

Submitted efficacy trials are correctly performed according to appropriate EPPO standards. Two growing seasons were studied for winter and spring cereals (2020 and 2021).

cMS should determine the sensitivity of the accepted weed species in accordance with their applicable internal regulations. For Poland the classification of weed sensitivity differ to SANCO. Accepted weed species for Poland (N-E EPPO zone) should be presented to following scale of sensitivity: S (susceptible) > 85%; MS (moderately susceptible) 70-85%; MT (moderately tolerant) 60-70%; T (tolerant) < 60%.

Applicant submitted trials carried out in 2020 and 2021. Those studies were carried out by testing unit mandated to conduct research in the field of efficacy of plant protection products by the Chief Inspector of Plant Health and Seed Inspection and are officially GEP recognized. Appropriate window application, number of applications and water volume was studied during those trials.

The cite of the original registrant's data on iodosulfuron-methyl-sodium and 2,4-D EHE now out of protection in support of those recommendations on the draft label that are not adequately supported. Such extrapolations should be considered by individual member states on a national level based on current registration, data protection and experience with similar iodosulfuron-methyl-sodium and 2,4-D EHE

products. The spectrum of weeds should be checked with label claims on these reference products.

ASSESSMENT FOR POLAND ON THE BASIS ON RESULTS FROM DE, CZ AND PL:

Applicant submitted in total 36 efficacy trials valid for Poland: 13 trials were performed on spring cereals and 23 trials on winter cereals.

Following cerelas were studed during trials:

- *winter cereals* (23 trials): wheat – 15 trials (DE-3, CZ-2, PL-10), triticale -1 trial (PL), barley – 6 trials (PL-1, DE-3, CZ-2), rye – 1 trial (PL).
- *spring cereals* (13 trials): wheat – 10 trials (PL), triticale -1 trial (PL), barley – 1 trial (PL) and oat - 1 trial (PL).

In the opinion of ZRMs number of trials for winter and spring cereals is accepted. On the basis on submitted efficacy trials and possibility of extrapolation between winter cereals (from winter wheat to winter triticale, winter barley, winter rye) and spring cereals (from spring wheat to sping triticale, spring barley and oat) all uses propsed in GAP – can be accepted. Expecially, when Applicant submitted sufficient number of selectivity trials for extrapolation performed on winter wheat (20), winter triticale (5) and winter rye (5) and for spring cereals: wheat (16) and trticale (5). Only, lack of selelctivity trials were presented for oat, winter barley and spring barley. So extrapolation from spring cereals to those crops is not possible according to Polish rules. But, Applicant, properly – not included oat, winter barley and spring barley in GAP table. So, all winter cereals included in GAP table can be accepted.

Below, ZRMs presented the assessment for accepted weed species in Polish label;

–***winter cereals*** (weeds from all studied winter cereals were assessed together):

APESV – major weed – 10 trials (so, number of trials is sufficient) – average level of infestation: 8.0 (min 5, max 15.8) was at the acceptable level in all trials. Trials were carried out on winter wheat (PL-7), winter triticale (PL-1), rye (PL-1) and winter barley (DE-1). **It can be concluded that Jockey 387 OD moderately efficiency control APESV at dose 0.8 L/ha (82.6%) and effectively the 1.0 L/ha (90.8%).** Results were comparable to st. ref. product Huzar Active Plus and characterized by betted efficiency than Hoester Super.

CAPBP – minor weed – 9 trials (so, number of trials is sufficient) – average level of infestation: 8.4 (min 5, max 11.9) was at the acceptable level in all trials. Trials were carried out on winter wheat (PL-4, DE-2), winter triticale (PL-1) and winter barley (DE-2). **It can be concluded that Jockey 387 OD efficiency control CAPBP at dose 0.8 L/ha (90.7%) and 1.0 L/ha (94.4%).** Results were comparable to st. ref. product Huzar Active Plus, Huzar OD and Hoester Super.

CENCY – major weed – 5 trials (so, number of trials is not acceptable). **Due to insufficient number of trials, this weed should be excluded from GAP table and label project**. At least 6 valid trials are required.

GALAP – major weed – 13 trials (so, number of trials is sufficient) – average level of infestation: 6.9 (min 2.5, max 10.8) was at the acceptable level in all trials (in the exception of one trial: E-WW-PL-2021-S21-03802804). This trial was excluded from the assessment. Valid trials were carried out on winter wheat (PL-5, DE-1, CZ-2), winter barley (DE-1, PL-1, CZ-1) and rye (PL-1). **It can be concluded that Jockey 387 OD efficiency control GALAP at dose 1.0 L/ha and moderately efficiency at dose 0.8 L/ha.** Results were comparable to st. ref. product Huzar Active Plus, Huzar OD and Secator Plus and were characterized by better efficienct than and Hoester Super.

LAMAM – minor weed – 6 trials (so, number of trials is sufficient) – average level of infestation: 6.1 (min 5, max 9) was at the acceptable level in all trials. Trials were carried out on winter wheat (PL-4), winter rye (PL-1) and winter barley (PL-1). **It can be concluded that Jockey 387 OD moderately efficiency control LAMAM at dose 0.8 L/ha (75.7%) and efficiency at dose 1.0 L/ha (89.0%).** Results were comparable to st. ref. product Huzar Active Plus.

LAMPU – minor weed – 9 trials (so, number of trials is sufficient) – average level of infestation: 6.5 (min 4, max 10.3) was at the acceptable level in all trials. Trials were carried out on winter wheat (PL-6,

DE-2) and winter barley (CZ-1). **It can be concluded that Jockey 387 OD efficiency control LAMPU at dose 0.8 L/ha (87.4%) and dose 1.0 L/ha (90.7%).** Results were comparable to st. ref. product Huzar Active Plus, Huzar OD and Sekator Plus.

MATCH – minor weed – 4 trials (so, number of trials is sufficient) – average level of infestation: 17 (min 6.8, max 30.8) was at the acceptable level in all trials. Trials were carried out on winter wheat (DE-2) and winter barley (DE-2). **It can be concluded that Jockey 387 OD efficiency control MATCH at dose 0.8 L/ha (96.0%) and dose 1.0 L/ha (98.3%).** Results were comparable to st. ref. product Huzar OD and Hoester Super.

MATIN – major weed – 12 trials (so, number of trials is sufficient) – average level of infestation: 5.9 (min 3, max 10) was at the acceptable level in all trials (in the exception of one trial: E-WB-CZ-2021_S21_0382820). This trial was excluded from the assessment. Valid trials were carried out on winter wheat (PL-5, CZ-2), winter triricale (PL-1), winter rye (PL-1) and winter barley (PL-1, CZ-1). **It can be concluded that Jockey 387 OD efficiency control MATIN at dose 0.8 L/ha and dose 1.0 L/ha.** Results were comparable to st. ref. product Huzar Active Plus, Hoester Super and Sekator Plus.

PAPRH - major weed in winter wheat, winter barley and winter triticale, in other winter cereals – minor weed– 12 trials (so, number of trials is sufficient) – average level of infestation: 11.6 (min 5, max 42.5) was at the acceptable level in all trials. Trials were carried out on winter wheat (PL-7, DE-2, CZ-1) and winter barley (DE-2). **It can be concluded that Jockey 387 OD moderately efficiency control PAPRH at dose 0.8 L/ha (84.4%) and efficiency at dose 1.0 L/ha (87.7%).** Results were comparable to st. ref. product Huzar Active Plus, Sekator Plus, Huzar OD and were characterized by better efficiency than Hoester Super.

STEME - minor weed – 12 trials (so, number of trials is sufficient) – average level of infestation: 8 (min 5, max 12) was at the acceptable level in all trials. Trials were carried out on winter wheat (PL-8, DE-1), winter triticale (PL-1), winter rye (PL-1) and winter barley (DE-1). **It can be concluded that Jockey 387 OD efficiency control STEME at dose 0.8 L/ha (87.0%) and efficiency at dose 1.0 L/ha (93.7%).** Results were comparable to st. ref. product Huzar Active Plus, Huzar OD and Hoester Super.

THLAR - minor weed – 8 trials (so, number of trials is sufficient) – average level of infestation: 6.9 (min 5, max 9.3) was at the acceptable level in all trials. Trials were carried out on winter wheat (PL-6), winter triticale (PL-1), winter rye (PL-1). **It can be concluded that Jockey 387 OD moderately efficiency control THLAR at dose 0.8 L/ha (83.8%) and efficiency at dose 1.0 L/ha (90.1%).** Results were comparable to st. ref. product Huzar Active Plus.

VERHE - minor weed – 7 trials (so, number of trials is sufficient) – average level of infestation: 8.2 (min 5, max 17.5) was at the acceptable level in all trials. Trials were carried out on winter wheat (PL-4, DE-1), winter triticale (PL-1), winter barley (DE-1). **It can be concluded that Jockey 387 OD moderately tolerant control VERHE at dose 0.8 L/ha (69.7%) and moderately efficiency at dose 1.0 L/ha (78.1%).** Results were comparable to st. ref. product Huzar Active Plus, Huzar OD and were characterized by better efficiency than Hoester Super.

VERPE - minor weed – 12 trials (so, number of trials is sufficient) – average level of infestation: 7.8 (min 2, max 17.5) was at the acceptable level in all trials (in the exception of one trial: E-WB-CZ-2021-S21-0382820). This trial was excluded from the assessment. Valid trials were carried out on winter wheat (PL-5, CZ-1), winter rye (PL-1), winter barley (PL-1, DE-1, CZ-2). **It can be concluded that Jockey 387 OD moderately efficiency control VERPE at dose 0.8 L/ha and efficiency at dose 1.0 L/ha.** Results were comparable to st. ref. product Huzar Active Plus, Huzar OD, Sekator Plus and were characterized by better efficiency than Hoester Super.

VIOAR – major weed in winter wheat and minor in other winter cereals – 16 trials (so, number of trials is sufficient) – average level of infestation: 13.5 (min 5, max 46.5) was at the acceptable level in all trials. Trials were carried out on winter wheat (PL-7, DE-3, CZ-1), winter triticale (PL-1), winter rye (PL-1) and winter barley (DE-2, CZ-1). **It can be concluded that Jockey 387 OD moderately efficiency control VIOAR at dose 0.8 L/ha (73.0%) and dose 1.0 L/ha (81.0%).** Results were comparable to st. ref. product Huzar Active Plus, Huzar OD and were characterized by better efficiency than Hoester Super.

Following weed species should be excluded from GAP table and label project: BRSNN, DESSO, GER-

MO, GERPU, SINAR – only represented by 1 trial and POLCO and CENCY for which not enough number of trials were presented due to their importance.

–***spring cereals*** (weeds from all studied winter cereals were assessed together):

APESV – major weed – 4 trials (so, number of trials is not sufficient) – **Due to insufficient number of trials, this weed should be excluded from GAP table and label project**. At least 6 valid trials are required.

BRSNN – minor weed – 3 trials (so, number of trials is sufficient) – average level of infestation: 8.4 (min 5, max 15) was at the acceptable level in all trials. Trials were carried out on spring wheat (1PL), spring barley (PL-1) and oat (PL-1). **It can be concluded that Jockey 387 OD efficiency control BRSNN at dose 0.8 L/ha (93.4%) and 1.0 L/ha (96.7%).** Results were comparable to st. ref. product Huzar Active Plus.

CAPBP – minor weed – 4 trials (so, number of trials is sufficient) – average level of infestation: 5.9 (min 5, max 7) was at the acceptable level in all trials. Trials were carried out on spring wheat (4PL). **It can be concluded that Jockey 387 OD efficiency control CAPBP at dose 0.8 L/ha (94.0%) and 1.0 L/ha (97.8%).** Results were comparable to st. ref. product Huzar Active Plus.

CHEAL – major weed – 13 trials (so, number of trials is sufficient) – average level of infestation: 9.79 (min 5.5, max 14.8) was at the acceptable level in all trials. Trials were carried out on spring wheat (PL-10), spring triticale (PL-1), oat (PL-1) and spring barley (PL-1). **It can be concluded that Jockey 387 OD efficiency control CHEAL at dose 0.8 L/ha (92.3%) and 1.0 L/ha (97.7%).** Results were comparable to st. ref. product Huzar Active Plus.

GALAP – minor weed – 4 trials (so, number of trials is sufficient) – average level of infestation: 7 (min 5, max 9) was at the acceptable level in all trials. Trials were carried out on spring wheat (4PL). **It can be concluded that Jockey 387 OD efficiency control GALAP at dose 0.8 L/ha (91.3%) and 1.0 L/ha (98.3%).** Results were comparable to st. ref. product Huzar Active Plus.

GERPU – minor weed – 3 trials (so, number of trials is sufficient) – average level of infestation: 6 (min 6, max 6) was at the acceptable level in all trials. Trials were carried out on spring wheat (3PL) and oat (1PL). **It can be concluded that Jockey 387 OD moderately efficiency control GERPU at dose 0.8 L/ha (79.3%) and efficiency control at dose 1.0 L/ha (88.3%).** Results were comparable to st. ref. product Huzar Active Plus.

LAMAM – minor weed – 3 trials (so, number of trials is sufficient) – average level of infestation: 8 (min 5, max 13) was at the acceptable level in all trials. Trials were carried out on spring wheat (2PL) and spring barley (1PL). **It can be concluded that Jockey 387 OD efficiency control LAMAM at dose 0.8 L/ha and 1.0 L/ha.** Results were comparable to st. ref. product Huzar Active Plus.

MATIN – minor weed – 6 trials (so, number of trials is sufficient) – average level of infestation: 5.8 (min 5, max 8 was at the acceptable level in all trials. Trials were carried out on spring wheat (3PL), spring triticale (PL1), spring barley (PL1) and oat (1PL). **It can be concluded that Jockey 387 OD efficiency control MATIN at dose 0.8 L/ha (91.5%) and 1.0 L/ha (97.7%).** Results were comparable to st. ref. product Huzar Active Plus.

PAPRH – minor weed – 4 trials (so, number of trials is sufficient) – average level of infestation: 5.7 (min 5, max 7) was at the acceptable level in all trials. Trials were carried out on spring wheat (2PL) and spring triticale (2PL). **It can be concluded that Jockey 387 OD efficiency control PAPRH at dose 0.8 L/ha (85.5%) and 1.0 L/ha (93.3%).** Results were comparable to st. ref. product Huzar Active Plus.

POLCO – major weed – 7 trials (so, number of trials is sufficient) – average level of infestation: 7.6 (min 4, max 14) was at the acceptable level in all trials. Trials were carried out on spring wheat (5PL), spring barley (PL1) and spring triticale (1PL). **It can be concluded that Jockey 387 OD moderately efficiency control POLCO at dose 0.8 L/ha (81.3%) and efficiently at dose 1.0 L/ha (90.0%).** Results were comparable to st. ref. product Huzar Active Plus.

STEME – minor weed – 6 trials (so, number of trials is sufficient) – average level of infestation: 5.8 (min 5, max 7.5) was at the acceptable level in all trials. Trials were carried out on spring wheat (5PL) and oat

(1PL). **It can be concluded that Jockey 387 OD efficiency control STEME at dose 0.8 L/ha (87.3%) and efficiently at dose 1.0 L/ha (92.8%).** Results were comparable to st. ref. product Huzar Active Plus.

VERPE – minor weed – 3 trials (so, number of trials is sufficient) – average level of infestation: 7.3 (min 5, max 10) was at the acceptable level in all trials. Trials were carried out on spring wheat (2PL), spring barley (PL1). **It can be concluded that Jockey 387 OD moderately efficiency control VERPE at dose 0.8 L/ha (76.3%) and efficiently at dose 1.0 L/ha (87.7%).** Results were comparable to st. ref. product Huzar Active Plus.

VIOAR – minor weed – 8 trials (so, number of trials is sufficient) – average level of infestation: 9.4 (min 5, max 30) was at the acceptable level in all trials. Trials were carried out on spring wheat (7PL) and oat (1PL). **It can be concluded that Jockey 387 OD moderately efficiency control VIOAR at dose 0.8 L/ha (82.0%) and efficiently at dose 1.0 L/ha (89.3%).** Results were comparable to st. ref. product Huzar Active Plus.

Following weed species should be excluded from GAP table and label project: AMARE, CENCY, CIRAR, GASPA, SINAR, VERHE – only represented by 1 trial and APESV, LAMPU, POLAV, THLAR for which not enough number of trials were presented due to their importance in Poland.

ASSESSMENT FOR BELGIUM ON THE BASIS ON RESULTS FROM RO, HU and BG:

In the opinion of ZRMs number of trials for winter cereals is accepted. On the basis on submitted efficacy trials and possibility of extrapolation between winter cereals (from winter wheat to winter triticale, winter barley, winter rye) all uses can be accepted. However, only winter wheat is included in GAP table for BG.

Below, ZRMs present weed species represented at least by 2 trials, classification of weed sensitivity for BG is made in line to SANCO. cMS should decide it is correct due to its national rules. Also, cMS should decide which species can be accepted due to their importance.

ANTAR- 2 trials. It can be concluded that ANTAR was sensitive against Jockey 387 OD at dose 0.8 L/ha and 1.0 L/ha. Results were comparable to st. ref. product.

APESV- 2 trials. It can be concluded that APESV was highly sensitive against Jockey 387 OD at dose 0.8 L/ha and 1.0 L/ha. Results were comparable to st. ref. product.

CAPBP- 5 trials. It can be concluded that CAPBP was sensitive against Jockey 387 OD at dose 0.8 L/ha and 1.0 L/ha. Results were comparable to st. ref. product.

CNSOR- 2 trials. It can be concluded that CNSOR was moderaletly sensitive against Jockey 387 OD at dose 0.8 L/ha and 1.0 L/ha. Results were comparable to st. ref. product.

CONAR- 3 trials. It can be concluded that CONAR was sensitive against Jockey 387 OD at dose 0.8 L/ha and highly sensitive 1.0 L/ha. Results were comparable to st. ref. product.

GALAP- 6 trials. It can be concluded that GALAP was sensitive against Jockey 387 OD at dose 0.8 L/ha and highly sensitive 1.0 L/ha. Results were comparable to st. ref. product.

LAMAM- 2 trials. It can be concluded that LAMAM was sensitive against Jockey 387 OD at dose 0.8 L/ha and 1.0 L/ha. Results were comparable to st. ref. product.

LAMPU- 5 trials. It can be concluded that LAMPU was sensitive against Jockey 387 OD at dose 0.8 L/ha and 1.0 L/ha. Results were comparable to st. ref. product.

PAPRH- 6 trials. It can be concluded that PAPRH was sensitive against Jockey 387 OD at dose 0.8 L/ha and highly sensitive 1.0 L/ha. Results were comparable to st. ref. product.

SINAR- 2 trials. It can be concluded that SINAR was highly sensitive against Jockey 387 OD at dose 0.8 L/ha and 1.0 L/ha. Results were comparable to st. ref. product.

STEME- 2 trials. It can be concluded that STEME was sensitive against Jockey 387 OD at dose 0.8 L/ha and 1.0 L/ha. Results were comparable to st. ref. product.

VERHE- 5 trials. It can be concluded that VERHE was moderately tolerant against Jockey 387 OD at dose 0.8 L/ha and 1.0 L/ha. Results were comparable to st. ref. product.

VERPE- 4 trials. It can be concluded that VERPE was moderately sensitive against Jockey 387 OD at dose 0.8 L/ha and 1.0 L/ha. Results were comparable to st. ref. product.

XANST- 2 trials. It can be concluded that XANST was higly sensitive against Jockey 387 OD at dose 0.8 L/ha and 1.0 L/ha. Results were comparable to st. ref. product.

Following weed species should be excluded from GAP table and label project: CHEAL, CIRAR, VIOAR – only represented by 1 trial

Summary: Obtained results were comparable in most cases to the standard reference product (in some cases – were characterized by better efficiency than standards).

The most effective for most studied weed species for post-emergence use on winter and spring cereals was dose 0.8 L/ha (should be use in condition of lower infestation) and dose 1.0 L/ha.

In Polish label following weeds species can be included:

- ***for winter cereals (wheat, triticale rye)***

- **Dose 0,8 L/ha**: *Susceptible weeds*: CAPBP, LAMPU, MATCH, MATIN, STEME; *Moderately susceptible weeds*: APESV, GALAP, LAMAM, PAPRH, THLAR, VERPE, VIOAR; *Moderately tolerant weeds*; VERHE.
- **Dose 1.0 L/ha:** *Susceptible weeds:*APESV, CAPBP, GALAP, LAMAM, LAMPU, MATCH, MATIN, STEME, PAPRH, THLAR, VERPE; *Moderately susceptible weeds:*VERHE, VIOAR.

- ***for spring cereals (wheat, triticale)***

- **Dose 0,8 L/ha**: *Susceptible weeds*: BRSNN, CAPBP, CHEAL, GALAP, LAMAM, MATIN, PAPRH, STEME; *Moderately susceptible weeds* GERPU, POLCO, VERPE, VIOAR.
- **Dose 1.0 L/ha:** *Susceptible weeds:* BRSNN, CAPBP, CHEAL, GALAP, GERPU, LAMAM, MATIN, PAPRH, POLCO, STEME, VERPE, VIOAR.

This plant protection product 'Jockey 387 OD' can be used on winter cereals (wheat, triticale and rye) and spring cereals (wheat, triticale) against weed species included in GAP table and label project. Product can be use post-emergence at BBCH 23-31 at spring application.

ZRMs left the final decision about acceptance use (only winter wheat according to GAP or extension for other winter cereals on the basis on the possibility of extrapolation results between winter cereals). Also, cMS should decide about list of accepted weed species and their sensitivity classification.

The OD is a new formulation that combines the advantages of solid and liquid formulations. This formulation improves retention of spray solution and its spreading on the surface of the leaves. It keeps the leaf surface moist longer than water dispersible granules, lengthening the period of the herbicide penetration, thus increasing the amount of the active ingredient that will enter the plant. Therefore its action is less dependent on air and soil water status. The use of OD formulation is especially advantageous under critical weather conditions or in the case of a relatively late application, when weeds are older and therefore less sensitive to herbicide.

3.3.1 Information on the occurrence or possible occurrence of the development of resistance

Final assessment of the resistance risk has to be carried out on member state level since the agronomic factors influencing the risk of resistance development tend to vary between the Member States.

There are currently 523 unique cases of herbicide resistant weeds globally, with 269 species (154 dicots and 115 monocots). Weeds have evolved resistance to 21 of the 31 known herbicide sites of action and to 167 different herbicides. Herbicide resistant weeds have been reported in 99 crops in 72 countries. The

website has 3264 registered users and 696 weed scientists have contributed new cases of herbicide resistant weeds. Resistance events have been reported in Europe for the two active substances and weed species target of Jockey 387 OD (product code: JMD-HER 387 OD). Following table summarizes these events (Source; www.weedscience.org).

- **Iodosulfuron-methyl-sodium**

#	Year	Species	Country	MOAs	Actives	Situations
1	2008	*Raphanus sativus*	Argentina	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	imazethapyr, imazapyr, bispyribac-sodium, chlorimuron-ethyl, metsulfuron-methyl, diclosulam, flumetsulam, imazamox, iodosulfuron-methyl-Na, flucarbazone-Na	Wheat, Sunflower, Canola
2	2010	*Lolium perenne ssp. multiflorum*	Argentina	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Enolpyruvyl Shikimate Phosphate Synthase HRAC Group 9 (Legacy G)	glyphosate, iodosulfuron-methyl-Na, pyroxsulam	Wheat
3	2017	*Poa annua*	Australia (New South Wales)	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	bispyribac-sodium, rimsulfuron, iodosulfuron-methyl-Na, foramsulfuron	Golf courses
4	2017	*Poa annua*	Australia (New South Wales)	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Enolpyruvyl Shikimate Phosphate Synthase HRAC Group 9 (Legacy G), Inhibition of Microtubule Assembly 2 HRAC Group 3 (Legacy K1), PSII inhibitors - Serine 264 Binders HRAC Group 5 (Legacy C1 C2), Unknown HRAC Group 0 (Legacy Z)	endothall, bispyribac-sodium, rimsulfuron, simazine, glyphosate, propyzamide/pronamide, iodosulfuron-methyl-Na, foramsulfuron	Golf courses
5	1998	*Raphanus raphanistrum*	Australia (South Australia)	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	chlorsulfuron, metosulam, iodosulfuron-methyl-Na	Spring Barley, Wheat
6	2005	*Avena sterilis ssp. ludoviciana*	Australia (South Australia)	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	iodosulfuron-methyl-Na	Wheat
7	2010	*Lolium rigidum*	Australia (South Australia)	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A), Inhibition of Enolpyruvyl Shikimate Phosphate Synthase HRAC Group 9 (Legacy G), PS I Electron Diversion HRAC Group 22 (Legacy D), PSII inhibitors - Serine 264 Binders HRAC Group 5 (Legacy C1 C2)	haloxyfop-methyl, clethodim, imazapyr, chlorsulfuron, atrazine, paraquat, glyphosate, iodosulfuron-methyl-Na	Pasture seed
8	2012	*Galium tricornutum*	Australia (South Australia)	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	imazapyr, imazamox, iodosulfuron-methyl-Na, pyroxsulam	Spring Barley, Wheat
9	2017	*Poa annua*	Australia (South Australia)	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	bispyribac-sodium, rimsulfuron, iodosulfuron-methyl-Na, foramsulfuron	Golf courses
10	2017	*Poa annua*	Australia (Victoria)	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	bispyribac-sodium, rimsulfuron, iodosulfuron-methyl-Na, foramsulfuron	Golf courses
11	2009	*Apera spica-venti*	Austria	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), PSII inhibitors - Serine 264 Binders HRAC Group 5 (Legacy C1 C2)	isoproturon, iodosulfuron-methyl-Na	Cereals
12	2019	*Apera spica-venti*	Belgium	Inhibition of Acetolactate	iodosulfuron-methyl-Na, foramsul-	Wheat

#	Year	Species	Country	MOAs	Actives	Situations
				Synthase HRAC Group 2 (Legacy B)	furon, mesosulfuron-methyl	
13	2004	*Parthenium hysterophorus*	Brazil	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	imazethapyr, chlorimuron-ethyl, cloransulam-methyl, iodosulfuron-methyl-Na, foramsulfuron	Soybean
14	2006	*Bidens subalternans*	Brazil	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), PSII inhibitors - Serine 264 Binders HRAC Group 5 (Legacy C1 C2)	atrazine, iodosulfuron-methyl-Na, foramsulfuron	Corn (maize)
15	2010	*Lolium perenne ssp. multiflorum*	Brazil	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	iodosulfuron-methyl-Na	Wheat
16	2013	*Raphanus raphanistrum*	Brazil	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	imazapyr, chlorimuron-ethyl, metsulfuron-methyl, sulfometuron-methyl, cloransulam-methyl, iodosulfuron-methyl-Na, imazapic	Spring Barley, Wheat
17	2016	*Lolium perenne ssp. multiflorum*	Brazil	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A)	clethodim, iodosulfuron-methyl-Na	Wheat
18	2017	*Lolium perenne ssp. multiflorum*	Brazil	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Enolpyruvyl Shikimate Phosphate Synthase HRAC Group 9 (Legacy G)	glyphosate, iodosulfuron-methyl-Na, pyroxsulam	Corn (maize), Soybean, Wheat
19	2002	*Lolium perenne ssp. multiflorum*	Chile	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Enolpyruvyl Shikimate Phosphate Synthase HRAC Group 9 (Legacy G)	glyphosate-trimesium, glyphosate, iodosulfuron-methyl-Na, flucarbazone-Na	Wheat
20	2003	*Lolium rigidum*	Chile	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A)	haloxyfop-methyl, clodinafop-propargyl, diclofop-methyl, clethodim, iodosulfuron-methyl-Na, flucarbazone-Na, tepraloxydim, pinoxaden	Wheat
21	2005	*Lolium perenne ssp. multiflorum*	Chile	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A)	clodinafop-propargyl, diclofop-methyl, clethodim, iodosulfuron-methyl-Na, flucarbazone-Na, tepraloxydim, pinoxaden	Wheat, Lupins, Canola
22	2007	*Lolium perenne ssp. multiflorum*	Chile	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A), Inhibition of Enolpyruvyl Shikimate Phosphate Synthase HRAC Group 9 (Legacy G)	haloxyfop-methyl, clethodim, glyphosate, iodosulfuron-methyl-Na, flucarbazone-Na, tepraloxydim, pinoxaden	Spring Barley
23	2010	*Raphanus sativus*	Chile	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	imazapyr, metsulfuron-methyl, triasulfuron, imazamox, iodosulfuron-methyl-Na, flucarbazone-Na, pyroxsulam	Wheat
24	2010	*Anthemis cotula*	Chile	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	metsulfuron-methyl, iodosulfuron-methyl-Na, pyroxsulam	Wheat
25	2010	*Anthemis arvensis*	Chile	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	iodosulfuron-methyl-Na, mesosulfuron-methyl, pyroxsulam	Wheat
26	2012	*Silene gallica*	Chile	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	imazapyr, metsulfuron-methyl, imazamox, iodosulfuron-methyl-Na, pyroxsulam	Wheat
27	2005	*Apera spica-venti*	Czech Republic	Inhibition of Acetolactate	sulfosulfuron, chlorsulfuron, iso-	Cereals, Winter

#	Year	Species	Country	MOAs	Actives	Situations
				Synthase HRAC Group 2 (Legacy B), PSII inhibitors - Serine 264 Binders HRAC Group 5 (Legacy C1 C2)	proturon, iodosulfuron-methyl-Na, mesosulfuron-methyl, pyroxsulam	wheat
28	1991	*Stellaria media*	Denmark	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	chlorsulfuron, tribenuron-methyl, florasulam, iodosulfuron-methyl-Na	Spring Barley, Wheat
29	2001	*Alopecurus myosuroides*	Denmark	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A), Inhibition of Microtubule Assembly 2 HRAC Group 3 (Legacy K1)	clodinafop-propargyl, fenoxaprop-ethyl, cycloxydim, flupyrsulfuron-methyl-Na, pendimethalin, florasulam, iodosulfuron-methyl-Na, mesosulfuron-methyl, pyroxsulam	Winter wheat
30	2003	*Papaver rhoeas*	Denmark	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	tribenuron-methyl, florasulam, iodosulfuron-methyl-Na	Wheat
31	2010	*Lolium perenne ssp. multiflorum*	Denmark	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A)	clodinafop-propargyl, florasulam, iodosulfuron-methyl-Na, mesosulfuron-methyl, pyroxsulam	Winter wheat
32	2010	*Tripleurospermum perforatum (=T. inodorum)*	Denmark	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	tribenuron-methyl, florasulam, iodosulfuron-methyl-Na	Spring Barley, Winter wheat
33	2011	*Apera spica-venti*	Denmark	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	sulfosulfuron, iodosulfuron-methyl-Na	Winter wheat
34	2016	*Lolium perenne*	Denmark	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A)	clodinafop-propargyl, iodosulfuron-methyl-Na	Wheat
35	2016	*Apera spica-venti*	Denmark	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A)	fenoxaprop-ethyl, florasulam, iodosulfuron-methyl-Na, mesosulfuron-methyl, pinoxaden	Wheat
36	2003	*Alopecurus myosuroides*	France	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A)	clodinafop-propargyl, diclofop-methyl, fenoxaprop-ethyl, sethoxydim, iodosulfuron-methyl-Na, mesosulfuron-methyl	Wheat
37	2003	*Lolium perenne ssp. multiflorum*	France	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A)	haloxyfop-methyl, clodinafop-propargyl, diclofop-methyl, sethoxydim, flupyrsulfuron-methyl-Na, iodosulfuron-methyl-Na, mesosulfuron-methyl, propoxycarbazone-Na	Wheat
38	2006	*Apera spica-venti*	France	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	iodosulfuron-methyl-Na, mesosulfuron-methyl, pyroxsulam	Wheat
39	2006	*Avena sterilis*	France	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	metsulfuron-methyl, iodosulfuron-methyl-Na, mesosulfuron-methyl, pyroxsulam	Wheat
40	2006	*Avena fatua*	France	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	metsulfuron-methyl, iodosulfuron-methyl-Na, mesosulfuron-methyl, pyroxsulam	Wheat
41	2006	*Alopecurus myosuroides*	France	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	imazamethabenz-methyl, iodosulfuron-methyl-Na, mesosulfuron-methyl	Wheat
42	2006	*Lolium rigidum*	France	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	flupyrsulfuron-methyl-Na, iodosulfuron-methyl-Na, mesosulfuron-methyl, propoxycarbazone-Na	Wheat
43	2007	*Papaver rhoeas*	France	Inhibition of Acetolactate Synthase HRAC Group 2	metsulfuron-methyl, iodosulfuron-methyl-Na, mesosulfuron-methyl	Wheat

#	Year	Species	Country	MOAs	Actives	Situations
				(Legacy B)		
44	2009	*Bromus sterilis*	France	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	iodosulfuron-methyl-Na, mesosulfuron-methyl, pyroxsulam, propoxycarbazone-Na	Wheat
45	2009	*Senecio vulgaris*	France	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	tribenuron-methyl, prosulfuron, metsulfuron-methyl, flazasulfuron, imazamox, florasulam, iodosulfuron-methyl-Na, mesosulfuron-methyl, thiencarbazone-methyl	Grapes, Wheat
46	2012	*Stellaria media*	France	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	thifensulfuron-methyl, metsulfuron-methyl, florasulam, iodosulfuron-methyl-Na, mesosulfuron-methyl	Wheat
47	2012	*Poa trivialis*	France	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	iodosulfuron-methyl-Na, mesosulfuron-methyl	Wheat
48	2015	*Poa annua*	France	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	iodosulfuron-methyl-Na, mesosulfuron-methyl	Wheat
49	2016	*Papaver rhoeas*	France	Auxin Mimics HRAC Group 4 (Legacy O), Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	metsulfuron-methyl, MCPA, 2,4-D, iodosulfuron-methyl-Na, mesosulfuron-methyl, aminopyralid	Cereals
50	2016	*Conyza sumatrensis*	France	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	flazasulfuron, iodosulfuron-methyl-Na, mesosulfuron-methyl, penoxsulam	Grapes
51	2016	*Conyza sumatrensis*	France	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Enolpyruvyl Shikimate Phosphate Synthase HRAC Group 9 (Legacy G)	flazasulfuron, glyphosate, iodosulfuron-methyl-Na, mesosulfuron-methyl, penoxsulam	Grapes
52	2005	*Apera spica-venti*	Germany	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	sulfosulfuron, chlorsulfuron, flupyrsulfuron-methyl-Na, sulfometuron-methyl, florasulam, iodosulfuron-methyl-Na, mesosulfuron-methyl, pyroxsulam	Wheat
53	2008	*Lolium perenne*	Germany	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A)	iodosulfuron-methyl-Na, pinoxaden, pyroxsulam	Wheat
54	2009	*Apera spica-venti*	Germany	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A), PSII inhibitors - Serine 264 Binders HRAC Group 5 (Legacy C1 C2)	fenoxaprop-ethyl, sulfosulfuron, isoproturon, iodosulfuron-methyl-Na, mesosulfuron-methyl, pinoxaden, pyroxsulam	Spring Barley, Winter wheat
55	2011	*Stellaria media*	Germany	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	thifensulfuron-methyl, amidosulfuron, triflusulfuron-methyl, tribenuron-methyl, nicosulfuron, imazamox, florasulam, iodosulfuron-methyl-Na, tritosulfuron, mesosulfuron-methyl, pyroxsulam	Spring Barley, Wheat, Rapeseed
56	2002	*Papaver rhoeas*	Greece	Auxin Mimics HRAC Group 4 (Legacy O), Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	2,4-D, iodosulfuron-methyl-Na, mesosulfuron-methyl	Wheat
57	2013	*Phalaris minor*	India	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	iodosulfuron-methyl-Na, mesosulfuron-methyl	Wheat
58	2014	*Rumex dentatus*	India	Inhibition of Acetolactate Synthase HRAC Group 2	florasulam, iodosulfuron-methyl-Na, mesosulfuron-methyl, pyroxsu-	Wheat

#	Year	Species	Country	MOAs	Actives	Situations
				(Legacy B)	lam	
59	2009	*Sinapis arvensis*	Iran	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	sulfosulfuron, tribenuron-methyl, metsulfuron-methyl, iodosulfuron-methyl-Na	Winter wheat
60	2009	*Avena sterilis*	Iran	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	iodosulfuron-methyl-Na, mesosulfuron-methyl	Wheat
61	2009	*Avena sterilis ssp. ludoviciana*	Iran	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	iodosulfuron-methyl-Na, mesosulfuron-methyl	Wheat
62	2010	*Avena sterilis ssp. ludoviciana*	Iran	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A)	clodinafop-propargyl, iodosulfuron-methyl-Na, mesosulfuron-methyl	Winter wheat
63	2017	*Galium aparine*	Iran	Auxin Mimics HRAC Group 4 (Legacy O), Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	sulfosulfuron, tribenuron-methyl, MCPA, 2,4-D, iodosulfuron-methyl-Na, mesosulfuron-methyl	Wheat
64	2021	*Alopecurus myosuroides*	Ireland	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A)	propaquizafop, cycloxydim, iodosulfuron-methyl-Na, mesosulfuron-methyl	Wheat
65	2021	*Lolium perenne ssp. multiflorum*	Ireland	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A)	propaquizafop, cycloxydim, iodosulfuron-methyl-Na, mesosulfuron-methyl, pinoxaden	Wheat
66	2007	*Lolium rigidum*	Israel	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A), Inhibition of Enolpyruvyl Shikimate Phosphate Synthase HRAC Group 9 (Legacy G)	clodinafop-propargyl, imazapyr, chlorsulfuron, tribenuron-methyl, sulfometuron-methyl, flumetsulam, metosulam, glyphosate, florasulam, iodosulfuron-methyl-Na, mesosulfuron-methyl, pinoxaden, propoxycarbazone-Na	Wheat
67	2008	*Amaranthus palmeri*	Israel	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	pyrithiobac-sodium, rimsulfuron, iodosulfuron-methyl-Na, foramsulfuron, trifloxysulfuron-Na, mesosulfuron-methyl	Corn (maize), Cotton, Watermelon
68	2013	*Lolium rigidum*	Israel	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A)	haloxyfop-methyl, clodinafop-propargyl, clethodim, cycloxydim, sulfometuron-methyl, iodosulfuron-methyl-Na, mesosulfuron-methyl, pinoxaden, propoxycarbazone-Na	Carrots, Wheat
69	1998	*Papaver rhoeas*	Italy	Auxin Mimics HRAC Group 4 (Legacy O), Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	tribenuron-methyl, 2,4-D, iodosulfuron-methyl-Na	Wheat
70	1998	*Papaver rhoeas*	Italy	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	tribenuron-methyl, florasulam, iodosulfuron-methyl-Na	Durum wheat
71	2002	*Lolium perenne ssp. multiflorum*	Italy	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A)	clodinafop-propargyl, diclofop-methyl, sethoxydim, tralkoxydim, cycloxydim, iodosulfuron-methyl-Na, mesosulfuron-methyl, pinoxaden	Durum wheat
72	2004	*Avena sterilis*	Italy	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A)	clodinafop-propargyl, cycloxydim, iodosulfuron-methyl-Na, mesosulfuron-methyl, pinoxaden	Durum wheat

#	Year	Species	Country	MOAs	Actives	Situations
73	2005	*Lolium perenne ssp. multiflorum*	Italy	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	iodosulfuron-methyl-Na, mesosulfuron-methyl	Durum wheat
74	2006	*Sinapis arvensis*	Italy	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	tribenuron-methyl, florasulam, iodosulfuron-methyl-Na	Durum wheat
75	2007	*Avena sterilis*	Italy	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	iodosulfuron-methyl-Na, mesosulfuron-methyl	Durum wheat
76	2012	*Lolium perenne ssp. multiflorum*	Italy	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Enolpyruvyl Shikimate Phosphate Synthase HRAC Group 9 (Legacy G)	glyphosate, iodosulfuron-methyl-Na, mesosulfuron-methyl	Wheat
77	2015	*Apera spica-venti*	Latvia	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	iodosulfuron-methyl-Na	Wheat, Winter wheat
78	2013	*Apera spica-venti*	Lithuania	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	iodosulfuron-methyl-Na	Winter wheat
79	2010	*Alopecurus myosuroides*	Netherlands	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	florasulam, iodosulfuron-methyl-Na, mesosulfuron-methyl, pyroxsulam	Winter wheat
80	2014	*Lolium perenne*	New Zealand	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	thifensulfuron-methyl, chlorsulfuron, tribenuron-methyl, iodosulfuron-methyl-Na, pyroxsulam	Wheat
81	2002	*Stellaria media*	Norway	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	tribenuron-methyl, metsulfuron-methyl, iodosulfuron-methyl-Na	Cereals
82	2006	*Tripleurospermum perforatum (=T. inodorum)*	Norway	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	tribenuron-methyl, iodosulfuron-methyl-Na	Winter wheat
83	2006	*Sonchus asper*	Norway	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	tribenuron-methyl, iodosulfuron-methyl-Na	Spring Barley, Spring wheat
84	2019	*Capsella bursa-pastoris*	Norway	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	iodosulfuron-methyl-Na	Wheat
85	2005	*Apera spica-venti*	Poland	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	sulfosulfuron, chlorsulfuron, iodosulfuron-methyl-Na, procarbazone-Na	Winter wheat
86	2010	*Alopecurus myosuroides*	Poland	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	iodosulfuron-methyl-Na, mesosulfuron-methyl	Winter wheat
87	2011	*Avena fatua*	Poland	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	sulfometuron-methyl, iodosulfuron-methyl-Na, mesosulfuron-methyl, propoxycarbazone-Na	Spring Barley, Spring wheat
88	2011	*Avena fatua*	Poland	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A)	fenoxaprop-ethyl, metsulfuron-methyl, sulfometuron-methyl, iodosulfuron-methyl-Na, pinoxaden, propoxycarbazone-Na	Spring Barley, Spring wheat
89	2012	*Alopecurus myosuroides*	Poland	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A)	fenoxaprop-ethyl, sulfometuron-methyl, iodosulfuron-methyl-Na, mesosulfuron-methyl, pinoxaden	Winter wheat
90	1986	*Avena fatua*	South Africa	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A)	clodinafop-propargyl, diclofop-methyl, fluazifop-butyl, fenoxaprop-ethyl, sethoxydim, tralkoxydim, sulfosulfuron, imazamox, iodosulfuron-methyl-Na	Wheat
91	1997	*Raphanus raphanistrum*	South Africa	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	thifensulfuron-methyl, chlorsulfuron, tribenuron-methyl, metsulfuron-methyl, triasulfuron, iodosulfu-	Spring Barley, Wheat

#	Year	Species	Country	MOAs	Actives	Situations
					ron-methyl-Na	
92	1999	*Phalaris minor*	South Africa	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A)	haloxyfop-methyl, clodinafop-propargyl, diclofop-methyl, propaquizafop, quizalofop-ethyl, fenoxaprop-ethyl, sulfosulfuron, iodosulfuron-methyl-Na, mesosul-furon-methyl	Pastures, Wheat
93	2007	*Sinapis alba*	Spain	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	tribenuron-methyl, iodosulfuron-methyl-Na	Winter wheat
94	2011	*Sinapis arvensis*	Spain	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	tribenuron-methyl, iodosulfuron-methyl-Na	Cereals
95	2015	*Alopecurus myosuroides*	Spain	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A), PSII inhibitors - Serine 264 Binders HRAC Group 5 (Legacy C1 C2)	clodinafop-propargyl, cloransulam-methyl, isoproturon, chlorotoluron, iodosulfuron-methyl-Na, mesosul-furon-methyl, pinoxaden	Wheat, Canola, Peas, Winter barley, Faba beans
96	2018	*Rapistrum rugosum*	Spain	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	tribenuron-methyl, iodosulfuron-methyl-Na	Winter wheat, Winter barley
97	2010	*Apera spica-venti*	Sweden	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	sulfosulfuron, iodosulfuron-methyl-Na, pyroxsulam	Winter wheat
98	2011	*Papaver rhoeas*	Sweden	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	amidosulfuron, iodosulfuron-methyl-Na, propoxycarbazone-Na	Winter wheat
99	2014	*Alopecurus myosuroides*	Sweden	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A)	fenoxaprop-ethyl, cycloxydim, flupyrsulfuron-methyl-Na, iodosul-furon-methyl-Na, mesosulfuron-methyl, pyroxsulam	Spring wheat, Winter wheat, Winter barley
100	2018	*Lolium perenne ssp. multiflorum*	Switzerland	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A)	quizalofop-ethyl, iodosulfuron-methyl-Na, mesosulfuron-methyl	Sugar beets, Triticale
101	2018	*Lolium perenne ssp. multiflorum*	Switzerland	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), PSII inhibitors - Serine 264 Binders HRAC Group 5 (Legacy C1 C2)	chlorotoluron, iodosulfuron-methyl-Na, mesosulfuron-methyl	Peas
102	2019	*Alopecurus myosuroides*	Switzerland	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A), PSII inhibitors - Serine 264 Binders HRAC Group 5 (Legacy C1 C2)	quizalofop-ethyl, chlorotoluron, iodosulfuron-methyl-Na, mesosul-furon-methyl	Wheat, Winter barley
103	2020	*Lolium perenne ssp. multiflorum*	Switzerland	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A), PSII inhibitors - Serine 264 Binders HRAC Group 5 (Legacy C1 C2)	quizalofop-ethyl, chlorotoluron, iodosulfuron-methyl-Na, mesosul-furon-methyl	Sugar beets, Peas, Triticale
104	2008	*Galium aparine*	Turkey	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	thifensulfuron-methyl, chlorsulfu-ron, tribenuron-methyl, triasulfu-ron, iodosulfuron-methyl-Na, mesosulfuron-methyl	Winter wheat
105	2008	*Bifora radians*	Turkey	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	thifensulfuron-methyl, chlorsulfu-ron, tribenuron-methyl, triasulfu-ron, iodosulfuron-methyl-Na,	Winter wheat

#	Year	Species	Country	MOAs	Actives	Situations
					mesosulfuron-methyl	
106	2020	*Amaranthus retroflexus*	Ukraine	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	imazethapyr, thifensulfuron-methyl, tribenuron-methyl, flumetsulam, imazamox, florasulam, iodosulfuron-methyl-Na, foramsulfuron, thiencarbazone-methyl	Corn (maize), Sunflower
107	2022	*Chenopodium album*	Ukraine	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	thifensulfuron-methyl, tribenuron-methyl, flumetsulam, imazamox, florasulam, iodosulfuron-methyl-Na, thiencarbazone-methyl	Corn (maize), Soybean, Wheat, Sunflower
108	2023	*Ambrosia artemisiifolia*	Ukraine	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Protoporphyrinogen Oxidase HRAC Group 14 (Legacy E)	imazapyr, amidosulfuron, nicosulfuron, flazasulfuron, flumetsulam, carfentrazone-ethyl, imazamox, iodosulfuron-methyl-Na, foramsulfuron, thiencarbazone-methyl	Sunflower
109	1984	*Alopecurus myosuroides*	United Kingdom	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	imazamethabenz-methyl, chlorsulfuron, flupyrsulfuron-methyl-Na, iodosulfuron-methyl-Na, mesosulfuron-methyl, pyroxsulam, propoxycarbazone-Na	Wheat
110	1993	*Avena sterilis*	United Kingdom	Antimicrotubule mitotic disrupter HRAC Group 0 (Legacy Z), Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Acetyl CoA Carboxylase HRAC Group 1 (Legacy A)	fluazifop-butyl, fenoxaprop-ethyl, tralkoxydim, imazamethabenz-methyl, flamprop-methyl, iodosulfuron-methyl-Na, mesosulfuron-methyl	Cereals, Wheat
111	2020	*Bromus diandrus*	United Kingdom	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	iodosulfuron-methyl-Na, mesosulfuron-methyl, pyroxsulam	Wheat
112	2020	*Bromus sterilis*	United Kingdom	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	iodosulfuron-methyl-Na, mesosulfuron-methyl, pyroxsulam	Wheat
113	2020	*Bromus commutatus*	United Kingdom	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	iodosulfuron-methyl-Na, mesosulfuron-methyl, pyroxsulam	Wheat
114	2005	*Ambrosia artemisiifolia*	United States (Delaware)	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B), Inhibition of Protoporphyrinogen Oxidase HRAC Group 14 (Legacy E)	imazethapyr, imazapyr, imazaquin, pyrithiobac-sodium, chlorimuron-ethyl, metsulfuron-methyl, halosulfuron-methyl, primisulfuron-methyl, cloransulam-methyl, oxyfluorfen, fomesafen, lactofen, acifluorfen, flumioxazin, flumiclorac-pentyl, carfentrazone-ethyl, sulfentrazone, imazamox, pyraflufen-ethyl, iodosulfuron-methyl-Na, trifloxysulfuron-Na	Soybean
115	2011	*Conyza canadensis*	United States (Kansas)	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	thifensulfuron-methyl, chlorsulfuron, tribenuron-methyl, metsulfuron-methyl, rimsulfuron, iodosulfuron-methyl-Na, thiencarbazone-methyl	Corn (maize), Cotton, Soybean, Wheat
116	2004	*Rottboellia cochinchinensis (=R. exaltata)*	Venezuela	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	nicosulfuron, iodosulfuron-methyl-Na, foramsulfuron	Corn (maize)
117	2010	*Sorghum halepense*	Venezuela	Inhibition of Acetolactate Synthase HRAC Group 2 (Legacy B)	nicosulfuron, iodosulfuron-methyl-Na, foramsulfuron	Corn (maize)

Iodosulfuron-methyl-sodium is a broad spectrum, post-emergence herbicide used throughout the world for treating wheat and other cereals. It is classified as an imidazolinone herbicide. Iodosulfuron-methyl-sodium inhibits the acetohydroxy acid synthase (AHAS) enzyme which is responsible for the synthesis of

the branched chain amino acids valine, leucine, and isoleucine. When applied, Iodosulfuron-methyl-sodium halts weed growth which eventually kills the weed or causes the weed to die due to its incapability to compete with surrounding vegetation.

- **2,4-D**

Auxinic herbicides such as 2,4-D – one of the first widely used herbicides – have been used as effective weed control agents since the introduction of 2,4-D herbicides in 1945 (Smith, 1989). Despite its decades-long worldwide use, resistance against 2,4-D has been found in only 28 different weed species, although the first cases had already been reported in wild carrot (*Daucus carota*) and spreading dayflower (*Commelina diffusa*) in 1957 (Switzer, 1957; Hilton, 1957; Heap, 2016).
The herbicidal mechanism of action of 2,4-D is considered to be activation of the auxin receptor system (TIR1 and related receptor proteins), which results in permanent up-regulation of auxin responses in plants. These include changes in the actin cytoskeleton, followed by up-regulation of the plant hormones ABA and ethylene, and high production levels of reactive oxygen species (ROS). In the end, 2,4-D treatment results in cell wall reorganization, membrane leakage and cell death.

In most cases of resistance to 2,4-D and auxinic herbicides, details of the mechanisms of resistance are not known. Increased absorption of 2,4-D (Kohler et al., 2004), reduced translocation (Weinberg et al., 2006), increased metabolism of 2,4-D (Hagin et al., 1970) and differential binding to auxin-binding proteins (Webb and Hall, 1995) have all been implicated with herbicide resistance. However, reading the published 2,4-D resistance literature with an eye on possible auxin transport impairment shows that similar mechanisms to that described by Goggin et al. (2016) might also be the cause of 2,4-D resistance in other cases (Riar et al., 2011; Rey-Caballero et al., 2016).

The claim that 2,4-D resistance is unlikely to evolve because of the complex and essential functions that auxin plays in plants is unsubstantiated. In many cases where resistance has evolved to synthetic auxins, the biochemical mechanism is unknown. However, in at least two cases (*Kochia scoparia* and *Sinapis arvensis*), resistance is conferred by a single dominant allele, indicating that resistance could develop and spread quite rapidly.

ZRMs agree with Aplicant that due to the different mode of action of both active substances iodosulfuron-methyl-sodium and 2.4 D, the occurrence of resistance to this herbicide is minimal. Worth noting is the fact that the application of the mixture of active substance from sulfonylurea group and 2,4-D has been widely adopted for weed con-trol in winter cereals to manage ALS resistant weeds.

For the use of Jockey 387 OD (product code: JMD-HER 387 OD) against target weeds it can be concluded, that:

- The product has a low to medium inherent and agronomical risk for resistance weed development.
- To decrease the risk of selecting resistant weeds, the application of an additional herbicide belonging to a different mode of action and having high efficacy on the species to be controlled is recommendable.
- It is recommended to use the product in alternation or in combinations with compounds having a different mode of action.
- To avoid the selection of resistance it is recommended to perform one application of Jockey 387 OD at the recommended dose(s) per season.

In order to minimize the risk of occurrence and development of herbicide weed resistance we should follow Good Agricultural Practice:

- follow strictly the directions provided in the plant protection product label,
- plant protection product should been used at the recommended dose in the recommended time to ensure optimum weed control
- use integrated weed control practices covering fields such as history crop rotation, herbicides used and various tillage (mechanical, cultural, biological and chemical)
- use rotation of herbicides (active substances) with different mechanisms of action,

- use a mixture of herbicides (active substances) with different mechanisms of action,
- use herbicides acting on several life processes in rotation and / or a mixture weeds (with different mechanisms of action).

Following entry should be added to Polish label in the opinion of ZRMs:

Resistance management strategy:

To minimize the risk of occurrence and development of weed resistance to herbicides, according to Good Agricultural Practice:

- follow closely the directions on the label of the crop protection product
- apply the product at the recommended dose, at the recommended date to ensure optimal weed control,
- adjust the selection of the herbicide and the decision to carry out the treatment to the prevailing (possibly potential) weed infestation, taking into account the dominant species and pest thresholds,
- use a rotation of herbicides (active substances) with different mechanisms of action,
- use a mixture of herbicides (active substances) with different mechanism of action,
- use in rotation and/or mixture herbicides acting on several vital processes of weeds (with different mechanism of action),
- apply an herbicide with a given mechanism of action only once during the growing season of the crop,
- adjust tillage operations to the conditions in the field, especially to the type and strength of the weeds,
- use various methods of weed control, including crop rotation, etc..,
- use certified seed
- clean agricultural machinery to prevent the transfer of weed propagating material to other sites,
- inform the permit holder of unsatisfactory weed control,
- contact your advisor, permit holder or permit holder's representative for more information.

In the opinion of Evaluator each of cMS can change or adjust risk assessment considering the national requirements and may designate additional measures relating to resistance prevention on the national level. Where there is evidence of changed sensitivity of the target organisms to this product then the cMS should review the effectiveness of the product against these targets.

3.3.2 Adverse effects on treated crops

In the evaluation process the fact that the active ingredients – iodosulfuron-methyl-sodium and 2,4-D EHE are used in many plant protection products and has been commonly used in crop protection were taken into consideration by Evaluator. However, in Poland – no PPP with both of those a.s. is already registered.

The Applicant submitted in total 36 selectivity studies carried out on winter cereals (26 trials) and spring cereals (10 trials). Those trials were carried out in two growing seasons (2020 and 2021). Trials carried out on winter cereals were carried out in three different EPPO zones: Maritime (3 trials: 2 DE and 1 CZ), N-E (15 trials: PL) and S-E (8 trials: RO-5, BG-1, HU-2). Trials performed on spring cereals were conducted only in one EPPO zone – N-E in Poland (10 trials: 6 on spring wheat and 4 on spring triticale). In the opinion of ZRMs submitted documentation is sufficient for N-E and S-E in line to GAP table.

The selectivity evaluation of the herbicide is to be performed according to listed below EPPO guidelines. The evaluation of herbicide selectivity was carried out 4-5 per season. Results were described in percent of destruction of plant for herbicides treatment compared to plant for untreated, where 0% means no phytotoxicity and 100% - complete destruction.

Phytotoxicity assessment was carried out with the use of different cultivars (commercially grown

varieties). Dosages N (recommended) and 2N (doubled recommended) were studied during selectivity trials. Experimental details and assessments methods were in accordance to EPPO standards. Detailed information's are presented by Applicant in BAD.

Assessment for Poland:

✓ ***Winter cereals:***

- ***winter wheat -*** Applicant submitted in total 25 trials valid for PL. 15 of them were efficacy trials in which phytotoxic effect was assessed at dose recommended (1.0 L/ha) and 10 – selectivity trials in which N and 2N dose was studied. Those trials were carried out on in PL, DE and CZ. Small phytotoxicity symptoms caused by 2N dose of JMD-HER 387 OD at the proposed dose rate of 1 L/ha, were observed in two (one in PL, one in CZ) selectivity trial performed on winter wheat, however they were transient and no phytotoxicicty symptoms were visible during last assessments, on these trails.
- ***winter triticale -*** Applicant submitted in total 5 trials valid for PL. 1 of them was efficacy trials in which phytotoxic effect was assessed at dose recommended (1.0 L/ha) and 4 – selectivity trials in which N and 2N dose was studied. Those trials were carried out on in PL. No phytotoxicity symptoms caused by JMD-HER 387 OD at the proposed dose rate of 1 L/ha were recorded in all trials.
- ***winter rye*** – Applicant submitted in total 5 trials valid for PL. 1 of them was efficacy trials in which phytotoxic effect was assessed at dose recommended (1.0 L/ha) and 4 – selectivity trials in which N and 2N dose was studied. Those trials were carried out on in PL. No phytotoxicity symptoms caused by JMD-HER 387 OD at the proposed dose rate of 1 L/ha were recorded in all trials.

✓ ***Spring cereals:***

- ***spring wheat –*** Applicant submitted in total 16 trials valid for PL. 10 of them were efficacy trials in which phytotoxic effect was assessed at dose recommended (1.0 L/ha) and 6 – selectivity trials in which N and 2N dose was studied. Those trials were carried out on in PL. Small phytotoxicity symptoms caused by JMD-HER 387 OD at the proposed dose rate of 1 L/ha were recorded, by the time of the last assessment, the signs of phytotoxicity have vanished on plots where 1N (1 L/ha of tested product) was used, and did not exceeded 6% where 2N of the proposed 1L/ha dose was used. Also reference product caused higher phytotoxicity symptoms which were more visible at the time of last assessment, even in 1N rate. Worth mentioning is the fact that severe weather conditions in the 2nd quart of 2021, (periods of temperatures below 5^{o}C have occured in days after the application was done) might have had an impact on phytotoxicity occurrence.
- ***spring triticale -*** Applicant submitted in total 5 trials valid for PL. 1 of them was efficacy trials in which phytotoxic effect was assessed at dose recommended (1.0 L/ha) and 4 – selectivity trials in which N and 2N dose was studied. Those trials were carried out on in PL. Small phytotoxicity symptoms caused by JMD-HER 387 OD at the proposed dose rate of 1 L/ha were recorded in trials performed in 2021. By the time of the last assessment, the signs of phytotoxicity have vanished on plots where both 1N and 2N of the proposed label dose of 1 L/ha were used. Also reference product caused higher phytotoxicity symptoms (over 15% for 2N dose) which were even slightly visible at the time of last assessment. Worth mentioning is the fact that severe weather conditions in the 2nd quart of 2021, (periods of temperatures below 5^{o}C have occured in days after the application was done) might have had an impact on phytotoxicity occurrence.

Assessment for Belgium:

✓ ***Winter cereals:***

- ***winter wheat -*** Applicant submitted in total 21 trials valid for PL. 13 of them were efficacy trials in which phytotoxic effect was assessed at dose recommended (1.0 L/ha) and 8 – selectivity trials in which N and 2N dose was studied. Those trials were carried out on in BG, RO and HU. Tiny phytotoxicity symptoms caused by target dose of both JMD-HER 387 OD and Huzar Active (reference product), were observed in one efficacy trial in Hungary (S21-03828-26). Symptoms were really small (0.3%) and were observed only during first assessment (13 days after application). This symp-

toms were not only minor, they were also transient and were not visible in next assessments (26 DA-A, 39 DA-A and 76 DA-A).

In most of the assessments no phytotoxicity symptoms were observed for any tested dosage for all tested cerals (both, winter and spring). In addition, the crop developed normally and did not involve a loss in yield at harvest. The same phytotoxicity symptoms were observed at standard referenece treatment. So, in the opinion of ZRMs it can be concluded that Jockey 387 OD is safe for use on winter cereals (wheat, triticale and rye) and spring cereals (wheat, triticale) at recommended dose.

Impact on the yield: Effects of JMD-HER 387 OD on yield of winter and spring wheat, winter and spring triticale and winter rye were assessed during selectivity trials. In those studies yield was assessed after application of single, highest rate (1 L/ha for JMD-HER 387 OD) of above product as well as twice the highest rate. Statistical analysis of yield and its parameters was done.

Yield data was assessed using Levene's Test If this test indicated no homogeneity of variance the transformed values were used for analysis of variance. If still no homogeneity of variance was obtained by the transformation the statistical analysis should be treated with caution. If no homogeneity on a data column is observed this is indicated with a * in the results tables.

Assessment data were then analysed using a two-way analysis of variance (ANOVA) on untransformed and transformed data. The probability of no significant differences occurring between treatment means is calculated as the F probability value (p(F)).
A mean comparison test was only performed when the treatment probability of F that is calculated during analysis of variance was significant at the observed significance level specified for the mean comparison test. The mean separation letter "a" is assigned to each treatment mean in an assessment data column when a non-significant treatment P(F) is detected.

Student Newman-Keuls' multiple comparison test was applied to separate any treatment differences that may be implied by the ANOVA TEST and these are indicated by a letter test; treatment means with no letters in common are significantly different according to the test initiated at the 95% confidence level.

No significant adverse effect on all of the cereals species was observed after application of JMD-HER 387 OD in comparison to the control.

Below, ZRMS presented detailed results for yield:

- ***winter wheat***

Report No.		III 6.1.4/01 S-WW-PL-2020-S20-03778-01	III 6.1.4/02 S-WW-PL-2020-S20-03778-02	III 6.1.4/03 S-WW-PL-2020-S20-03778-03	III 6.1.4/04 S-WW-PL-2020-S20-03778-04	III 6.1.4/15 S-WW-PL-2021-S20-03829-01	III 6.1.4/16 S-WW-PL-2021-S20-03829-02	III 6.1.4/17 S-WW-PL-2021-S20-03829-03
Application date Crop BBCH on app. day		23.04.2020 29	20.04.2020 31	15.04.2020 29	20.04.2020 30	13.05.2021 31	19.04.2021 29	19.04.2021 27
Product	g a.s./ha	Yield (t/ha)	Yield (t/ha)	Yield (t/ha)	Yield (t/ha)	Yield (t/ha)	Yield (t/ha)	Yield (t/ha)
Control	-	10,9	6.14	7.11	6.7	6.81	4.72	5.67
JMD-HER 387 OD 1N	377g - 2,4-D EHE; 10g -Iodosulfuron;	10.86	6.17	7.61	7	6.78	4,99	6.02
JMD-HER 387 OD 2N	754g - 2,4-D EHE; 20g -Iodosulfuron;	10.73	6.11	7.66	7.17	6.79	4.65	5.75
Huzar Activ Plus 1N	300g - 2,4-D EHE; 10g -Iodosulfuron; 7.5g – Thiencarbazone; 30g - Mefenpyr-diethyl	10.72	6.26	7.21	6.74	6.76	4.18	5.76
Huzar Activ Plus 2N	600g - 2,4-D EHE; 20g -Iodosulfuron; 15g – Thiencarbazone; 60g - Mefenpyr-diethyl	10,91	6.07	7.45	7.24	6.78	4.69	5.73

Report No.	III 6.1.4/26 S-WW-DE-2021-S21-03829-18	III 6.1.4/27 S-WW-DE-2021-S21-03829-19	III 6.1.4/28 S-WW-CZ-2021-S21-03829-22

Application date Crop BBCH on app. day		23.04.2020 29	20.04.2020 31	15.04.2020 29
Product	g a.s./ha	Yield (t/ha)	Yield (t/ha)	Yield (t/ha)
Control	-	8	8.24	11.03
JMD-HER 387 OD 1N	377g - 2,4-D EHE; 10g -Iodosulfuron;	7.75	8.31	10.76
JMD-HER 387 OD 2N	754g - 2,4-D EHE; 20g -Iodosulfuron;	8.13	8.24	10.89
Huzar OD 1N	93.197g -Iodosulfuron;	7.84	8.3	-
Huzar OD 2N	186.394g -Iodosulfuron;	7.77	8.2	-
Sekator Plus 1N	287g - 2,4-D EHE; 6.25g -Iodosulfuron; 25g - Amidosulfuron	-	-	11.01
Sekator Plus 2N	574g - 2,4-D EHE; 12.5g -Iodosulfuron; 50g - Amidosulfuron	-	-	10,93

Report No.		III 6.2.1/29 (S-WW-RO-2020-S20-03778-21)	III 6.2.1/30 (S-WW-RO-2020-S20-03778-22)	III 6.2.1/31 (S-WW-BG-2021-S21-03829-24)	III 6.2.1/32 (S-WW-RO-2021-S21-03829-25)	III 6.2.1/33 (S-WW-RO-2021-S21-03829-26)	III 6.2.1/34 (S-WW-RO-2021-S21-03829-27)	III 6.2.1/35 (S-WW-HU-2021-S21-03829-28)	III 6.2.1/36 (S-WW-HU-2021-S21-03829-29)
Application date Crop BBCH on app. day		16.04.2020 29	17.04.2020 29	13.04.2021 29	13.04.2021 29	13.04.2021 29	14.04.2021 29	29.04.2021 29	30.04.2021 29
Product	g a.s./ha	Yield (t/ha)	Yield (t/ha)	Yield (t/ha)	Yield (t/ha)	Yield (t/ha)	Yield (t/ha)	Yield (t/ha)	Yield (t/ha)
Control	-	3.82	5.19	4.47	6.56	7.55	7.75	5.83	5.21
JMD-HER 387 OD 1N	377g - 2,4-D EHE; 10g - Iodosulfuron;	3.77	5.03	4.44	6.59	7.53	7.79	6.07	5.35
JMD-HER 387 OD 2N	754g - 2,4-D EHE; 20g - Iodosulfuron;	3.57	5.05	4.17	6.64	7.52	7.77	6.5	5.47
Hussar Active Plus 1N	300g - 2,4-D EHE; 10g - Iodosulfuron; 7.5g – thien-carbazone 30g – mefenpyr-diethyl	3.71	5.05	-	6.58	7.41	7.85	-	-
Hussar Active Plus 2N	600g - 2,4-D EHE; 20g - Iodosulfuron; 15g – thien-carbazone 60g – mefenpyr-diethyl	3,9	5.01	-	6.59	7.56	7.77	-	-
Sekator OD 1N	100g - amidosul-furon; 25g - Iodosulfuron;	-	-	4.36	-	-	-	-	-
Sekator OD 2N	200g - amidosul-furon; 50g - Iodosulfuron;	-	-	4.09	-	-	-	-	-
HuszarActive Plusz 1N	300g - 2,4-D EHE; 10g - Iodosulfuron; 7.5g – thien-carbazone 30g – mefenpyr-diethyl	-	-	-	-	-	-	6.39	5.34
HuszarActive Plusz 2N	600g - 2,4-D EHE; 20g - Iodosulfuron; 15g – thien-carbazone 60g – mefenpyr-diethyl	-	-	-	-	-	-	6.4	5.3

In 7 field trials on winter wheat JMD-HER 387 OD was used in single rate of 1 L/ha and doubled rate of 2 L/ha did not have significant adverse effect on yield. Phytotoxicity effects were observed in only one trial, (S20-03778-02), on the plots where double rate was used. It has to be said that these effects were transient, and did not have any influence on yield and its parameters (statistically insignificant). No statis-

tical differences in yield were observed between plots treated with JMD-HER 387 OD as well as on control plots.

– ***winter triticale***

Report No.		III 6.1.4/05 S-WT-PL-2020-S20-03778-05	III 6.1.4/06 S-WT-PL-2020-S20-03778-06	III 6.1.4/18 S-WT-PL-2021-S21-03829-04	III 6.1.4/19 S-WT-PL-2021-S21-03829-05
Application date Crop BBCH on app. day		16.04.2020 29	15.04.2020 31	19.04.2021 29	19.04.2021 30
Product	g a.s./ha	Yield (t/ha)	Yield (t/ha)	Yield (t/ha)	Yield (t/ha)
Control	-	6.37	4.11	5.44	5.72
JMD-HER 387 OD 1N	377g - 2,4-D EHE; 10g -Iodosulfuron;	6.68	4.18	5.36	5.25
JMD-HER 387 OD 2N	754g - 2,4-D EHE; 20g -Iodosulfuron;	6.45	4.13	5.34	5.59
Huzar Activ Plus 1N	300g - 2,4-D EHE; 10g -Iodosulfuron; 7.5g – Thiencarbazone; 30g - Mefenpyr-diethyl	6.37	4.14	5.74	5.62
Huzar Activ Plus 2N	600g - 2,4-D EHE; 20g -Iodosulfuron; 15g – Thiencarbazone; 60g - Mefenpyr-diethyl	6.53	4.09	5.53	5.22

In field trials on winter triticale JMD-HER 387 OD was used in single rate of 1 L/ha and doubled rate of 2 L/ha, did not have significant adverse effect on yield. Phytotoxicity effects were not observed, even on the plots where double rate was used. No statistical differences in yield were observed between plots treated with JMD-HER 387 OD as well as on control plots.

– ***winter rye***

Report No.		III 6.1.4/07 S-WR-PL-2020-S20-03778-09	III 6.1.4/08 S-WR-PL-2020-S20-03778-10	III 6.1.4/20 S-WR-PL-2021-S21-03829-09	III 6.1.4/21 S-WR-PL-2021-S21-03829-10
Application date Crop BBCH on app. day		15.04.2020 31	21.04.2020 32	20.04.2021 23	21.04.2021 23
Product	g a.s./ha	Yield (t/ha)	Yield (t/ha)	Yield (t/ha)	Yield (t/ha)
Control	-	73.68	78.71	76.82	76.02
JMD-HER 387 OD 1N	377g - 2,4-D EHE; 10g -Iodosulfuron;	74.69	78.71	76,9	75.67
JMD-HER 387 OD 2N	754g - 2,4-D EHE; 20g -Iodosulfuron;	74.48	78,93	76.77	76.02
Huzar Activ Plus 1N	300g - 2,4-D EHE; 10g -Iodosulfuron; 7.5g – Thiencarbazone; 30g - Mefenpyr-diethyl	73.56	78.83	76.89	75.69
Huzar Activ Plus 2N	600g - 2,4-D EHE; 20g -Iodosulfuron; 15g – Thiencarbazone; 60g - Mefenpyr-diethyl	74.8	79	76,94	75.18

In field trials on winter rye JMD-HER 387 OD was used in single rate of 1 L/ha and doubled rate of 2 L/ha, did not have significant adverse effect on yield. Phytotoxicity effects were not observed, even on the plots where double rate was used. No statistical differences in yield were observed between plots treated with JMD-HER 387 OD as well as on control plots.

– ***spring wheat***

Report No.		III 6.1.4/09 S-SW-PL-2020-S20-03778-11	III 6.1.4/10 S-SW-PL-2020-S20-03778-12	III 6.1.4/11 S-SW-PL-2020-S20-03778-13	III 6.1.4/12 S-SW-PL-2020-S20-03778-14	III 6.1.4/22 S-SW-PL-2021-S21-03829-11	III 6.1.4/23 S-SW-PL-2021-S21-03829-12
Application date Crop BBCH on app. day		08.05.2020 26	08.05.2020 32	12.05.2020 29	27.05.2020 29	21.05.2021 24	19.05.2021 25
Product	g a.s./ha	Yield (t/ha)	Yield (t/ha)	Yield (t/ha)	Yield (t/ha)	Yield (t/ha)	Yield (t/ha)
Control	-	5.24	3.68	4.85	5.28	4,98	4.23
JMD-HER 387 OD 1N	377g - 2,4-D EHE; 10g -Iodosulfuron;	5.35	3.81	4.79	5.6	4,99	4.38

JMD-HER 387 OD 2N	754g - 2,4-D EHE; 20g -Iodosulfuron;	5.29	3.63	5.15	5.22	4.85	4.25
Huzar Activ Plus 1N	300g - 2,4-D EHE; 10g -Iodosulfuron; 7.5g – Thiencarbazone; 30g - Mefenpyr-diethyl	5.54	3.82	4,97	5.57	4,97	4.31
Huzar Activ Plus 2N	600g - 2,4-D EHE; 20g -Iodosulfuron; 15g – Thiencarbazone; 60g - Mefenpyr-diethyl	5.39	3.77	5.23	5.53	4.76	4.23

In field trials on spring wheat JMD-HER 387 OD was used in single rate of 1 L/ha and doubled rate of 2 L/ha, did not have significant adverse effect on yield. Phytotoxicity effects were not observed, even on the plots where double rate was used. No statistical differences in yield were observed between plots treated with JMD-HER 387 OD as well as on control plots.

– ***spring triticale***

Report No.		III 6.1.4/13 S-SW-PL-2020-S20-03778-15	III 6.1.4/14 S-SW-PL-2020-S20-03778-16	III 6.1.4/24 S-SW-PL-2021-S21-03829-13	III 6.1.4/25 S-SW-PL-2021-S21-03829-14
Application date Crop BBCH on app. day		12.05.2020 25	12.05.2020 29	24.05.2021 23	19.05.2021 23
Product	g a.s./ha	Yield (t/ha)	Yield (t/ha)	Yield (t/ha)	Yield (t/ha)
Control	-	3.25	5.15	4.55	5.47
JMD-HER 387 OD 1N	377g - 2,4-D EHE; 10g -Iodosulfuron;	3.42	5.25	4.58	5.32
JMD-HER 387 OD 2N	754g - 2,4-D EHE; 20g -Iodosulfuron;	3.22	5.35	4.5	5.41
Huzar Activ Plus 1N	300g - 2,4-D EHE; 10g -Iodosulfuron; 7.5g – Thiencarbazone; 30g - Mefenpyr-diethyl	3.09	5.11	4.46	5.35
Huzar Activ Plus 2N	600g - 2,4-D EHE; 20g -Iodosulfuron; 15g – Thiencarbazone; 60g - Mefenpyr-diethyl	3.34	4.89	4.04	5.24

In field trials on spring triticale JMD-HER 387 OD was used in single rate of 1 L/ha and doubled rate of 2 L/ha, did not have significant adverse effect on yield. Phytotoxicity effects were not observed, even on the plots where double rate was used. No statistical differences in yield were observed between plots treated with JMD-HER 387 OD as well as on control plots.

Effect on the quality of yield: No significant adverse effect on all of the cereals species was observed after application of JMD-HER 387 OD in comparison to the control. **It can be concuded that Jockey 387 OD have no negative impact on quality of yield of winter (wheat, triticale, rye) and spring cereals (wheat, triticale).**

Below, ZRMS presented detailed results for quality of yield:

– ***winter wheat***

Report No.		III 6.1.4/01 S-WW-PL-2020-S20-03778-01			III 6.1.4/02 S-WW-PL-2020-S20-03778-02			III 6.1.4/03 S-WW-PL-2020-S20-03778-03			III 6.1.4/04 S-WW-PL-2020-S20-03778-04			III 6.1.4/15 S-WW-PL-2021-S20-03829-01			III 6.1.4/16 S-WW-PL-2021-S20-03829-02			III 6.1.4/17 S-WW-PL-2021-S20-03829-03		
Application date Crop BBCH on app. day		23.04.2020 29			20.04.2020 31			15.04.2020 29			20.04.2020 30			13.05.2021 31			19.04.2021 29			19.04.2021 27		
Grain moisture, TGW and yield per plot		Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]
Control	-	13.4	41,96	82.06	13.2	37,95	76,94	12.7	39.61	81.11	12.8	45.6	82,9	13.3	39.44	77.42	12.4	25.35	72,98	11,9	40.62	82.37
JMD-HER 387 OD 1N	377g - 2,4-D EHE; 10g -Iodosulfuron;	13.3	41.82	82.19	13.3	36,92	77.05	12.8	39.53	81.11	12,9	44.3	83.1	13.3	38.64	77.37	12.4	25.14	73,93	12.1	40.63	82.81
JMD-HER 387 OD 2N	754g - 2,4-D EHE; 20g -Iodosulfuron;	13.2	42.07	82.16	13.4	37.4	77,9	12.8	39.78	80,98	12.8	43.7	83.7	13.4	38.86	77.13	12.4	24.86	74.12	12	40.59	82.38
Huzar Activ Plus 1N	300g - 2,4-D EHE; 10g -Iodosulfuron; 7.5g – Thiencarbazone; 30g - Mefenpyr-diethyl	13.3	41.46	82.29	13.4	37.07	76	12.8	39.52	81.01	12.8	42,9	83.7	13.4	38.01	76.88	12.4	24.22	72.04	12.1	40.09	82.71
Huzar Activ Plus 2N	600g - 2,4-D EHE; 20g -Iodosulfuron; 15g – Thiencarbazone;	12.2	40,92	82.49	13.3	36.19	77.69	12.8	40.01	81.23	12.8	45.6	83.5	13.3	37.82	76.61	12.3	26.13	73,95	11,9	40.53	82.45

	60g - Mefenpyr-diethyl																			

Report No.		III 6.1.4/26 S-WW-DE-2021-S21-03829-18			III 6.1.4/27 S-WW-DE-2021-S21-03829-19			III 6.1.4/28 S-WW-CZ-2021-S21-03829-22		
Application date Crop BBCH on app. day		23.04.2020 29			20.04.2020 31			15.04.2020 29		
Grain moisture, TGW and yield per plot		Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]
Control	-	13.1	40.15	72.13	12,9	43.78	82.1	10.2	42.12	82.68
JMD-HER 387 OD 1N	377g - 2,4-D EHE; 10g -Iodosulfuron;	13	39.33	73,96	12.8	44.15	82.4	10	43.3	83.51
JMD-HER 387 OD 2N	754g - 2,4-D EHE; 20g -Iodosulfuron;	13	39.13	74.59	12.8	43.41	82.22	10	42.69	83.32
Huzar OD 1N	93.197g -Iodosulfuron;	13.2	40.59	73.58	13.1	43.79	81,94	-	-	-
Huzar OD 2N	186.394g -Iodosulfuron;	13.2	40.56	75.19	12,9	43.6	82.23	-	-	-
Sekator Plus 1N	287g - 2,4-D EHE; 6.25g -Iodosulfuron; 25g - Amidosulfuron	-	-	-	-	-	-	10	43.04	-83.86
Sekator Plus 2N	574g - 2,4-D EHE; 12.5g -Iodosulfuron; 50g - Amidosulfuron	-	-	-	-	-	-	9,9	42.7	-82.67

Report No.		III 6.2.1/29 (S-WW-RO-2020-S20-03778-21)			III 6.2.1/30 (S-WW-RO-2020-S20-03778-22)			III 6.2.1/31 (S-WW-BG-2021-S21-03829-24)			III 6.2.1/32 (S-WW-RO-2021-S21-03829-25)			III 6.2.1/33 (S-WW-RO-2021-S21-03829-26)			III 6.2.1/34 (S-WW-RO-2021-S21-03829-27)			III 6.2.1/35 (S-WW-HU-2021-S21-03829-28)			III 6.2.1/36 (S-WW-HU-2021-S21-03829-29)		
Grain moisture, TGW and yield per plot		Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]
Control	-	13.5	43.7	73.88	13.68	40.83	76.76	11.6	33.46	74.01	11.73	31.39	79.37	12,9	38.14	78.79	13.2	39.26	79.61	15.4	41,91	79.43	13.7	41.59	81,99
JMD-HER 387 OD 1N	377g - 2,4-D EHE; 10g -Iodosulfuron;	13.5	43.67	74.25	13.48	40.62	77.04	11.2	33.42	74.07	12.08	31.13	78.82	13	38.25	78.35	13.23	39.05	79.56	13,9	42.21	79.53	13.2	42.42	81.42
JMD-HER 387 OD 2N	754g - 2,4-D EHE; 20g -Iodosulfuron;	13.58	43.65	73.81	13.73	40.85	76.79	11.2	32.47	72,91	11.53	31.37	79.32	12.8	38.15	78.83	13.08	39.57	79.67	14.1	42,92	79.01	13.7	41.71	80.56
Hussar Active Plus 1N	300g - 2,4-D EHE; 10g -Iodosulfuron; 7.5g – thiencarba-zone 30g – mefenpyr-diethyl	13.5	43,98	74.23	13.7	40.79	76.77	-	-	-	12.08	31.15	78.75	13.2	38.07	78.47	13.03	39.52	79.79	-	-	-	-	-	-
Hussar Active Plus 2N	600g - 2,4-D EHE; 20g -Iodosulfuron; 15g – thiencarba-zone 60g – mefenpyr-diethyl	13.68	43.27	74.02	13.88	40.51	76.79	-	-	-	11.7	31.20	79.07	13	38.21	78.85	13.08	39.19	79.57	-	-	-	-	-	-
Sekator OD 1N	100g - amidosulfu-ron; 25g -Iodosulfuron;	-	-	-	-	-	-	11.5	32,96	73.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sekator OD 2N	200g - amidosulfu-ron; 50g -Iodosulfuron;	-	-	-	-	-	-	11.1	32.07	72.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
HuszarActive Plusz 1N	300g - 2,4-D EHE; 10g -Iodosulfuron; 7.5g – thiencarba-zone 30g – mefenpyr-diethyl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14.2	42.31	79.75	13,9	41.27	79.55
HuszarActive Plusz 2N	600g - 2,4-D EHE; 20g -Iodosulfuron; 15g – thiencarba-zone 60g – mefenpyr-diethyl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14.1	41.40	81.34	13.6	41.15	82.83

– ***winter triticale***

Report No.		III 6.1.4/05 S-WT-PL-2020-S20-03778-05			III 6.1.4/06 S-WT-PL-2020-S20-03778-06			III 6.1.4/18 S-WT-PL-2021-S21-03829-04			III 6.1.4/19 S-WT-PL-2021-S21-03829-05		
Application date Crop BBCH on app. day		16.04.2020 29			15.04.2020 31			19.04.2021 29			19.04.2021 30		
Grain moisture, TGW and yield per plot		Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]
Control	-	12	34.8	76.15	12.8	45.67	76.17	13.5	38.73	76,91	13.4	39.35	73.55
JMD-HER 387 OD 1N	377g - 2,4-D EHE; 10g -Iodosulfuron;	12.1	33.66	75.55	12.7	45.75	75,98	13.4	39.03	76,91	13.5	39.41	73.45
JMD-HER 387 OD 2N	754g - 2,4-D EHE; 20g -Iodosulfuron;	12.1	35.11	75,98	12.8	45.79	75,92	13.6	38.78	77.35	13.4	38.25	72,93
Huzar Activ Plus 1N	300g - 2,4-D EHE; 10g -Iodosulfuron; 7.5g – Thiencarbazone;	12	36.27	76.54	12.8	46.34	76.22	13.6	38.76	76.71	13.5	38.13	72.77

	30g - Mefenpyr-diethy												
Huzar Activ Plus 2N	600g - 2,4-D EHE; 20g -Iodosulfuron; 15g – Thiencarbazone; 60g - Mefenpyr-diethyl	12	34,96	75.87	12.7	45.73	75.73	13.6	38.37	76,92	13.5	39.43	73.14

– ***winter rye***

Report No.		III 6.1.4/07 S-WR-PL-2020-S20-03778-09			III 6.1.4/08 S-WR-PL-2020-S20-03778-10			III 6.1.4/20 S-WR-PL-2021-S21-03829-09			III 6.1.4/21 S-WR-PL-2021-S21-03829-10		
Application date Crop BBCH on app. day		15.04.2020 31			21.04.2020 32			20.04.2021 23			21.04.2021 23		
Grain moisture, TGW and yield per plot		Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]
Control	-	13.6	25.76	73.68	12.8	29.29	78.71	13.3	27.49	76.82	12.45	19.54	76.02
JMD-HER 387 OD 1N	377g - 2,4-D EHE; 10g -Iodosulfuron;	13.6	26.18	74.69	12.8	28.46	78.71	13.3	27.61	76,9	12.35	18.3	75.67
JMD-HER 387 OD 2N	754g - 2,4-D EHE; 20g -Iodosulfuron;	13.4	26.16	74.48	12.8	28.89	78,93	13.3	27.1	76.77	12.43	18.55	76.02
Huzar Activ Plus 1N	300g - 2,4-D EHE; 10g -Iodosulfuron; 7.5g – Thiencarbazone; 30g - Mefenpyr-diethy	13.4	25.31	73.56	12.8	29.56	78.83	13.3	27.52	76.89	12.43	18.12	75.69
Huzar Activ Plus 2N	600g - 2,4-D EHE; 20g -Iodosulfuron; 15g – Thiencarbazone; 60g - Mefenpyr-diethyl	13.5	25.79	74.8	12.7	28.8	79	13.3	26.76	76,94	12.43	18.51	75.18

– ***spring wheat***

Report No.		III 6.1.4/09 S-SW-PL-2020-S20-03778-11			III 6.1.4/10 S-SW-PL-2020-S20-03778-12			III 6.1.4/11 S-SW-PL-2020-S20-03778-13			III 6.1.4/12 S-SW-PL-2020-S20-03778-14			III 6.1.4/22 S-SW-PL-2021-S21-03829-11			III 6.1.4/23 S-SW-PL-2021-S21-03829-12		
Application date Crop BBCH on app. day		08.05.2020 26			08.05.2020 32			12.05.2020 29			27.05.2020 29			21.05.2021 24			19.05.2021 25		
Grain moisture, TGW and yield per plot		Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]
Control	-	13.2	43.1	74.6	12.5	45.24	81.55	12.7	43.12	70.32	12.7	44.85	66.64	13.3	34,91	80.35	14.1	35,91	74.74
JMD-HER 387 OD 1N	377g - 2,4-D EHE; 10g -Iodosulfuron;	13.1	43.5	74	12.5	44.23	82.16	12.7	42.46	69.85	12.6	45.47	66,91	13.2	35.35	80,92	13.7	36.86	76.12
JMD-HER 387 OD 2N	754g - 2,4-D EHE; 20g -Iodosulfuron;	13.2	43.3	73,9	12.4	45.41	82.49	12.7	42.45	69.79	12.6	45.1	66.82	13.2	34.08	80.14	13.7	35.48	75.86
Huzar Activ Plus 1N	300g - 2,4-D EHE; 10g -Iodosulfuron; 7.5g – Thiencarbazone; 30g - Mefenpyr-diethy	13.2	43.3	74.2	12.5	44.1	81.86	12.7	42.71	70.17	12.6	44,97	66.62	13.1	34.6	80.41	13.8	36,97	76.3
Huzar Activ Plus 2N	600g - 2,4-D EHE; 20g -Iodosulfuron; 15g – Thiencarbazone; 60g - Mefenpyr-diethyl	13.2	42.3	74.1	12.4	43.89	82.17	12.7	73.14	70.26	12.6	45.27	67.01	13.1	34.76	80.76	13,9	36.53	75.81

– ***spring triticale***

Report No.		III 6.1.4/13 S-SW-PL-2020-S20-03778-15			III 6.1.4/14 S-SW-PL-2020-S20-03778-16			III 6.1.4/24 S-SW-PL-2021-S21-03829-13			III 6.1.4/25 S-SW-PL-2021-S21-03829-14		
Application date Crop BBCH on app. day		12.05.2020 25			12.05.2020 29			24.05.2021 23			19.05.2021 23		
Grain moisture, TGW and yield per plot		Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]	Grain moisture [%]	TGW[3] [g]	HLW [kg]
Control	-	12.2	35,99	76.15	12.2	35.75	75.8	13.5	32.07	72.21	13,9	35.76	76.81
JMD-HER 387 OD 1N	377g - 2,4-D EHE; 10g -Iodosulfuron;	12.2	37.09	76.44	12.2	36.52	75.83	13.3	32.41	72.69	13.7	34.52	77.37
JMD-HER 387 OD 2N	754g - 2,4-D EHE; 20g -Iodosulfuron;	12.2	36.38	76.54	12.2	36.15	75.7	13.2	31.5	72.87	13.7	34.72	77.16
Huzar Activ Plus 1N	300g - 2,4-D EHE; 10g -Iodosulfuron; 7.5g – Thiencarbazone; 30g - Mefenpyr-diethy	12.3	36.61	76.2	12.2	36.36	76.03	13.2	32.62	72.59	13.6	34.77	77.46
Huzar Activ Plus 2N	600g - 2,4-D EHE; 20g -Iodosulfuron; 15g – Thiencarbazone; 60g - Mefenpyr-diethyl	12.3	37.07	76.15	12.2	35.61	75.75	13.1	31.07	72.26	13.6	34.3	76.81

Effect on the transformation processes: Despite the absence of specific data on Jockey 387 OD (product code: JMD-HER 387 OD) it may be considered that the proposed uses of Jockey 387 OD are unlikely to have a negative impact on the transformation processes. ZRMS accepted the Applicant

statement for lack of trials against transformation processes for winter and spring cereals. However, cMS should decide if this statement can be accepted

Effect on the propagating purposes: ZRMS accepted Applicant statement for lack of trials against propagation. However, cMS should decide if this statement can be accepted. Jockey 387 OD (product code: JMD-HER 387 OD), similarly, to the references products to which was compared, has shown to be selective to treated crops, showing negligible phytotoxicity symptoms and with no effect on yield at the N dose. Therefore, no further data is deemed to be necessary in the opinion of Evaluator.

Impact on succeeding crops: The EU requirements on plant protection products requires, that sufficient data must be reported to permit an evaluation of possible adverse effects of a treatment with the plant protection product on succeeding crops if studies and evaluations presented in the other part of the dossier, show that significant residues of the active substance, its metabolites or degradation products, which have or may have biological activity on succeeding crops, remain in soil or in plant materials up to sowing or planting time of possible succeeding crops. Therefore, the Applicant should present the assessment of the possible effect of Jockey 387 OD on crops grown as rotational or replacement crops following crops treated with that product, prepared in accordance to the EPPO Standard Efficacy evaluation of plant protection products.

Effects on succeeding crops (PP 1/207 (2)). This standard is intended as a general standard on the methods used to examine whether the active substance of a plant protection product can cause negative effects on crops grown after a crop treated with that product. These crops can be grown as normal rotational crops as well as replacement crops in case of crop failure.

Components of Jockey 387 OD are old active ingredients authorised for cereal production for long time ago. Restrictions on rotational crops are well-known. According to the scientific data half dissipation time (DT_{50}) of iodosulfuron is 2.6 – 110 days and DT_{50} for 2,4-D is 54 and 195.5 days. So, it can be assumed that the herbicide Jockey 387 OD (product code: JMD-HER 387 OD) is degraded in the soil during the growing season to a level that does not pose a risk to succeeding crops. The information in label regarding effects on succeeding crops is sufficient. In case of the need to sift the treated plantation (as a result of crop damage by frost, disease or pest), only spring cereals can be grown on the same field after the period of one month and after shallow seedbed preparation. Maize can also be grown on the same field but after performing ploughing, at least one month before planting the maize.

This recommendations can be accepted by PL, but cMS should decribe recommendations on the national level in the opinion of ZRMs.

Impact on the adjacent crops: The Jockey 387 OD (product code JMD-HER 387 OD) is effective against some mono- and dicotyledonous weeds. In this situation, this plant protection product may also cause discoloration and damage to non-target foliage plants, including adjacent crops. The information in this registration report and label warns against overlapping and drift of the spray liquid should be presented.

Therefore, warnings to avoid spray drift on adjacent crops should appear on the label. For example: *In order to protect plants and non-target arthropods, it is necessary to designate a protective zone with a width of 5 m from areas not used for agriculture.*

3.3.3 Observations on other undesirable or unintended side-effects

None other undesirable or unintended side effects were observed in efficacy field trials.

3.4 Methods of analysis (Part B, Section 5)

3.4.1 Analytical method for the formulation

Analytical methods for determination of 2,4-D and iodosulfuron-methyl-sodium in JMD-HER 387 OD was not evaluated as part of the EU review of 2,4-D and iodosulfuron-methyl-sodium. Therefore, all relevant data are provided and are considered adequate.

2,4-D

The method for determination of 2,4-D and iodosulfuron-methyl-sodium in JMD-HER 387 OD formulation is based on high performance liquid chromatography technique (HPLC) with DAD detection wavelength 270 nm and external standard. In order to confirm method specificity, chromatograms of acetonitrile, placebo, standard and analysed sample were superimposed and compared.
There were no peaks interfering with the 2,4-D peak. The correlation coefficient was $R^2 = 0.9999$ (the criterion of acceptability is $R^2 \geq 0.99$). The relative standard deviation of instrument precision for the determined active substance was RSD = 0.66% (criterion of acceptability is $H_r \leq 1$). Acceptable relative standard deviation of repeatability for the determined active substance is ≤ 1.67%. The obtained results of 1.10% is acceptable. The accuracy of active ingredient determination was estimated by the recovery measurement. The recovery value for the main component should be 97% ÷ 103%. The obtained result 98.28% is acceptable.
The method for determination of 2,4-D in JMD-HER 387 OD fulfils acceptability criteria contained in SANCO/3030/99 rev.5, 22 March 2019 guidance and assure appropriate active substance determination in the formulation.

Iodosulfuron-methyl-sodium

There were no peaks interfering with the iodosulfuron-methyl-sodium peak. The correlation coefficient was $R^2 = 1$ (the criterion of acceptability is $R^2 \geq 0.99$). The relative standard deviation of instrument precision for the determined active substance was 0.27% (criterion of acceptability is $H_r \leq 1$). Acceptable relative standard deviation of repeatability for the determined active substance is ≤ 2.71%. The obtained results of 0.74% is acceptable. The accuracy of active ingredient determination was estimated by the recovery measurement. The recovery value for the main component should be 90% ÷ 110%. The obtained result 101.44% is acceptable.
The method for determination of iodosulfuron-methyl-sodium in JMD-HER 387 OD fulfils acceptability criteria contained in SANCO/3030/99 rev.5, 22 March 2019 guidance and assure appropriate active substance determination in the formulation.

Relevant impurities - free phenols

There were no peaks interfering with the impurity peak. The correlation coefficient was $R^2 = 0.9933$ (the criterion of acceptability is $R^2 \geq 0.99$). Acceptable relative standard deviation of repeatability is ≤ 6.63%. The obtained results of 4.38% is acceptable. The accuracy was estimated by the recovery measurement. The recovery value for the main component should be 70% ÷ 130%. The obtained result 100.17% is acceptable.
The method for determination of relevant impurity – free fenols in JMD-HER 387 OD fulfils acceptability criteria contained in SANCO/3030/99 rev.5, 22 March 2019 guidance and assure its appropriate determination in the formulation.

Relevant impurities – dioxins and furans

There were no peaks interfering with the impurity peak. The correlation coefficient was $R^2 > 0.99$ (the criterion of acceptability is $R^2 \geq 0.99$). Horrat ratio was in range 0.08-0.42 (criterion of acceptability is $H_r \leq 1$). Acceptable relative standard deviation of repeatability is % RSD < % RSDr. The obtained results of RSD = 2.2-14.2%. and RSDr =30-43.3% is acceptable. The accuracy was estimated by the marginal re-

covery measurement. The recovery value for the main component should be 70% ÷ 130%. The obtained result 83-129% is acceptable.
The method for determination of relevant impurities - dioxins and furans in JMD-HER 387 OD fulfils acceptability criteria contained in SANCO/3030/99 rev.5, 22 March 2019 guidance and assure its appropriate determination in the formulation.

3.4.2 Analytical methods for residues

All analytical methods are active substances data and were evaluated during the EU review of 2,4-D and iodosulfuron-methyl-sodium. They were considered adequate. No additional studies have been performed.

Sufficiently sensitive and selective analytical methods are available for all analytes included in the residue definitions.
Noticed data gaps are:

- none

Commodity/crop	Supported/ Not supported
Spring wheat	Supported
Spring triticale	Supported
Winter wheat	Supported
Winter triticale	Supported
Rye	Supported

3.5 Mammalian toxicology (Part B, Section 6)

3.5.1 Acute toxicity

No acute toxicity studies were performed for JMD-HER 387 OD. The classification of JMD-HER 387 OD was based on the composition of the product and was performed by additivity formula according to the Regulation (EC) of the European Parliament and of the Council No. 1272/2008 of December 16th, 2008 on classification, labelling and packaging of substances and mixtures. Details on composition and classification of formulants are provided in dRR Part C. It was assessed that, regarding toxicology, JMD-HER 387 OD should be classified as:

- Acute Tox. 4, H302 - Harmful if swallowed.
- Eye Dam. 1, H318 - Causes serious eye damage.
- Skin Sens. 1, H317 - May cause an allergic skin reaction.

3.5.2 Operator exposure

Operator exposure to JMD-HER 387 OD was not evaluated as part of the EU review of 2,4-D and iodosulfuron-methyl-sodium. Therefore, all relevant data and risk assessments are provided here and are considered adequate.

The operator exposure was assessed against the AOEL agreed in the EU review of 2,4-D and iodosulfuron-methyl-sodium. No studies were available to determine the dermal absorption, default values as defined in the EFSA guidance on dermal absorption (EFSA Journal 2017;15(6):4873) were used for the

calculations.

Operator exposure calculations were performed using the EFSA model AOEM (Agricultural Operator Exposure Model (Guidance on the assessment of exposure of operators, workers, residents and bystanders in risk assessment for plant protection products; EFSA Journal 2014;12(10):3874; calculator version: 30/03/2015).

According to the model calculations, it can be concluded that the risk for the operator using JMD-HER 387 OD on intended uses presented in GAP table is acceptable when operator is equipped with work wear (arms, body and legs covered) and protective gloves during mixing/loading and during application.

3.5.3 Worker exposure

Worker exposure to JMD-HER 387 OD was not evaluated as part of the EU review of 2,4-D and iodosulfuron-methyl-sodium. Therefore, all relevant data and risk assessments are provided here and are considered adequate.

Worker exposure calculations were performed using the EFSA model AOEM (Agricultural Operator Exposure Model (Guidance on the assessment of exposure of operators, workers, residents and bystanders in risk assessment for plant protection products; EFSA Journal 2014;12(10):3874; calculator version: 30/03/2015) and EUROPOEM II re-entry model (Hemmen et al (2002) Post-application exposure of workers to pesticides in agriculture, Report of the re-entry working group. EUROPOEM II project. FAIR3 CT96-1406).

The long-term exposure of worker to 2,4-D, calculated with the EFSA calculator, was estimated to be slightly above the systemic AOEL for 2,4-D. Calculation performed with another model (EUROPOEM II re-entry model) show no exceedance of AOEL for 2,4-D. For iodosulfuron-methyl-sodium all estimated values are below the systemic AOEL for iodosulfuron-methyl-sodium.
It can be concluded that the use of JMD-HER 387 OD according to the list of intended uses presented in GAP Table, causes no health risk for the worker assuming the workwear (arms, body and legs covered) and protective gloves are used.

It is forbidden to re-enter area treated with JMD-HER 387 OD containing 2,4-D and iodosulfuron-methyl-sodium until spray deposit on plant surfaces has dried. As a standard rule, it should be mentioned on the label: “Treated crops should not be re-entered before spray deposits on leaf surfaces have completely dried”.

3.5.4 Bystander and resident exposure

Bystander and resident exposure to JMD-HER 387 OD was not evaluated as part of the EU review of 2,4-D and iodosulfuron-methyl-sodium. Therefore, all relevant data and risk assessments are provided here and are considered adequate.

Bystander and resident exposure calculations were performed using the EFSA model AOEM (Agricultural Operator Exposure Model (Guidance on the assessment of exposure of operators, workers, residents and bystanders in risk assessment for plant protection products; EFSA Journal 2014;12(10):3874; calculator version: 30/03/2015), German bystander and resident model and EUROPOEM II MODEL bystander exposure.

The reference value acutely toxic active substance (RVAAS) for 2,4-D and iodosulfuron-methyl-sodium is not allocated. Consequently, it is assumed that the estimation of bystander exposure is covered by the calculation of resident exposure towards this active substance.
The long-term exposure of children residents to 2,4-D via re-entry and the sum of all pathways, calculated with the EFSA calculator, was estimated to be above the systemic AOEL for 2,4-D. Calculation performed with two other models (German bystander and resident model and EUROPOEM II MODEL bystander exposure) shows no exceedance of AOEL for 2,4-D. For iodosulfuron-methyl-sodium all estimated values are below the systemic AOEL for iodosulfuron-methyl-sodium. It can be concluded that the incidental short-time exposure of bystander and resident (children and adult) to 2,4-D and iodosulfuron-methyl-sodium contained in the formulation JMD-HER 387 OD causes no risk to human health if the product is used in accordance with the intended uses listed in the GAP Table.
Taking into account above, an additional risk mitigation measures should be included on the label:

- "After the application of product, place warning boards in visible places around the field: " No unauthorized access to the area treated with plant protection products ". The boards should remain until the plants are harvested. "
- "During spraying, a protection zone of at least 2-3 m away from residential buildings/habitats and bystanders should be used."

3.6 Residues and consumer exposure (Part B, Section 7)

2,4-D

Stability of Residues

2,4-D residues were shown to be stable at least 18 months in high water, high starch and dry matrices, when stored at -18 °C, and at least 12 months in high oil matrices when stored at -23 °C to -27 °C. 2,4-D residues were found to be chemically stable in beef matrices when stored frozen for 4 months (EFSA Journal 2014;12(9):3812). Sufficient stability has been demonstrated to support the residue data presented in this document.

No further data are required to support the proposed uses.

Metabolism in plants

No new data submitted in the framework of this application.

Plant and animal residue definition for monitoring and risk assessment: Sum of 2,4-D, its salts, esters and conjugates, expressed as 2,4-D (Reg. (EU) 2022/1363, EFSA Journal 2014;12(9):3812)

No further data are required to support the proposed uses.

Magnitude of residues in plants

Proposed GAPs:

Winter wheat, winter rye, winter triticale, spring wheat, spring triticale

BBCH 23-31; 1 application 100.5 - 188.5 g as./ha; PHI: N/A

No new data are submitted in the framework of this application. Applicant refers to the unprotected EU data.

GAP on which MRL/EU assessment is based: 1 x 0.75 kg a.e./ha, BBCH 29-32, PHI not specified

Residues ((8 trials on wheat, 4 trials on barley and 1 trial on oats): 6x <0.02, <0.04, 6x <0.05 mg/kg

Overdosed trials were considered in the risk assessment in this application since all residue values were below the LOQ.

The residues arising from the proposed use will not exceed the MRLs established for cereals (Reg. (EU) 2022/1363: 2 mg/kg – wheat, rye, triticale mg/kg).

According to SANTE/2019/12752 rev.1 extrapolation the residue trials on barley may be extrapolate to oat, rye and wheat and residue trials on wheat may be extrapolate to oat, rye and barley, before forming of the edible part.

Sufficient trials on cereals are available to support the proposed uses.

Magnitude of residues in livestock

The new animal model calculation modify the theoretical maximum daily intake for animals, but regarding available feeding data, there is no risk for animal MRL to be exceeded. Supplementary livestock feeding studies are not required.

Magnitude of residues in processed commodities (Industrial Processing and/or Household Preparation)

As quantifiable residues of 2,4-D are not expected in edible part of crops based on available residue data, there is no need to investigate the effect of industrial and/or household processing.

Magnitude of residues in representative succeeding crops

Considering available data dealing with nature of residues, no study dealing with magnitude of residues in succeeding crops is needed.

All crops under consideration, may be grown in rotation but, according to the soil degradation studies evaluated in the framework of the peer review, the DT90 value calculated of 2,4-D, was 67.7 days which is below the trigger value of 100 days.

Other / special studies

Cereals have not melliferous capacity. Studies are not required.

Estimation of exposure through diet and other means

The proposed uses of 2,4-D in the formulation JMD-HER 387 OD do not represent unacceptable acute and chronic risks for consumers (calculation was conducted using EFSA PRIMo rev.3.1).

Iodosulfuron-methyl-sodium

Stability of Residues

The storage stability report shows that iodosulfuron-methyl and its metabolite triazine amine (AE F059411) are stable in wheat grain, green material and straw for at least 24 months under deep-freezer storage conditions (≤-18°C).

The Applicant refers to data included in the Registration Report of Atlantis 12 OD.

NOTE: The data protection of Atlantis 12 OD should be confirmed by the competent authority at national level before registration.

Metabolism in plants

No new data submitted in the framework of this application.

EU Endpoints Plant	
Plant groups covered	Cereals (Wheat)
Rotational crops covered	Yes
Metabolism in rotational crops similar to metabolism in primary crops?	Yes

Processed commodities	Not relevant
Residue pattern in processed commodities similar to pattern in raw commodities?	Not applicable
Plant residue definition for monitoring	Sum of iodosulfuron-methyl and its salts, expressed as iodosulfuron-methyl (EFSA, 2012, 2016; Reg. (EU) No 289/2014)
Plant residue definition for risk assessment	Sum of iodosulfuron-methyl and its salts, expressed as iodosulfuron-methyl (EFSA, 2012, 2016) Triazine amine (IN-A4098) is a potential candidate for the plant residue definition for risk assessment, and a final decision is pending further clarification regarding the toxicological properties and the related consumer risk. Pending the conclusion on the IN-A4098 toxicity, also the metabolite AE 0031838 (hydroxymethyl triazine amine) observed up to 15% TRR in grain may require a reassessment.
Conversion factor from enforcement to RA	1 (EFSA, 2012, 2016)

Animal	
Animals covered	-
	-
Time needed to reach a plateau concentration	-
	-
Animal residue definition for monitoring	Not necessary (EFSA, 2012, 2016) Sum of iodosulfuron-methyl and its salts, expressed as iodosulfuron-methyl (Reg. (EU) No 289/2014)
Animal residue definition for risk assessment	Not necessary (EFSA, 2012, 2016)
Conversion factor	-
Metabolism in rat and ruminant similar	-
Fat soluble residue	No

EFSA Journal 2020;18(3):6053 (Scientific Opinion of the Scientific Panel on Plant Protection Products and their Residues (PPR Panel) on the genotoxic potential of triazine amine (metabolite common to several sulfonylurea active substances): *Based on the overall weight of evidence, the Panel, in agreement with the cross-cutting Working Group Genotoxicity, concluded that there is no concern for the potential of triazine amine to induce gene mutations and clastogenicity; however, the potential to induce aneugenicity was not adequately investigated. For a conclusion, an in vitro micronucleus assay performed with triazine amine would be needed.*

No further data are required to support the proposed uses.

Magnitude of residues in plants
Proposed GAPs:

Winter wheat, winter rye, winter triticale, spring wheat, spring triticale
BBCH 23-31; 1 application 8-9 g as./ha; PHI: N/A
No new data are submitted in the framework of this application. Applicant refers to the unprotected EU data.
GAP on which EU a.s. assessment is based: 1 × 0.010-0.015 kg as/ha, BBCH 32-39, PHI not relevant, outdoor
Residues (12 trials on wheat, 1 trial on barley and 1 trial on rye): 14 × <0.01 mg/kg
The residues arising from the proposed use will not exceed the MRLs established for cereals (Reg. (EU) No 289/2014: 0.01 mg/kg – wheat, rye, triticale mg/kg).
According to SANTE/2019/12752 rev.1 extrapolation the residue trials on barley may be extrapolate to oat, rye and wheat and residue trials on wheat may be extrapolate to oat, rye and barley, be-fore forming of the edible part.
Sufficient trials on cereals are available to support the proposed uses.

Magnitude of residues in livestock

The calculated dietary burdens were found to not exceed the trigger value of 0.004 mg/kg bw (0.1 mg/kg dry matter (DM) for all groups of livestock. Further investigation of residues is therefore not required.

Magnitude of residues in processed commodities (Industrial Processing and/or Household Preparation

As residues in wheat grain are below the LOQ (<0.01 mg/kg) at the intended maximum application rate of 9 g a.s./ha, studies on the effects of processing on the nature of the residues are not required.

Magnitude of residues in representative succeeding crops

Iodosulfuron-methyl residue levels in rotational commodities were not expected to exceed 0.01 mg/kg, provided that iodosulfuron-methyl-sodium is applied in compliance with the representative GAPs.

Other / special studies

Cereals have not melliferous capacity. Studies are not required.

3.6.1 Consumer exposure

The chronic and acute consumer exposure calculations were performed using revision 3.1 of the EFSA Pesticide Residues Intake Model (PRIMo rev. 3.1). This exposure assessment model contains the relevant European food consumption data for different subgroups of the EU population.

Consumer risk assessment for 2,4-D

ADI	0.02 mg/kg bw per day
TMDI (% ADI) according to EFSA PRIMo rev. 3.1	114 % (based on DK child Diet)
IEDI (% ADI) according to EFSA PRIMo rev. 3.1	46 % (based on NL toddler Diet)
ARfD	0.3 mg/kg bw
IESTI (% ARfD) according to EFSA PRIMo rev. 3.1*	Unprocessed commodities Wheat: 10% (based on UK 4-6 years Diet) Rye: 4% (based on (based on UK infant Diet) Processed commodities Wheat / milling (flour): 8% (based on DE child Diet) Wheat / milling (wholemeal)-baking: 4% (based on NL child Diet) Rye / boiled: 2% (based on NL child Diet) Rye / milling (wholemeal)-baking: 2% (based on NL child Diet)
NTMDI (% ADI) **	Not relevant.
NEDI (% ADI)**	Not relevant.

NESTI (% ARfD) **	Not relevant.

* include raw and processed commodities if both values are required for PRIMo rev. 3.1
** if national model is available

The proposed uses of 2,4-D in the formulation JMD-HER 387 OD does not represent unacceptable chronic and acute risks for the consumer.

Consumer risk assessment for iodosulfuron-methyl-sodium

ADI	0.03 mg/kg bw per day
TMDI (% ADI) according to EFSA PRIMo rev. 3.1	6 % (based on NL toddler diet)
IEDI (% ADI) according to EFSA PRIMo rev. 3.1	Not relevant. TMDI < 100%.
ARfD	3.15 mg/kg bw per day
IESTI (% ARfD) according to EFSA PRIMo rev. 3.1*	Wheat and rye: 0.0 % (for all the groups tested)
NTMDI (% ADI) **	Not relevant.
NEDI (% ADI)**	Not relevant.
NESTI (% ARfD) **	Not relevant.

* include raw and processed commodities if both values are required for PRIMo rev. 3.1
** if national model is available

The proposed uses of iodosulfuron-methyl-sodium in the formulation JMD-HER 387 OD do not represent unacceptable acute and chronic risks for the consumer.

3.7 Environmental fate and behaviour (Part B, Section 8)

3.7.1 Predicted environmental concentrations in soil (PEC_{soil})

PECs modeling was performed with Excel calculator based on simple equations included in FOCUS soil persistence document issued in 1997. PECs for formulation was obtained from PECs for iodosulfuron-methyl-sodium (worst case) taking into account content of active substance and density of the formulation. For further risk assessment worst case PECs values were used.

3.7.1 Predicted environmental concentrations in groundwater (PEC_{gw})

PECgw for active substances iodosulfuron-methyl-sodium, 2,4-D and their metabolites after application to winter and spring cereals were calculated with PELMO 6.6.4 and PEARL 5.5.5 MACRO 5.5.4.

At Tier I PECgw values for iodosulfuron-methyl-sodium and its metabolites AE F161778, AE F145740, BCS-CW81253, AE F145741, AE 0000119 and AE 0002166 were below the trigger value of 0.1 µg/L for all scenarios. PECgw for the metabolites AE F075736 and AE F059411 for few scenarios were above 0.1 µg/L. However, in further modelling at Tier II conducted with additional field data for active substance and metabolite AE F075736, PECgw values for AE F075736 and AE F059411 were below 0.1 µg/L.
~~Hence trigger value for PECgw calculated with PEARL and PELMO was exceeded, additional modelling with MACRO was performed. PECgw obtained with MACRO for active substance and all metabolites when PUF=0.5 applied. In case of MACRO modelling with PUF=0 PECgw were below the trigger of 0.1 µg/L for active substance and metabolites except AE F059411 for which PECgw was slightly above 0.1 µg/L but still below the trigger of 0.75 µg/L for non-relevant metabolites.~~

The results of the leaching for 2,4-D show that when used according to the intended use in cereals 2,4-D and its metabolites l2,4-DCP, 2,4-DCA and 4-CP each in acceptable amounts to groundwater in every European scenario, since all PECgw were found to be under the limit of 0.1 µg/L.

3.7.2 Predicted environmental concentrations in surface water (PEC_{sw})

PECsw for active substances and their metabolites after application to winter and spring cereals were calculated with FOCUS STEPS 1-2 v3.2, FOCUS SWASH v5.3, FOCUS PRZM v4.3.1, FOCUS MACRO v5.5.4, FOCUS TOXWA v5.5.3, SWAN v.5.0.1. Since for spring cereals some scenarios are not available, maize was used in modelling as a surrogate crop. PECsw values were used in aquatic risk assessment.

3.7.3 Predicted environmental concentrations in air (PEC_{air})

The fate and behaviour of 2,4-D and iodosulfuron-methyl-sodium in air was evaluated during the EU review. No additional studies have been performed.

The vapour pressure at 20 °C of the 2,4-D is < 10 5 Pa. Hence the 2,4-D is regarded as non-volatile. Therefore, exposure of adjacent surface waters and terrestrial ecosystems by the 2,4-D due to volatilization with subsequent deposition is not expected to occur. Additionally, DT50 value in the atmosphere is below 2 days indicating that it would not be persistent in air.

The vapour pressure at 25 °C of the iodosulfuron-methyl-sodium is < 10^{-5} Pa. Hence the iodosulfuron-methyl-sodium is regarded as non-volatile. Therefore, exposure of adjacent surface waters and terrestrial ecosystems by the iodosulfuron-methyl-sodium due to volatilization with subsequent deposition is not expected to occur.

3.8 Ecotoxicology (Part B, Section 9)

3.8.1 Effects on terrestrial vertebrates

Birds

Effects on birds for JMD-HER 387 OD were not evaluated as part of the EU review of 2,4-D and iodosulfuron-methyl-sodium. However further data on JMD-HER 387 OD is not relevant as data for each active substance on toxicity to birds are considered essential. It is possible to extrapolate from data for each active substance. Therefore, all relevant data were assessed in the EU review. Risk assessments for JMD-HER 387 OD with the proposed use pattern and EU agreed endpoints have been provided and are considered adequate.

The risk assessment for effects on birds was carried out according to the latest guidance for risk assessment for birds and mammals EFSA Journal 2009; 7(12): 1438.

The acute and reproductive risks of JMD-HER 387 OD to birds were assessed from toxicity expo-sure ratios between EU agreed toxicity endpoints, estimated from studies with active substances, as well as SV90 and SVm. Since JMD-HER 387 OD contains two active substances, combine risk assessment was performed as well.

Drinking water exposure leaf scenario and puddle scenario has not been estimated since not relevant.

Exposure for earthworm-eating birds and fish-eating birds via secondary poisoning was assessed from toxicity exposure ratios between EU agreed toxicity endpoints, estimated from studies with active substances as well as exposure estimated from predicted environmental concentration of 2,4-D and iodosulfuron-methyl-sodium in earthworms and fishes.

The TER values where applicable exceed the trigger values of 10 for acute and 5 for reproductive and long-term risk, thus indicating no unacceptable risk to birds from the proposed use of JMD-HER 387 OD. No risk management measures are required.

Terrestrial vertebrates (other than birds)

Effects on mammals for JMD-HER 387 OD were not evaluated as part of the EU review of 2,4-D and iodosulfuron-methyl-sodium. However further data on JMD-HER 387 OD is not relevant as data for each active substance on toxicity to mammals are considered essential. It is possible to extrapolate from data for each active substance. Therefore, all relevant data were assessed in the EU review. Risk assessments for JMD-HER 387 OD with the proposed use pattern and EU agreed endpoints have been provided and are considered adequate.

The risk assessment for effects on terrestrial vertebrates other than birds was carried out according to the latest guidance for risk assessment for birds and mammals EFSA Journal 2009; 7(12): 1438.

The acute and reproductive risks of JMD-HER 387 OD to terrestrial vertebrates other than birds were assessed from toxicity exposure ratios between EU agreed toxicity endpoints, estimated from studies with 2,4-D and iodosulfuron-methyl-sodium, as well as SV90 and SVm. Since JMD-HER 387 OD contains two active substances, combine risk assessment was performed as well.

Drinking water exposure puddle scenario has not been performed since not relevant.

Exposure for earthworm-eating mammals and fish-eating mammals via secondary poisoning was assessed from toxicity exposure ratios between EU agreed toxicity endpoints, estimated from studies with 2,4-D and iodosulfuron-methyl-sodium as well as exposure estimated from predicted environmental concentration of 2,4-D and iodosulfuron-methyl-sodium in earthworms and fishes.

The TER values where applicable exceed the trigger values of 10 for acute and 5 for reproductive and long-term risk, thus indicating no unacceptable risk to mammals from the proposed use. No risk mitigations are required.

3.8.2 Effects on aquatic species

Effects on aquatic organisms for JMD-HER 387 OD were not evaluated as part of the EU review of 2,4-D and iodosulfuron-methyl-sodium. Acute toxicity studies of JMD-HER 387 OD to invertebrates, algae and aquatic plants as well as literature data for metabolite 4-CP were submitted in this dossier.

Risk assessments for JMD-HER 387 OD with the proposed use pattern was carried out according to the latest guidance for risk assessment for aquatic organisms in edge-of-field surface water EFSA Journal 2013; 11(7):3290.

PECsw/RAC values were calculated with PECsw values obtained for active substances and their metabolites calculated in Step 1, 2, 3 and 4. Most of the PECsw/RAC values were below 1 for acute and long-term risk using Step 3 and Step 4 PECsw indicating no unacceptable risk to aquatic organisms at application rate of 1 L/ha provided the appropriate risk mitigations are applied. Summary of proposed risk mitigations for each scenario are in table below.

Scenario	Winter cereals, application rate: 1 L/ha	Spring cereals, application rate: 1 L/ha
D1/ditch	risk mitigation at national level	75% nozzle reduction or 5m buffer zone
D1/stream	risk mitigation at national level	risk mitigation at national level
D2/ditch	risk mitigation at national level	not relevant
D2/stream	risk mitigation at national level	not relevant
D3/ditch	75% nozzle reduction or 5m buffer zone	75% nozzle reduction or 5m buffer zone
D4/pond	no risk mitigation needed	no risk mitigation needed
D4/stream	75% nozzle reduction or 5m buffer zone	75% nozzle reduction or 5m buffer zone
D5/pond	no risk mitigation needed	no risk mitigation needed
D5/stream	75% nozzle reduction or 5m buffer zone	75% nozzle reduction or 5m buffer zone
D6/ditch	risk mitigation at national level	75% nozzle reduction or * 5m buffer zone
R1/pond	no risk mitigation needed	no risk mitigation needed *
R1/stream	5m vegetated buffer zone	5m vegetated buffer zone *
R2/stream	not relevant	5m vegetated buffer zone *
R3/stream	5m vegetated buffer zone	5m vegetated buffer zone *
R4/stream	75% nozzle reduction or 5m buffer zone	5m vegetated buffer zone

For Poland D3, D4 and R1 scenarios are relevant. R1 scenario is not available for spring cereals but it can be assumed that risk assessment is covered by R1 risk assessment for winter cereals and maize. In case of Poland, it can be concluded that JMD-HER 387 OD used at the max. rate of 1 L/ha to protect cereals according to proposed GAP does not pose unacceptable risk to aquatic organisms under condition that 5m vegetated buffer strip is applied.

Classification of JMD-HER 387 OD was done on the basis of formulation test results as well as active substances properties. The proposed classification of the product JMD-HER 387 OD is:

Aquatic Acute 1, H400
Aquatic Chronic 1, H410

3.8.3 Effects on bees

Effects on bees for JMD-HER 387 OD were not evaluated as part of the EU review of 2,4-D and iodosulfuron-methyl-sodium. Toxicity studies of JMD-HER 387 OD to bees were submitted in this dossier.

Risk assessments for JMD-HER 387 OD with the proposed use pattern was carried out according to the "Guidance Document on Terrestrial Ecotoxicology", as provided by the Commission Services (SANCO/10329/2002 rev.2 (final), October 17, 2002) and the latest Draft EFSA Guidance for risk assessment for bees EFSA Journal 2013; 11(7):3295.

The risks of JMD-HER 387 OD to honeybees was assessed from Hazard Quotients (HQ) and Exposure Toxicity Ratio (ETR) between toxicity endpoints, estimated from acute oral and contact studies with active ingredient and formulated product as well as the maximum single application rate.

All the hazard quotients were considerably less than the respective triggers, indicating that JMD-HER 387 OD at maximum rate of 1 L/ha poses a low risk to bees. No risk management measures are required.

3.8.4 Effects on other arthropod species other than bees

Effects on non-target arthropods for JMD-HER 387 OD were not evaluated as part of the EU review of 2,4-D and iodosulfuron-methyl-sodium. Toxicity studies of JMD-HER 387 OD to non-target arthropods were submitted in this dossier.

Risk assessments for JMD-HER 387 OD with the proposed use pattern was carried out according to the guidance for risk assessment for arthropods "Guidance Document on Terrestrial Ecotoxicology", as provided by the Commission Services (SANCO/10329/2002 rev.2 (final), October 17, 2002) and in consideration of the recommendations of the guidance document ESCORT 2.

The in-field and off-field risk of JMD-HER 387 OD to non-target arthropods was assessed from Hazard Quotients (HQ) between toxicity endpoints estimated from studies with active ingredient and the formulated product JMD-HER 387 OD as well as in-field and off-field predicted environmental rate. No risk was determined in-field and off-field after application of JMD-HER 387 OD at maximum rate of 1 L/ha. No risk management measures are required.

3.8.5 Effects on soil organisms

Effects on earthworms and other soil micro-organisms for JMD-HER 387 OD were not evaluated as part of the EU review of 2,4-D and iodosulfuron-methyl-sodium. The earthworm, *Folsomia candida* and *Hypoaspis aculeifer* chronic toxicity studies as well as nitrogen transformation test for JMD-HER 387 OD were submitted in this dossier.

Risk assessments for JMD-HER 387 OD with the proposed use pattern was carried out according to the guidance for risk assessment for terrestrial ecotoxicology "Guidance Document on Terrestrial Ecotoxicology", (SANCO/10329/2002 rev.2 final, 2002).

Earthworms, *Folsomia candida* and *Hypoaspis aculeifer*
The risk of JMD-HER 387 OD to earthworms, *Folsomia candida* and *Hypoaspis aculeifer* was assessed from acute toxicity exposure ratios (TERs) between the selected toxicity endpoint for the active ingredient, metabolites and the formulated product JMD-HER 387 OD as well as the maximum soil PECs.

The acute and chronic TER values were greater than the trigger of 10 and 5 respectively, indicating an acceptable risk to earthworms, *Folsomia candida* and *Hypoaspis aculeifer* following application of JMD-HER 387 OD at maximum rate of 1 L/ha. No risk management measures are required.

Micro-organisms
The risk of JMD-HER 387 OD to soil micro-organisms was evaluated by comparison of no-effect concentration in soil, derived from laboratory tests for active substances, metabolites and the formulated product JMD-HER 387 OD with predicted application concentrations (PECs) obtained for active substances, metabolites and the formulation.

According to the performed risk assessment it was assessed that the application of JMD-HER 387 OD at maximum rate of 1 L/ha does not pose unacceptable risk to soil micro-organisms. No risk management measures are required.

3.8.6 Effects on non-target terrestrial plants

Effects on non-target terrestrial plants for JMD-HER 387 OD were not evaluated as part of the EU review of 2,4-D and iodosulfuron-methyl-sodium. The studies on seedling emergence and vegetative vigour for JMD-HER 387 OD were submitted in this dossier.

The risk of JMD-HER 387 OD to non-target plants was assessed from toxicity exposure ratios between toxicity endpoints for the formulation JMD-HER 387 OD and predicted environmental rate. The TER values were greater than the trigger of 5, indicating an acceptable risk to non-target terrestrial plants following application of JMD-HER 387 OD at maximum rate of 1 L/ha provided the following risk mitigations are applied:

- 10m buffer zone or 5 m buffer zone with 50% drift reducing spray nozzles.

3.8.7 Effects on other terrestrial organisms (Flora and Fauna)

Not relevant.

3.9 Relevance of metabolites (Part B, Section 10)

All 2,4-D and iodosulfuron-methyl-sodium are predicted to occur in groundwater at concentrations below 0.1 µg/L (see dRR Part B8). Assessment of the relevance of metabolites according to the stepwise procedure of the EC guidance document SANCO/221/2000 –rev.10 is therefore not required.

4 Conclusion of the national comparative assessment (Art. 50 of Regulation (EC) No 1107/2009)

JMD-HER 387 OD contains two active substances 2,4-D and iodosulfuron-methyl-sodium. Neither 2,4-D nor iodosulfuron-methyl-sodium are candidates for substitution. A comparative assessment was therefore not considered necessary.

5 Further information to permit a decision to be made or to support a review of the conditions and restrictions associated with the authorization

Metabolism and Residues:

In the case of the stability of iodosulfuron-methyl, the Applicant refers to the data contained in the Atlantis 12 OD Registration Report. The data protection of Atlantis 12 OD should be confirmed by the competent authority at national level before registration.

~~List of data submitted or referred to by the applicant and relied on, but already evaluated should be completed before registration (Appendix 1 in B7 and B5).~~ The list was completed.

Appendix 1 Copy of the product authorization

MS assessor to insert details of the product authorization for MS country.

Appendix 2 Copy of the product label

Sekcja fizykochemii: Odnośnie sekcji „POSTĘPOWANIE Z RESZTKAMI CIECZY UŻYTKOWEJ I MYCIE APARATURY" dodano zalecenie „Po pracy aparaturę dokładnie umyć 4-krotnie wodą."
Sekcja skuteczności: Zmieniono zapis dotyczący listy zaakceptowanych gatunków chwastów oraz ich klasyfikacji wrażliwości. Uzupełniono strategię zarządzania odpornością. Pozostałych zapisów w etykiecie nie zmieniono.
Sekcja toksykologii: EUH208 nie ma uzasadnienia, ponieważ środek jest sklasyfikowany jako H317 oraz korekta w części Środki ostrożności dla osób stosujących środek.
Metabolizm i pozostałości: brak uwag
Fate: bez uwag
Ekotoksykologia: W celu ochrony organizmów wodnych konieczne jest wyznaczenie zadarnionej strefy ochronnej o szerokości 5 m od zbiorników i cieków wodnych. W celu ochrony roślin niebędących celem działania środka konieczne jest wyznaczenie strefy ochronnej o szerokości 10 m od terenów nieużytkowanych rolniczo bądź wyznaczenie strefy ochronnej o szerokości 5 m od terenów nieużytkowanych rolniczo z równoczesnym użyciem opryskiwaczy redukujących znoszenie cieczy użytkowej o 50%.

Posiadacz zezwolenia:
Pestila Spółka z ograniczoną odpowiedzialnością, Studzianki 24a, 97-320 Wolbórz, tel.:/fax: +48 446164375, e-mail: info@pestila.pl.

JOCKEY 387 OD

Środek przeznaczony do stosowania przez użytkowników profesjonalnych

Zawartość substancji czynnej: **jodosulfuron** (substancja z grupy sulfonylomocznków) - **10 g/l** (0,95%)
2,4-D EHE (substancja z grupy fenoksykwasów) - **377 g/l** (36,1%)

Zezwolenie MRiRW nr R - /2023 z dnia .2023 r.

Uwaga

H304	–	Połknięcie i dostanie się przez drogi oddechowe może grozić śmiercią.
H315	–	Działa drażniąco na skórę.
H317	–	Może powodować reakcję alergiczną skóry.
H318	–	Powoduje poważne uszkodzenie oczu
H410	–	Działa bardzo toksycznie na organizmy wodne, powodując długotrwałe skutki.

~~EUH 208~~	~~–~~	~~Zawiera 2,4-D 2EHE. Może powodować wystąpienie reakcji alergicznej.~~
EUH 401	–	W celu uniknięcia zagrożeń dla zdrowia ludzi i środowiska, należy postępować zgodnie z instrukcją użycia.
P261	–	Unikać wdychania rozpylonej cieczy.
P264	–	Dokładnie umyć ręce po użyciu.
P280	–	Stosować rękawice ochronne/odzież ochronną/ochronę twarzy.
P301+P310	–	W PRZYPADKU POŁKNIĘCIA: Natychmiast skontaktować się z OŚRODKIEM ZATRUĆ lub z lekarzem.
P331	–	NIE wywoływać wymiotów.
P302 + P352	–	W PRZYPADKU KONTAKTU ZE SKÓRĄ: Umyć dużą ilością wody z mydłem.
P333 + P313	–	W przypadku wystąpienia podrażnienia skóry lub wysypki: Zasięgnąć porady/ zgłosić się pod opiekę lekarza.
P310	–	Natychmiast skontaktować się z OŚRODKIEM ZATRUĆ lub lekarzem.
P391	–	Zebrać wyciek.

OPIS DZIAŁANIA

Herbicyd w formie zawiesiny olejowej do rozcieńczania wodą, stosowany nalistnie, przeznaczony do wiosennego zwalczania jednorocznych i wieloletnich chwastów jedno i dwuliściennych w pszenicy ozimej, życie, pszenżycie ozimym, pszenicy jarej oraz pszenżycie jarym.

Środek przeznaczony do stosowania przy użyciu opryskiwaczy polowych.

DZIAŁANIE NA CHWASTY

Jockey 387 OD jest herbicydem zawierającym dwie substancje czynne: jodosulfuron oraz 2,4-D (tzn. w formie estru etyloheksylowego). Jockey 387 OD jest herbicydem o działaniu układowym, pobierany jest przez liście oraz korzenie chwastów, a następnie szybko przemieszczany w całej roślinie powodując jej deformację i zahamowanie wzrostu, co w efekcie powoduje zamieranie całego chwastu. Jodosulfuron blokuje działanie enzymów podczas syntezy aminokwasów; 2,4-D hamuje działanie hormonów roślinnych odpowiedzialnych za wzrost roślin oraz zakłóca proces rozwoju komórek. Najwyższą skuteczność wykazuje wobec chwastów jednorocznych, będących w fazie 2-4 liści. Zwalczanie chwastów uzyskuje się po upływie od 1 do 3 tygodni od wykonania zabiegu. Szybkość działania preparatu zależna jest od fazy rozwojowej zwalczanych chwastów i ich tempa wzrostu, oraz warunków atmosferycznych – temperatury i wilgotności powietrza.

Zboża ozime (pszenica, pszenżyto, żyto):

- **Dawka 0,8 l/ha:**

Chwasty wrażliwe na środek: tasznik pospolity (CAPBP), jasnota purpurowa (LAMPU), rumianek pospolity (MATCH), maruna bezwonna (MATIN), gwiazdnica pospolita (STEME),

Chwasty średnio wrażliwe na środek: miotła zbożowa (APESV), przytulia czepna (GALAP), jasnota różowa (LAMAM), mak polny (PAPRH), tobołki polne (THLAR), przetacznik perski (VERPE), fiołek polny (VIOAR)

Chwasty średnio odporne na środek: przetacznik bluszczykowaty (VERHE)

- **Dawka 1,0 l/ha**

Chwasty wrażliwe na środek: miotła zbożowa (APESV), tasznik pospolity (CAPBP), przytulia czepna (GALAP), jasnota różowa (LAMAM), jasnota purpurowa (LAMPU), rumianek pospolity (MATCH), maruna bezwonna (MATIN), mak polny (PAPRH), gwiazdnica pospolita (STEME), tobołki polne (THLAR), przetacznik perski (VERPE).

Chwasty średnio wrażliwe na środek: przetacznik bluszczykowaty (VERHE), fiołek polny (VIOAR)

Zboża jare (pszenica, pszenżyto):

- **Dawka 0,8 l/ha:**

Chwasty wrażliwe na środek: samosiewy rzepaku (BRSNW), tasznik pospolity (CAPBP), komosa biała (CHEAL), przytulia czepna (GALAP), jasnota różowa (LAMAM), maruna bezwonna (MATIN), mak polny (PAPRH), gwiazdnica pospolita (STEME)

Chwasty średnio wrażliwe na środek: bodziszek drobny (GERPU), rdestówka powojowata (POLCO), przetacznik perski (VERPE), fiołek polny (VIOAR)

- **Dawka 1,0 l/ha**

~~**Chwasty wrażliwe na środek w dawce 0,8 L/ha**: samosiewy rzepaku (BRSNW), tasznik pospolity (CAPBP), chaber bławatek (CENCY), komosa biała (CHEAL), przytulia czepna (GALAP), jasnota różowa (LAMAM), jasnota purpurowa (LAMPU), rumianek pospolity (MATCH), maruna bezwonna (MATIN), mak polny (PAPRH), gwiazdnica pospolita (STEME).~~

Chwasty wrażliwe na środek ~~w dawce 1 L/ha~~: ~~miotła zbożowa (APESV),~~ samosiewy rzepaku (BRSNW), tasznik pospolity (CAPBP), ~~chaber bławatek (CENCY),~~ komosa biała (CHEAL), przytulia czepna (GALAP), bodziszek drobny (GERPU), jasnota różowa (LAMAM), ~~jasnota purpurowa (LAMPU), rumianek pospolity (MATCH),~~ maruna bezwonna (MATIN), mak polny (PAPRH), rdestówka powojowata (POLCO), gwiazdnica pospolita (STEME), ~~tobołki polne (THLAR),~~ przetacznik perski (VERPE), fiołek polny (VIOAR)

~~**Chwasty średnio wrażliwe na środek w dawce 0,8 L/ha**: miotła zbożowa (APESV), bodziszek drobny (GERPU), rdestówka powojowata (POLCO), tobołki polne (THLAR), przetacznik perski (VERPE), fiołek polny (VIOAR)~~

~~**Chwasty średnio wrażliwe na środek w dawce 1 L/ha:** przetacznik bluszczykowaty (VERHE)~~

~~**Chwasty średnio odporne na środek w dawce 0,8 L/ha**: przetacznik bluszczykowaty (VERHE)~~

STOSOWANIE ŚRODKA

Zboża ozime (pszenica ozima, pszenżyto ozime, żyto) i zboża jare (pszenica jara, pszenżyto jare).

Maksymalna dawka dla jednorazowego zastosowania: 1 L/ha

Zalecana dawka dla jednorazowego zastosowania: 0,8-1 L/ha

Termin stosowania środka: stosować wiosną od fazy trzech widocznych rozkrzewień do fazy pierwszego kolanka (BBCH 23-31)

Zalecana ilość wody: **200-300 l/ha**

Zalecane opryskiwanie: średniokropliste

Maksymalna liczba zabiegów w sezonie wegetacyjnym: 1

UWAGI:

Środek wnika do roślin w ciągu 2 godzin od zastosowania. Deszcz występujący po tym okresie czasu nie wpływa negatywnie na działanie Jockey 387 OD.

Aby zapobiec powstawaniu zjawiska odporności chwastów na środek Jockey 387 OD, należy przestrzegać zaleceń zawartych w tej etykiecie i nie stosować dawek niższych i wyższych niż zalecane, jak i również stosować środek naprzemiennie z herbicydami należącymi do różnych grup chemicznych o odmiennym mechaniźmie działania na chwasty. Należy postępować zgodnie z Dobrą Praktyką Rolniczą, stosować różne metody zwalczania chwastów (w tym płodozmian), stosować kwalifikowany materiał siewny oraz informować posiadacza zezwolenia o niezadowalającym zwalczaniu chwastów.

NASTĘPSTWO ROŚLIN

Środek rozkłada się w glebie w ciągu okresu wegetacji nie stwarzając zagrożenia dla roślin uprawianych następczo.
W przypadku wcześniejszego zaorania plantacji potraktowanej środkiem (w wyniku uszkodzenia roślin przez przymrozki, choroby lub szkodniki), po wykonaniu uprawy przedsiewnej na polu tym można uprawiać wyłącznie kukurydzę, zboża jare i ziemniaki.
Przestrzegać zaleceń dotyczących następstwa roślin obowiązujących dla herbicydów stosowanych w mieszaninach ze środkiem Jockey 387 OD.

ŚRODKI OSTROŻNOŚCI I ZALECENIA STOSOWANIA ZWIĄZANE Z DOBRĄ PRAKTYKĄ ROLNICZĄ

Środka nie stosować:

- na rośliny mokre, chore i uszkodzone np. przez szkodniki lub przymrozki
- po nocnych przymrozkach oraz przed spodziewanymi, silnymi przymrozkami.

Podczas stosowania środka nie dopuścić do:

- znoszenia cieczy użytkowej na sąsiednie plantacje roślin uprawnych,
- nakładania się cieczy użytkowej na stykach pasów zabiegowych i uwrociach.

SPORZĄDZANIE CIECZY UŻYTKOWEJ

Przed przystąpieniem do sporządzania cieczy użytkowej dokładnie ustalić potrzebną jej ilość. Odmierzoną ilość środka wlać do zbiornika opryskiwacza napełnionego częściowo wodą (z włączonym mieszadłem). Opróżnione opakowania przepłukać trzykrotnie wodą, a popłuczyny wlać do zbiornika opryskiwacza z cieczą użytkową. Zbiornik opryskiwacza uzupełnić wodą do potrzebnej ilości.
Po wlaniu środka do zbiornika opryskiwacza nie wyposażonego w mieszadło hydrauliczne ciecz w zbiorniku mechanicznie wymieszać.
W przypadku stosowania środka w mieszaninie z innymi środkami przestrzegać ściśle zaleceń dotyczących sporządzania cieczy użytkowej tych środków.
W przypadku przerw w opryskiwaniu przed ponownym przystąpieniem do pracy należy dokładnie wymieszać ciecz użytkową w zbiorniku opryskiwacza.

Ze względu na bardzo dużą wrażliwość niektórych roślin uprawnych nawet na znikome ilości środka, bardzo ważne jest dokładne wymycie opryskiwacza po zabiegu, zwłaszcza przed użyciem w innych roślinach niż zalecane.

POSTĘPOWANIE Z RESZTKAMI CIECZY UŻYTKOWEJ I MYCIE APARATURY

Z resztkami cieczy użytkowej po zabiegu należy postępować w sposób ograniczający ryzyko skażenia wód powierzchniowych i podziemnych w rozumieniu przepisów Prawa wodnego oraz skażenia gruntu, tj.:

- po uprzednim rozcieńczeniu zużyć na powierzchni, na której przeprowadzono zabieg, jeżeli jest to możliwe lub
- unieszkodliwić z wykorzystaniem rozwiązań technicznych zapewniających biologiczną degradację substancji czynnych środków ochrony roślin, lub – unieszkodliwić w inny sposób, zgodny z przepisami o odpadach. Po pracy aparaturę dokładnie umyć 4-krotnie wodą..

WARUNKI BEZPIECZNEGO STOSOWANIA ŚRODKA

Przed zastosowaniem środka należy poinformować o tym fakcie wszystkie zainteresowane strony, które mogą być narażone na znoszenie cieczy roboczej i które zwróciły się o taką informację.

Środki ostrożności dla osób stosujących środek:

Nie jeść, nie pić ani nie palić podczas używania produktu.
Stosować rękawice ochronne, ochronę oczu i twarzy oraz odzież roboczą ~~ochronną~~, zabezpieczającą przed oddziaływaniem środków ochrony roślin w trakcie przygotowywania cieczy użytkowej oraz w trakcie wykonywania zabiegu.

Zanieczyszczoną odzież zdjąć i wyprać przed ponownym użyciem.

Środki ostrożności związane z ochroną środowiska naturalnego:

Nie zanieczyszczać wód środkiem ochrony roślin lub jego opakowaniem.
Nie myć aparatury w pobliżu wód powierzchniowych.
Unikać zanieczyszczania wód poprzez rowy odwadniające z gospodarstw i dróg.

W celu ochrony organizmów wodnych konieczne jest wyznaczenie zadarnionej strefy ochronnej o szerokości 5 m od zbiorników i cieków wodnych.
W celu ochrony roślin ~~oraz stawonogów~~ niebędących celem działania środka konieczne jest wyznaczenie strefy ochronnej o szerokości 10 m od terenów nieużytkowanych rolniczo bądź wyznaczenie strefy ochronnej o szerokości 5 m od terenów nieużytkowanych rolniczo z równoczesnym użyciem opryskiwaczy redukujących znoszenie cieczy użytkowej o 50%.

Okres od zastosowania środka do dnia, w którym na obszar, na którym zastosowano środek mogą wejść ludzie oraz zostać wprowadzone zwierzęta (okres prewencji): nie wchodzić do czasu całkowitego wyschnięcia cieczy użytkowej na powierzchni roślin.

Okres od ostatniego zastosowania środka do dnia zbioru rośliny uprawnej (okres karencji): Nie dotyczy

Okres od ostatniego zastosowania środka na rośliny przeznaczone na paszę do dnia w którym zwierzęta mogą być karmione tymi roślinami (okres karencji dla pasz):
Nie dotyczy

Okres od ostatniego zastosowania środka na rośliny do dnia w którym można siać lub sadzić rośliny uprawiane następczo: Należy uwzględnić następstwo roślin

WARUNKI PRZECHOWYWANIA I BEZPIECZNEGO USUWANIA ŚRODKA OCHRONY ROŚLIN I OPAKOWANIA

Chronić przed dziećmi.
Środek ochrony roślin przechowywać:

- w miejscach lub obiektach, w których zastosowano odpowiednie rozwiązania zabezpieczające przed skażeniem środowiska oraz dostępem osób trzecich,
- w oryginalnych opakowaniach, w sposób uniemożliwiający kontakt z żywnością, napojami lub paszą,
- w temperaturze 0 °C - 30°C.

Zabrania się wykorzystywania opróżnionych opakowań po środkach ochrony roślin do innych celów.

Niewykorzystany środek przekazać do podmiotu uprawnionego do odbierania odpadów niebezpiecznych.

Opróżnione opakowania po środku zwrócić do sprzedawcy środków ochrony roślin będących środkami niebezpiecznymi.

PIERWSZA POMOC

Antidotum: brak, stosować leczenie objawowe.
W razie konieczności zasięgnięcia porady lekarza, należy pokazać opakowanie lub etykietę.

Okres ważności - 2 lata
Data produkcji - .....
Zawartość netto - .....
Nr partii - .....

Appendix 3 Letters of Access

Letters of access are provided in separate appendixes.

Appendix 4 Lists of data considered for national authorization

Tables considered not relevant can be deleted as appropriate.

MS to blacken authors of vertebrate studies in the version made available to third parties/public.

List of data submitted by the applicant and relied on

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	Data protection claimed Y/N	Justification if data protection is claimed	Owner
Section B1, B2 and B4: Identity, Physical and Chemical Properties, Further information							
KCP 2.1 KCP 2.4.1 KCP 2.4.2 KCP 2.8.5.1.1 KCP 2.8.5.1.2 KCP 2.8.6.2 KCP 2.8.6.3 KCP 2.8.7.2	Ciach J.	2021	JMD-HER 387 OD. Determination of physicochemical properties of preparation in an COEX bottle. Stage 1: Determination of physicochemical properties of initial preparation. Report No 002/DPL/2021 Pestila Spółka z ograniczoną odpowiedzialnością. GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 2.2.1	Buczkowski D.	2021	JMD-HER 387 OD Determination of explosive properties Report No BW-06/21 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 2.2.2 KCP 2.3.1 KCP 2.3.3	Flasińska P.	2021	JMD-HER 387 OD Determination of flash point, auto-ignition temperature and oxidizing properties. Report No BC-11/21 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*

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	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 2.4.1 KCP 2.4.2 KCP 2.6.1 KCP 2.7.1	Ciach J.	2021	JMD-HER 387 OD. Determination of physicochemical properties of preparation in an COEX bottle. Stage 1: Determination of physicochemical properties of initial preparation. Stage 3: Determination of physicochemical properties of preparation stored at temperature 40±2°C for 8 weeks. Report No 002/DPL/2021 Pestila Spółka z ograniczoną odpowiedzialnością. GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 2.5.1 KCP 2.5.2	Ciach J.	2022	JMD-HER 387 OD. Determination of the surface tension and viscosity of the preparation in a COEX bottle. Report No 001/DPL/2022 Pestila Spółka z ograniczoną odpowiedzialnością. GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 2.7.1/01 KCP 2.7.3	Ciach J.	2021	JMD-HER 387 OD. Determination of active substrances content of preparation in an COEX bottle. Stage 1: Determination of active substrances content of initial preparation. Stage 2: Determination of physicochemical properties of the preparation stored at temperature 0±2°C for 7 days. Stage 3: Determination of active substrances content of preparation stored at temperature 40±2°C for 8 weeks. Report No 001/DPL/2021 Pestila Spółka z ograniczoną odpowiedzialnością. GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 2.7.4	Ciach J.	2021	JMD-HER 387 OD. Determination of active substrances content of preparation in an COEX bottle. Stage 1: Determination of active substrances content of initial preparation. Stage 2: Determination of physicochemical properties of the preparation stored at temperature 0±2°C for 7 days. Report No 001/DPL/2021 Pestila Spółka z ograniczoną odpowiedzialnością. GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 2.7.1/02 KCP 2.7.1/03 KCP 2.11	Wołoszynowska M.	2021	JMD-HER 387 OD Determination of physicochemical properties. Report No BA-05/21 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 2.7.1/04	Pstuś J.	2022	Analysis of JMD-HER 387 OD before and after ageing tests to determine content of dioxins and furans. Report No K733/JP Selvita Services Sp. z o.o. GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 2.7.5/01	Ciach J.	2023	JMD-HER 387 OD. Determination of physicochemical properties of preparation in an COEX bottle. Stage 5: Determination of physicochemical properties of the preparation stored at temperature 20±2°C for 2 years. Report No 002/DPL/2021 Pestila Spółka z ograniczoną odpowiedzialnością GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*

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	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 2.7.5/02	Ciach J.	2023	JMD-HER 387 OD. Determination of active substrances content of preparation in an COEX bottle. Stage 5: Determination of an active substance content in a preparation stored at temperature 20±2°C for 2 years. Report No 001/DPL/2021 Pestila Spółka z ograniczoną odpowiedzialnością. GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
Section B3: Efficacy Data and Information							
KCP 3.2/01	Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-01 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/02	Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-02 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/03	Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-03 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 3.2/04	Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-04 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/05	Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-05 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/06	Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-06 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/07	Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-07 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 3.2/08	Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-08 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/09	Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-09 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/10	Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-10 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/11	Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-11 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 3.2/12	Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-12 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/13	Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-13 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/14	Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-14 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/15	Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-15 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 3.2/16	Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-16 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/17	Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-17 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/18	Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Poland. 2020; Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-18 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/19	Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-01 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*

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KCP 3.2/20	Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-02 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/21	Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-03 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/22	Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-04 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/23	Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in spring wheat. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-05 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 3.2/24	Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in spring wheat. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-06 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/25	Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in spring wheat. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-07 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/26	Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in spring wheat. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-08 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/27	Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Germany 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-09 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 3.2/28	Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Germany 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-10 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/29	Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Germany 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-12 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/30	Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter barley. Germany 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-14 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/31	Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter barley. Germany 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-15 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 3.2/32	Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter barley. Germany 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-16 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/33	Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Czech Republic 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-17 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/34	Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Czech Republic 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-18 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/35	Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter barley. Czech Republic 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-19 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 3.2/36	Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter barley. Czech Republic 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03828-20 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/37	Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Romania. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-19 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/38	Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Romania. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-20 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/39	Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Romania. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-21 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 3.2/40	Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Romania. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-22 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/41	Głowacki G.	2020	Determination of efficacy of JMD-HER 387 OD applied once in spring 2020 against mono- and broadleaved weeds in cereals. Romania. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03776-23 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/42	Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Bulgaria 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03828-21 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/43	Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Bulgaria 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03828-22 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 3.2/44	Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Bulgaria 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03828-23 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/45	Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Bulgaria 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03828-24 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/46	Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Hungary 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03828-25 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/47	Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Hungary 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03828-26 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 3.2/48	Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Hungary 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03828-27 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.2/49	Głowacki G.	2021	Determination of efficacy of JMD-HER 387 OD applied once in spring 2021 against mono- and broadleaved weeds in winter wheat. Hungary 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03828-28 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/01	Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-01 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/02	Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-02 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/03	Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-03 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 3.4/04	Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-04 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/05	Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-05 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/06	Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-06 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/07	Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-09 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/08	Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-10 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 3.4/09	Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-11 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/10	Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-12 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/11	Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-13 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/12	Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-14 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/13	Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-15 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 3.4/14	Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Poland. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S20-03778-16 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/15	Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter wheat. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-01 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/16	Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter wheat. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-02 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/17	Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter wheat. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-03 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/18	Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter triticale. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-04 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 3.4/19	Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter triticale. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-05 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/20	Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter rye. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-09 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/21	Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter rye. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-10 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/22	Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in spring wheat. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-11 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/23	Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in spring wheat. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-12 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 3.4/24	Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in spring triticale. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-13 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/25	Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in spring triticale. Poland 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-14 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/26	Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter wheat. Germany 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-18 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/27	Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter wheat. Germany 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-19 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 3.4/28	Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter wheat. Czech Republic 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-22 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/29	Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Romania. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: 20-03778-21 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/30	Głowacki G.	2020	Determination of selectivity of JMD-HER 387 OD applied once in spring 2020 in cereals. Romania. 2020. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: 20-03778-22 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/31	Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter wheat. Bulgaria 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-24 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/32	Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter wheat. Romania 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-25 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 3.4/33	Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter wheat. Romania 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-26 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/34	Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter wheat. Romania 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-27 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/35	Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter wheat. Hungary 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-28 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
KCP 3.4/36	Głowacki G.	2021	Determination of selectivity of JMD-HER 387 OD applied once in Spring 2021 in winter wheat. Hungary 2021. Eurofins Agroscience Services Sp. z o.o., Poland; Report No.: S21-03829-29 GEP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GEP.	Pestila*
Section B5: Analytical Methods							

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 5.1.1/01 KCP 5.1.1/02	Ciach J.	2021	JMD-HER 387 OD. Determination of active substrances content of preparation in an COEX bottle. Stage 1: Determination of active substrances content of initial preparation. Stage 2: Determination of physicochemical properties of the preparation stored at temperature 0±2°C for 7 days. Stage 3: Determination of active substrances content of preparation stored at temperature 40±2°C for 8 weeks. Stage 5: Determination of physicochemical properties of preparation stored at temperature 20±2°C for 2 years. Report No 001/DPL/2021 Pestila Spółka z ograniczoną odpowiedzialnością. GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 5.1.1/03	Wołoszynowska M.	2021	Determination of physicochemical properties. Report No BA-05/21 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 5.1.1/04	Pstuś J.	2020	GC method for determination of dioxins and furans in JMD-HER 387 OD. Report No RVM/2022/48 Selvita Services Sp. z o.o. GLP: No Published: No	N	N	New data for formulation, not previously submitted or evaluated.	Pestila*
KCP 5.1.2/01	Włodarczyk M.	2021	Validation of analytical method for the determination of active substances of the test item JMD-HER 387 OD in 50% sucrose solution Study code: 0005/0099/FA SORBOLAB Research Laboratory LLC GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*

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	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 5.1.2/02	Włodarczyk M.	2021	Validation of analytical method for the determination of active substances in aqueous solution of the test item JMD-HER 387 OD Study code: 0005/0102/FA SORBOLAB Research Laboratory LLC GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 5.1.2/03 (filed as KCP 10.4.1.1/01)	Arendarczyk A.	2021	JMD-HER 387 OD Earthworm reproduction test (*Eisenia andrei*) STUDY CODE: G-03-21 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna, Ecotoxicology Research Group GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 5.1.2/04 (filed as KCP 10.4.2.1/01)	Gierbuszewska A.	2021	JMD-HER 387 OD Collembolan *(Folsomia candida)* Reproduction Test Study code: G-04-21 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna, Ecotoxicology Research Group GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 5.1.2/05 (filed as KCP 10.2.1.3/02)	Czarnecka M.	2021	JMD-HER 387 OD *Raphidocelis subcapitata* SAG 61.81 (formerly *Pseudokirchneriella subcapitata*) Study code: W-03-21 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna, Ecotoxicology Research Group GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 5.1.2/06 (filed as KCP 10.6.2/02)	Arendarczyk A.	2021	JMD – HER 387 OD Terrestrial Plant Test: Vegetative Vigour Test Study code: G-07-21 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna, Ecotoxicology Research Group GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 5.1.2/07 (filed as KCP 10.2.1.2/03)	Czarnecka M.	2021	JMD – HER 387 OD *Chironomus* sp., Acute Immobilisation Test Study code: W-01-21 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna, Ecotoxicology Research Group GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 5.1.2/08 (filed as KCP 10.2.1.4/01)	Czarnecka M.	2021	JMD – HER 387 OD *Lemna gibba* CPCC 310, Growth inhibition test Study code: W-04-21 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna, Ecotoxicology Research Group GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 5.1.2/09 (filed as KCP 10.2.1.4/02)	Turek-Lipka T.	2021	JMD – HER 387 OD Water-sediment *Myriophyllum spicatum* toxicity test Study code: W-05-21 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna, Ecotoxicology Research Group GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
Section B6: Mammalian Toxicology							

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
7.3/01	Nabanita Sam	2023	*IN VITRO* percutaneous dermal absorption study of 2,4-D 2-EHE, formulated as JMD-HER 387 OD through human skin Study code: AG-G1341 Eurofins Advinus Agrosciences Services India Private Limited GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
Section B8: Environmental Fate							
KCP 9.2.4.1/01	Tabor E	2022	JMD-HER 387 OD Calculation of predicted environmental concentrations of 2,4-D and iodosulfuron-methyl-sodium in groundwater using the FOCUS groundwater scenarios (PEARL, PELMO, MACRO) Company Report No: EST/17/2022 Source: ESTICON Sp. z o.o., Poland GLP: No Published: No	N	N	Not relevant	Pestila*
KCP 9.2.5/01	Tabor E	2022	JMD-HER 387 OD Calculation of Predicted Environmental Concentrations of 2,4-D and iodosulfuron-methyl-sodium in surface water using the FOCUS scenarios (Steps 1, 2, 3 and 4) Company Report No: EST/18/2022 Source: ESTICON Sp. z o.o., Poland GLP: No Published: No	N	N	Not relevant	Pestila*
Section B9: Ecotoxicology							
KCP 10.2.1.1/01	[redacted]	1984	Measurement of median lethal dose as a rapid indication of contaminant toxicity to fish [redacted] GLP: No Published: Yes	Y	N	Not relevant	NR
KCP 10.2.1.2/01	Kühn, R. *et al.*	1989	Results of the harmful effects of selected water pollutants (anilines, phenols, aliphatic compounds) to D*aphnia magna* Wat. Res. Vol. 23, No. 4, pp. 495-499, 1989 GLP: No Published: Yes	Y	N	Not relevant	NR

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 10.2.1.2/02	Czarnecka M	2021	JMD-HER 387 OD *Daphnia magna*, Acute Immobilisation Test Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study code: W-02-21 GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 10.2.1.2/03	Czarnecka M	2021	JMD-HER 387 OD *Chironomus* sp., Acute Immobilisation Test Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study code: W-01-21 GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 10.2.1.3/01	Cowgill, U. *et al.*	1989	Toxicity of nine benchmark chemicals to *Skeletonema costatum*, a marine diatom Environmenlal Toxicology and Chemisrry, Vol. 8, pp. 451-455, 1989 GLP: No Published: Yes	N	N	Not relevant	NR
KCP 10.2.1.3/02	Czarnecka M	2022	JMD-HER 387 OD *Raphidocelis subcapitata* SAG 61.81 (formerly *Pseudokirchneriella subcapitata*), Growth inhibition test Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study Code: W-03-21 GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 10.2.1.4/01	Czarnecka M	2021	JMD-HER 387 OD *Lemna gibba*, Growth Inhibition Test Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study Code: W-04-21 GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 10.2.1.4/02	Turek-Lipka T	2021	JMD-HER 387 OD Water-sediment *Myriophyllum spicatum* toxicity test Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study Code: W-05-21 GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 10.3.1.1.1/01	Meler, A	2021	Honeybees, Acute Oral Toxicity Test of the test item JMD-HER 387 OD according to OECD Guideline 213 SORBBOLAB Research Laboratory LLC, Poznań, Poland Study Code: 0005/0097/E GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 10.3.1.1.1/02	Orzechowska U	2021	Bumblebee, Acute Oral Toxicity Test of the test item JMD-HER 387 OD according to OECD guideline 247 SORBBOLAB Research Laboratory LLC, Poznań, Poland Study Code: 0005/0101/E GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 10.3.1.1.2/01	Meler, A	2021	Honeybees, Acute Contact Toxicity Test of the test item JMD-HER 387 OD according to OECD Guideline 214 SORBBOLAB Research Laboratory LLC, Poznań, Poland Study code: 0005/0098/E GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 10.3.1.1.2/02	Orzechowska U	2021	Bumblebee, Acute Contact Toxicity Test of the test item JMD-HER 387 OD according to OECD guideline 246 SORBBOLAB Research Laboratory LLC, Poznań, Poland Study code: 0005/0104/E GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 10.3.1.2/01	Orzechowska U	2021	Honey bee, chronic oral toxicity test of the test item JMD-HER 387 OD according to OECD 245 Guideline SORBBOLAB Research Laboratory LLC, Poznań, Poland Study code: 0005/0100/E GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 10.3.1.4/01	Orzechowska U	2021	Honey Bee Larval Toxicity Test following Repeated Exposure to the test item JMD-HER 387 OD according to OECD GD 239 ENV/JM/MONO(2016)34 SORBBOLAB Research Laboratory LLC, Poznań, Poland Study code: 0005/0103/E GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 10.3.2.2/01	Knapik M	2021	An extended laboratory test for evaluating the effects of JMD-HER 387 OD on the parasitic wasp, *Aphidius rhopalosiphi* (De Stefani-Perez); Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study Code: B-41-21 GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 10.3.2.2/02	Knapik M	2021	An extended laboratory test for evaluating the effects of JMD-HER 387 OD on the predatory mite, *Typhlodromus pyri* (Sch.); Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study Code: B-40-2 GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 10.3.2.2/02	Knapik M	2021	Amendment No. 1 to the Final Report An extended laboratory test for evaluating the effects of JMD-HER 387 OD on the predatory mite, Typhlodromus pyri (Sch.). Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study Code: B-40-2 GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 10.3.2.2/03	Knapik M	2021	An extended laboratory test for evaluating effects of JMD-HER 387 OD on the ladybird beetle, *Coccinella septempunctata* (L.) Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study code: B-39-21 GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 10.3.2.2/04	Mautino G	2023	Effects of JMD-HER 387 OD (2,4-D-2EH + iodosulfuronmethylsodi-um) on the rove beetle Aleochara bilineata – extended laboratory test SAGEA Centro di Saggio s.r.l. Study code: 1185.H.SAG22/r GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 10.4.1.1/01	Arendarczyk A	2021	JMD-HER 387 OD Earthworm reproduction test (*Eisenia andrei*) Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study code: G-03-21 GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 10.4.2.1/01	Gierbuszewska A	2021	JMD-HER 387 OD Collembolan (*Folsomia candida*) Reproduction Test Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study code: G-04-21 GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 10.4.2.1/02	Gierbuszewska A	2021	Predatory mite (*Hypoaspis (Geolaelaps) aculeifer*) reproduction test in soil Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study code: G-05-21 GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 10.5/01	Pieczka P	2021	JMD-HER 387 OD Soil Microorganisms: Nitrogen Transformation Test Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study code: G-06-21 GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*
KCP 10.6.2/01	Pieczka P	2021	JMD-HER 387 OD Terrestrial Plant Test: Seedling Emergence and Seedling Growth Test Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study code: G-08-21 GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner
KCP 10.6.2/02	Arendarczyk A	2021	JMD-HER 387 OD Terrestrial Plant Test: Vegetative Vigour Test Institute of Industrial Organic Chemistry, Branch Pszczyna, Poland Study code: G-07-21 GLP: Yes Published: No	N	Y	New data for formulation, not previously submitted or evaluated. Study conducted in compliance with GLP.	Pestila*

* Pestila Spółka z ograniczoną odpowiedzialnością.

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

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data pro-tection claimed Y/N	Justification if data protection is claimed	Owner
Section B5: Analytical Methods							
2,4-D							
KCP 5.2	Gesell J.T., Li Q.	2013a	Method validation study for the determination of residues of (2,4-dichlorophenoxy)acetic acid and its esters and conjugates in agricultural commodities using solid-phase extraction and liquid chromatography with tandem mass spectrometry detection. Dow AgroSciences LLC, Indianapolis, USA Report No. 130886 GLP Unpublished	N	N	Not applicable	EU 2,4-D Task Force
KCP 5.2	Gesell J.T., Li Q.	2013a	Revised Final Report – Method validation study for the determination of residues of (2,4- dichlorophenoxy)acetic acid in agricultural commodities using solid-phase extraction and liquid chromatography with tandem mass spectrometry detection. Dow AgroSciences LLC, Indianapolis, USA	N	N	Not applicable	EU 2,4-D Task Force

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data pro-tection claimed Y/N	Justification if data protection is claimed	Owner
			Report No. 110357 GLP Unpublished				
KCP 5.2	Bendler S.E.	2013 b	Independent laboratory validation of an analytical method for the determination of 2,4-D and its esters in crop matrices. Report No. 205G585 EPL Bio Analytical Services GLP Unpublished	N	N	Not applicable	EU 2,4-D Task Force
KCP 5.2	Bendler S.E.	2013 b	Independent laboratory validation of an analytical method for the determination of 2,4-D and its esters in crop matrices Dow AgroSciences LLC, Indianapolis, USA EPL Bio Analytical Services Report No. 205G585 DAS Protocol No. 130888 GLP Unpublished	N	N	Not applicable	EU 2,4-D Task Force
KCP 5.2	Langridge G.	2012	Independent laboratory validation of an analytical method for the determination of (2,4-dichlorophenoxy)acetic acid in crops Report No. CEMS-5229 CEM Analytical Services, UK GLP Unpublished	N	N	Not applicable	EU 2,4-D Task Force
KCP 5.2	Gesell J.T., Li Q.	2013 b	Method validation study for the determination of residues of (2,4-dichlorophenoxy)acetic acid and its esters in bovine and poultry tissues using solid-phase extraction and liquid chromatography with tandem mass spectrometry detection. Report No. 130887 Dow AgroSciences LLC, Indianapolis, USA	N	N	Not applicable	EU 2,4-D Task Force

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data pro-tection claimed Y/N	Justification if data protection is claimed	Owner
			GLP Unpublished				
KCP 5.2	Gesell J.T., Li Q.	2013 b	Revised Final Report – Method validation study for the determination of residues of (2,4-dichlorophenoxy) acetic acid in bovine and poultry tissues using solid-phase extraction and liquid chromatography with tandem mass spectrometry detection. Dow AgroSciences LLC, Indianapolis, USA Report No. 110468 GLP Unpublished	N	N	Not applicable	EU 2,4-D Task Force
KCP 5.2	Bendler S.E.	2013 a	Independent laboratory validation of an analytical method for the determination of 2,4-D and its esters in bovine and poultry tissues. Report No. 205G584 EPL Bio Analytical Services. GLP Unpublished	N	N	Not applicable	EU 2,4-D Task Force
KCP 5.2	Garcia-Alix, M	2012 a	Independent laboratory validation of an analytical method for the determination of (2,4-dichlorophenoxy)acetic acid in animal matrices. CEMS Analytical Services, UK Study Code CEMS-5230 DAS Protocol No. 110763 GLP Unpublished	N	N	Not applicable	EU 2,4-D Task Force
KCP 5.2	Gesell J.T.	2012 a	Method validation study for the determination of residues of (2,4-dichlorophenoxy) acetic acid and its metabolites in soil. Report No. 110503 Dow AgroSciences LLC, Indianapolis, USA GLP Unpublished	N	N	Not applicable	EU 2,4-D Task Force
KCP 5.2	Gesell J.T.	2012	Method validation study for the determination of residues of (2,4-	N	N	Not applicable	EU 2,4-D

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data pro-tection claimed Y/N	Justification if data protection is claimed	Owner
		b	dichlorophenoxy)acetic acid and its metabolites in surface water, ground water and drinking water. Report No. 110504 Dow AgroSciences LLC, Indianapolis, USA GLP Unpublished				Task Force
KCP 5.2	Garcia-Alix M.	2012	Independent laboratory validation of an analytical method for the determination of (2,4-dichlorophenoxy)acetic acid, 2,4-dichlorophenol, 4-chlorophenol and 2,4-dichloroanisole in water. Report No. CEMS-5324 CEM Analytical Services, UK GLP Unpublished	N	N	Not applicable	EU 2,4-D Task Force
KCP 5.2	Class T.	2011	2,4-D: Development and validation of an analytical method for the determination of 2,4-D in air. Report No. P 2166 G PTRL Europe GmbH, Germany GLP Unpublished	N	N	Not applicable	EU 2,4-D Task Force
KCP 5.2	Senciuc M.	2011	Development and validation of an analytical method for the determination of 2,4-D in body fluid(s). Report No. P 2167 G PTRL Europe GmbH, Germany GLP Unpublished	N	N	Not applicable	EU 2,4-D Task Force
Iodosulfuron-methyl sodium							
KCP 5.2	Stuke S., Ballmann C.	2013	Analytical method 01360 for the determination of amidosulfuron, metsulfuron-methyl, iodosulfuron-methyl-sodium, mesosulfuron-methyl, and foramsulfuron in samples from plant origin by HPLC-MS/MS	N	N	Not applicable	Bayer CropScience

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data pro-tection claimed Y/N	Justification if data protection is claimed	Owner
			Bayer CropScience Report No.: MR-13/007 Edition Number: M-455564-01-1 GLP Unpublished				
KCP 5.2	Konrad S.	2013	Independent lab validation of BCS method 01360 for the determination of residues of amidosulfuron, metsulfuron-methyl, iodosulfuron-methyl-sodium, mesosulfuron-methyl and foramsulfuron in samples from plant origin by HPLC-MS/MS Currenta GmbH & Co. OHG, Leverkusen, Germany BCS Report No.: 2013/0060/01 Edition Number: M-470160-01-1 GLP Unpublished	N	N	Not applicable	Bayer CropScience
KCP 5.2	Stuke S.	2015	Cross validation of enforcement method 01360 for the determination of sulfonylureas vs. extraction procedure applied in ^{14}C-metabolism studies using incurred residues in plant matrices analysed by HPLC-MS/MS GLP Unpublished	N	N		Bayer CropScience
KCP 5.2	Freitag T.	2013	Amendment no. 0001 to report no.: MR-08/138 - Analytical Method 01115 for the determination of residues of amidosulfuron,iodosulfuron-methyl-sodium, metsulfuron-methyl, mesosulfuron-methyl and foramsulfuron in soil by HPLC-MS/MS Bayer CropScience Report No.: M-310074-03-1 Edition Number: M-310074-03-1 GLP Unpublished	N	N	Not applicable	Bayer CropScience

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data pro-tection claimed Y/N	Justification if data protection is claimed	Owner
KCP 5.2	Krebber R.; Braune M.	2013	Analytical method 01387 for the determination of various pesticides in drinking and surface water by HPLC-MS/MS Bayer CropScience Report No.: MR-13/085 Edition Number: M-466732-01-1 GLP Unpublished	N	N	Not applicable	Bayer CropScience
KCP 5.2	Stanislowski T.	2013	Independent laboratory validation of BCS analytical methods 01333 and 01387 for determination of various pesticides in surface water by Di-HPLC-MS/MS PTRL Europe, Ulm, Germany Bayer CropScience Report No.: P3117 G Edition Number: M-470714-02-1 GLP Unpublished	N	N	Not applicable	Bayer CropScience
KCP 5.2	Reichert N.	2000	Development and validation of an analytical method for the determination of iodosulfuron methyl sodium in air Institut Fresenius Chem.und Biolog. Lab. AG, Taunusstein, Germany Bayer CropScience Report No.: IF-100/21283-00, Edition Number: M-199299-02-1 GLP Unpublished	N	N	Not applicable	Bayer CropScience
KCP 5.2	Everitt S. L.	1998 Amended: 2000-03-13)	Validation and analytical method for the determination of AE F115008 in air AE F115008 active substance Code: AE F115008 Report No.: C001382 Doc No. M-181311-03-1 GLP Unpublished	N	N	Not applicable	Bayer CropScience

Section B7: Metabolism and Residues							
2,4-D							N
KCA 6.1/01	Barker W.	1995	Determination of Frozen Storage Stability for 2.4-Dichlorophenoxy Acetic Acid (2,4-D) in/on Crops Report/file No EN-CAS Project #93-0044 GLP: Y Published: N	N	N	Not applicable	European Union 2,4-D Task Force 2012
KCA 6.1/02	[redacted]	1996	2,4-D: Magnitude of Residue in Meat and Milk of Lactating Dairy Cows Report/file No PTRL Project No 886 GLP: Y Published: N	N	N	Not applicable	European Union 2,4-D Task Force 2012
KCA 6.1/03	Rawle N.W.	2002	Storage Stability of Residues of 2,4-DCP, 2,4-D, 2,4-DB and 2,4-DP-p in Cereal Whole Plant, Grain and Straw Report No. CEMR-1397 (AHM R 99 142) GLP: Y Published: N	N	N	Not applicable	European Union 2,4-D Task Force 2012
KCA 6.2.1/01	Smith G.A.	1991	Metabolism of 14C-(2,4-Dichlorophenoxy)acetic acid, Dimethylamine Salt in Apples ABC Laboratories, Inc. Report N°38072 GLP: Y Published: N	N	N	Not applicable	European Union 2,4-D Task Force 2012
KCA 6.2.1/02	Puglis, J.M. Smith, G.	1992	Metabolism of Uniformly Ring Labeled [14C] 2,4-Dichlorophenoxyacetic Acid 2-Ethylhexyl Ester in Potatoes ABC Laboratories, Inc. Report N°38075 GLP: Y Published: N	N	N	Not applicable	European Union 2,4-D Task Force 2012
KCA 6.2.1/03	Bristol et al.	1982	Determination of Free and Hydrolyzable Residues of 2,4-Dichlorophenoxyacetic Acid and 2,4-Dichlorophenol in Potatoes	N	N	Not applicable	SAN

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data pro-tection claimed Y/N	Justification if data protection is claimed	Owner
			J. Agric. Food Chem. 1982, 30, 137-144 GLP: N Published: Y				
KCA 6.2.1/04a	Puvanesarajah V.	1992	Metabolism of 14C-Ring Labeled 2,4-Dichlorophe- noxyacetic Acid 2-Ethylhexyl Ester in Wheat ABC Laboratories, Inc. Report N°38076 GLP: Y Published: N	N	N	Not applicable	European Union 2,4-D Task Force 2012
KCA 6.2.1/04b	Puvanesarajah V.	1992	Supplemental Data for the Study "Metabolism of Uniformly 14C-Ring Labeled 2,4-Dichlorophenoxy- acetic Acid 2-Ethylhexyl Ester in Wheat" ABC Laboratories, Inc. Report N°38076-01 GLP: Y Published: N	N	N	Not applicable	European Union 2,4-D Task Force 2012
KCA 6.2.1/05	Grover et al.	1985	Fate of 2,4-D Iso-octyl Ester after Application to a Wheat Field J. Environ. Qual. 14, 203-210 GLP: N Published: Y	N	N	Not applicable	SAN
KCA 6.2.1/06	Feung C.S.	1978	Comparative metabolic fate of 2,4-Dichloropheno- xyacetic Acid in Plants and Plant Tissue Culture J. Agric. Food Chem.,Vol. 26, N°5, pp 1064-1067. GLP: N Published: Y	N	N	Not applicable	European Union 2,4-D Task Force 2012
KCA 6.2.2-6.2.5/01	[redacted]	1993 1994	Metabolism of Uniformly 14C-ring Labeled 2,4-Dichlorophenoxyacetic acid in Lactating Goats [redacted] Report 40630	Y	N	Not applicable	European Union 2,4-D Task

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data pro-tection claimed Y/N	Justification if data protection is claimed	Owner
			and supplementary report Supplemental Data for the Study, Metabolism of Uniformly 14C-ring Labeled 2,4-Dichlorophenoxyacetic acid in Lactating Goats [redacted] Report 40630-01 GLP: Y Published: N				Force 2012
KCA 6.2.2-6.2.5/02	[redacted]	1992	Metabolism of Uniformly Ring Labeled [14C] 2,4-Dichloro phenoxyacetic Acid in Poultry [redacted] Report 38077 GLP: Y Published: N	Y	N	Not applicable	European Union 2,4-D Task Force 2012
KCA 6.2.2-6.2.5/03	Bjerke et al.	1972	Residue study of phenoxy herbicides in milk and cream. J. Agric. Food Chem., Vol. 20, N°5, 1972, pp 963-967 GLP: N Published: Y	N	N	Not applicable	European Union 2,4-D Task Force 2012
KCA 6.2.2-6.2.5/04	Clark et al.	1975	Residues of chlorophenoxy acid herbicides and their phenolic metabolites in tissues of sheep and cattle. J. Agric. Food Chem., Vol. 23, N°3, 1975, pp 573-578 GLP: N Published: Y	N	N	Not applicable	European Union 2,4-D Task Force 2012
KCA 6.2.2-6.2.5/05	Leng M.L.	1972	Residues in milk and meat and safety to livestock from the use of phenoxy herbicides in pasture and rangeland Down to earth, Vol.28, N°1, Summer 1972 pp 12-20. GLP: N Published: Y	N	N	Not applicable	European Union 2,4-D Task Force

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data pro-tection claimed Y/N	Justification if data protection is claimed	Owner
							2012
KCA 6.3/01a	Buchta A. et al.	2006	Aminopielik Standard 600 SL. Determination of active substance residues in corn, straw and soil Institute of Organic Industry C/01/05 GLP: Y Published: N	N	N	Not applicable	European Union 2,4-D Task Force 2012
KCA 6.3/01b	Zmijowska A.	2010	Amendment No 1 to the final report Aminopielik Standard 600 SL. Determination of residues of active substance in corn, straw and soil Institute of Industrial Organic Chemistry C/01/05 GLP: Y Published: N	N	N	Not applicable	European Union 2,4-D Task Force 2012
KCA 6.3/01c	Winiarska K.	2010	Amendment No 2 to the final report Aminopielik Standard 600 SL. Determination of residues of active substance in corn, straw and soil Institute of Industrial Organic Chemistry C/01/05 GLP: Y Published: N	N	N	Not applicable	European Union 2,4-D Task Force 2012
KCA 6.3/02	Różalski K.	2008 a	Residues of 2,4-D and Dicamba after one application of Aminipielik D 450 SL in winter wheat, one site in Poland 2007 GAB Poland Sp. z.o.o. 20074502/PL1-FPWW GLP: Y Published: N	N	N	Not applicable	European Union 2,4-D Task Force 2012
KCA 6.3/03	Klimmek S. Tanguy M.	2011	Determination of residues of 2,4-D in spring wheat after one application of 2,4-D DMA 600 g/L and 2,4-D 2 EHE-600 at 4 sites in Northern Europe 2010 Eurofins Agrosience Report Number: S10-02109	N	N	Not applicable	European Union 2,4-D Task Force

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data pro-tection claimed Y/N	Justification if data protection is claimed	Owner
			GLP: Y Published: N				2012
KCA 6.3/04	Pfarl C.	1993	Residues of 2,4-D in cereals treated with 1.0 l Dicopur fluid/ha Agrolinz Report N°1166 GLP: Y Published: N	N	N	Not applicable	European Union 2,4-D Task Force 2012
KCA 6.3/05	Pfarl C.	1993	Residues of 2,4-D in cereals treated with 1.1 L Spritz Hormin 600/ha and 1.5 L U 46 D-Fluid Agrolinz Report No. 1153 GLP: Y Published: N	N	N	Not applicable	European Union 2,4-D Task Force 2012
KCA 6.3/06	Różalski K.	2008 c	Residues of 2,4-D and Dicamba after one application of Aminipielik D 450 SL in spring barley, one site in Poland 2007 GAB Poland Sp. z.o.o. Report Number: 20074502/PL1-FPSH GLP: Y Published: N	N	N	Not applicable	European Union 2,4-D Task Force 2012
KCA 6.3/07	Klimmek S. Tanguy M.	2012	Determination of residues of 2,4-D in maize and processed fraction silage after one application of 2,4-D DMA 600 and 2,4-D 2EHE 600 at 4 sites in Northern Europe 2010 Eurofins Agrosience Report Number: S10-02224 GLP: Y Published: N	N	N	Not applicable	European Union 2,4-D Task Force 2012
KCA 6.3/08	Galy H.	2000	Residue levels of MCPA potassium salt & 2,4-D dimethylamine salt in Maize following postemergence treatment with the preparations Agroxone or Marks 2,4-D Amine under Field conditions in Europe in	N	N	Not applicable	European Union 2,4-D

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data pro-tection claimed Y/N	Justification if data protection is claimed	Owner
			1999- Field Phase Marks 2,4-D Amine Report No. R9033 TER2 /(AHM R 99 302) GLP: Y Published: N				Task Force 2012
KCA 6.3/09	Nagra B.S.	2001	Determination of Residues of 2,4-D and 2,4-DCP in Maize Samples Report No. CEMR-1167 (AHM R 99 321 GLP: Y Published: N	N	N	Not applicable	European Union 2,4-D Task Force 2012
KCA 6.3/10	Old J. & Venuti J.	2001 b	2,4-D Dimethylamine Salt Residue Decline in Cereals in Southern Europe: Field Phase Report No. AHM R 99 111 GLP: Y Published: N	N	N	Not applicable	European Union 2,4-D Task Force 2012
KCA 6.3/11	Rawle N M.	2002	Determination of Residues of 2,4-D and 2,4-DCO in Wheat and Barley Samples Report No. AHM R 99 125 GLP: Y Published: N	N	N	Not applicable	European Union 2,4-D Task Force 2012
Iodosulfuron-methyl-sodium							
KCA 6.1 /01	Wrede, A.	1998 a	Stability of AE F115008 in wheat grain during deep freeze storage of 24 months Hoechst Schering AgrEvo GmbH, Frankfurt am Main, Germany Bayer CropScience, Report No.: C001041, Edition Number: M-181689-01-1 EPA MRID No.: 45108918	N	N	Not applicable	Bayer CropScience

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data pro-tection claimed Y/N	Justification if data protection is claimed	Owner
			Date: 1998-10-05 GLP/GEP: yes unpublished				
KCA 6.1 /02	Wrede, A.	1998b	Stability of AE F115008 in wheat straw during deep freeze storage of 24 months (interim report) Code: AE F115008 Hoechst Schering AgrEvo GmbH, Frankfurt am Main, Germany Bayer CropScience, Report No.: C000983, Report includes Trial Nos.: CR96/018 Edition Number: M-181582-01-1 Date: 1998-09-30 GLP/GEP: yes unpublished	N	N	Not applicable	Bayer CropScience
KCA 6.1 /03	Wrede, A.	1998c	Stability of AE F115008 in wheat shoot during deep freeze storage of 24 months (interim report) Code: AE F115008 Hoechst Schering AgrEvo GmbH, Frankfurt am Main, Germany Bayer CropScience, Report No.: C000985, Report includes Trial Nos.: CR96/017 Edition Number: M-181587-01-1 Date: 1998-09-30 GLP/GEP: yes unpublished	N	N	Not applicable	Bayer CropScience
KCA 6.1 /04	Kaussmann, M.	2019	Storage stability of foramsulfuron, iodosulfuron-methyl and their metabolites AE F153745, AE F092944, AE F059411 and AE 0031838 in wheat (grain, green material, straw) for 24 months - Inter-im report Report No.: P642176501, Edition Number: M-635482-02-1 Bayer AG, Crop Science Division, Monheim, Germany ... amended: 2019-04-23 GLP/GEP: Yes unpublished	N	N	Not applicable	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data pro-tection claimed Y/N	Justification if data protection is claimed	Owner
KCA 6.2.1 /01	Braun, P. J.; Brueckner, H.; Voelkl, S.	1998	Metabolism in wheat (Triticum aestivum) after treatment at a nominal rate of 1 x 20 g a.s./ha 2-triazinyl-14C-AE F115008 Hoechst Schering AgrEvo GmbH, Frankfurt am Main, Germany Bayer CropScience, Report No.: C001497, Edition Number: M-182772-01-1 EPA MRID No.: 45108921 Date: 1998-11-16 GLP/GEP: yes unpublished	N	N	Not applicable	Bayer CropScience
KCA 6.2.1 /02	Tarara, G.; Brueckner, H.	1998	Metabolism in wheat (Triticum aestivum) after single treatment at a nominal rate of 20 g a.s./ha U-phenyl-14C-AE F115008 Hoechst Schering AgrEvo GmbH, Frankfurt am Main, Germany Bayer CropScience, Report No.: A67671, Edition Number: M-148037-01-1 EPA MRID No.: 45108922 Date: 1998-11-04 GLP/GEP: yes unpublished	N	N	Not applicable	Bayer CropScience
KCA 6.2.2 /01	-	1999	Poultry - Metabolism, distribution and nature of the residues in eggs and edible tissues Code: (14C)-AE F115008 Bayer CropScience, Report No.: C005548, Report includes Trial Nos.: TOX95291 Edition Number: M-192269-01-1 EPA MRID No.: 45108923 Date: 1999-10-11 GLP/GEP: yes unpublished	Y	N	Not applicable	Bayer CropScience

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data pro-tection claimed Y/N	Justification if data protection is claimed	Owner
KCA 6.2.3 /01	-	1999	Ruminant - Metabolism, distribution and nature of residues in milk and edible tissues (14C) AE F115008 Code: AE F115008 Bayer CropScience, Report No.: C005678, Report includes Trial Nos.: TOX95290 Edition Number: M-192483-01-1 EPA MRID No.: 45108924 Date: 1999-12-15 GLP/GEP: yes unpublished	Y	N	Not applicable	Bayer CropScience
KCA 6.3 /01	Helgers, A.	1998a	AE F115008 00 WG20 A103 WG (wettable granule) 200 g/kg in tank mix with two different formulations of the safener AE F107892 (AE F107892 00 WG15 A101 and AE F107892 00 EC10 A102) Residue trials on wheat to determine residue decline of AE F115008 and AE F107892 following 1 application; European Union (northern zone) 1995 Hoechst Schering AgrEvo GmbH, Frankfurt am Main, Germany Bayer CropScience, Report No.: A56709, Edition Number: M-140498-01-1 Date: 1998-05-18 GLP/GEP: yes unpublished	N	N	Not applicable	Bayer CropScience
KCA 6.3/02	Helgers, A.	1998d	AE F115008 and AE F107892 EG (emulsifiable granule) and WG (water dispersible granule) 50 and 150 g/kg Code: AE F115008 02 EG20 A401 and Code: AE F115008 02 WG20 A903 Residue trials on cereals with two different coformulations to determine a residue decline of AE F115008 and AE F107892 following 1 application; European Union (Northern zone), 1996 Hoechst Schering AgrEvo GmbH, Frankfurt am Main, Germany Bayer CropScience,	N	N	Not applicable	Bayer CropScience

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data pro-tection claimed Y/N	Justification if data protection is claimed	Owner
			Report No.: A59541, Edition Number: M-143212-01-1 Date: 1998-05-18 GLP/GEP: yes unpublished				
KCA 6.3/03	Freitag, T.	2004 b	Determination of residues of iodosulfuron-methyl-sodium and mefenpyr-diethyl in/on wheat following spray application of AE F115008 02 OD35 AI 400 OD and AE F11 5008 02 1L35 A2 400 OD in te field in Sweden, Germany, great Britan and Northern France Bayer CropScience Report No.: RA-2615/06 Report includes Trial Nos.: 0225-03; 0492-03; 0493-03; 0494-03; R20030225/8; R20030492/7; R20030493/5; R20030494/3 Edition Number: M-231310-02-1 Date: 2004-05-10 “Amended: 2007-01-16” GLP/GEP: yes unpublished	N	N	Not applicable	Bayer CropScience
KCA 6.3/04	Helgers, A.	1998 b	AE F115008 00 WG20 A103 WG (wettable granule) 200 g/kg in tank mix with two different formulations of the safener AE F107892 (AE F107892 00 WG15 A101 and AE F107892 00 EC10 A102) Residue trials on wheat to determine residue decline of AE F115008 and AE F107892 following 1 application; European Union (southern zone), 1995 Hoechst Schering AgrEvo GmbH, Frankfurt am Main, Germany Bayer CropScience, Report No.: A56708, Edition Number: M-140497-01-1 Date: 1998-05-18 GLP/GEP: yes unpublished	N	N	Not applicable	Bayer CropScience
KCA	Helgers, A.	1998	AE F115008 and AE F107892 EG (emulsifiable granule) and WG	N	N	Not applicable	Bayer

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data pro-tection claimed Y/N	Justification if data protection is claimed	Owner
6.3/05		c	(water dispersible granule) 50 and 150 g/kg Code: AE F115008 02 EG20 A401 and Code: AE F115008 02 WG20 A903 Residue trials on cereals with two different coformulations to determine a residue decline of AE F115008 and AE F109872 following 1 application; European Union (southern zone) 1996 Hoechst Schering AgrEvo GmbH, Frankfurt am Main, Germany Bayer CropScience, Report No.: A59542, Edition Number: M-143213-02-1 Date: 1998-03-27 “Amended: 1999-06-11” GLP/GEP: yes unpublished				CropScience
KCA 6.3/06	Davies, P.	2002	Residues in wheat European Union (Southern zone) 2001 Biopower® Iodosulfuron-methyl-sodium (5 %) Meenpyr-diethyl (15 %) Code: AE F11 5008 02 WG20 B301 Aventis CropScience GmbH, Frankfurt am Main, Germany Bayer CropScience, Report No.: C020875 Edition Number: M-210317-01-1 Date: 2002-07-09 GLP/GEP: yes unpublished	N	N	Not applicable	Bayer CropScience
KCA 6.3/07	Freitag, T.	2004 a	Determination of residues of iodosulfuron-methyl-sodium and mefenpyr-diethyl in/on wheat following spray application of AE F11 5008 02 1L35 A2 400 OD in te field in Italy, Spain and Southern France Bayer CropScience Report No.: RA-2616/03 Report includes Trial Nos.: 0226-03; 0489-03; 0490-03; 0491-03; R20030226/6; R20030489/7; R20030490/0; R20030491/9 Edition Number: M-231305-02-1	N	N	Not applicable	Bayer CropScience

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			Date: 2004-05-10 “Amended: 2007-01-16” GLP/GEP: yes unpublished				
KCA 6.6.1 /01	Buerkle, L. W.	1998	Residues in rotated crops sown 29 days after application to bare soil at a rate of 20 g a.s./ha AE F115008-triazinyl 2-14C Hoechst Schering AgrEvo GmbH, Frankfurt am Main, Germany Bayer CropScience, Report No.: C000833, Edition Number: M-181318-01-1 EPA MRID No.: 45108927 Date: 1998-08-25 GLP/GEP: yes unpublished	N	N	Not applicable	Bayer CropScience
KCA 6.6.1 /02	Buerkle, L. W.; Kellner, G.; Voelkl, S.	1998 a	Residues in rotated crops sown 120 days after application to bare soil at a rate of 20 g a.s./ha AE F115008-triazinyl 2-14C Hoechst Schering AgrEvo GmbH, Frankfurt am Main, Germany Bayer CropScience, Report No.: C001454, Edition Number: M-182667-01-1 EPA MRID No.: 45108928 Date: 1998-10-06 GLP/GEP: yes unpublished	N	N	Not applicable	Bayer CropScience
KCA 6.6.1 /03	Buerkle, L. W.; Kellner, G.; Voelkl, S.	1998 b	Residues in rotated crops sown 1 year after application to bare soil at a rate of 20 g a.s./ha AE F115008-triazinyl 2-14C Hoechst Schering AgrEvo GmbH, Frankfurt am Main, Germany Bayer CropScience, Report No.: C001331, Edition Number: M-182374-01-1 EPA MRID No.: 45108929 Date: 1998-10-06	N	N	Not applicable	Bayer CropScience

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			GLP/GEP: yes unpublished				
KCA 6.6.1 /04	Meyer, B. N.; Tull, P. J.	1999	Uptake of [14C]-AE F115008 residues from soil by rotational wheat, soybeans and sugarbeets under confined conditions AgrEvo USA Company, Environmental Chemistry, Pikeville, NC, USA Bayer CropScience, Report No.: B002595, Report includes Trial Nos.: 511BY Edition Number: M-238341-01-1 EPA MRID No.: 45108930 Date: 1999-12-09 GLP/GEP: yes unpublished	N	N	Not applicable	Bayer CropScience

The following tables are to be completed by MS

List of data submitted by the applicant and not relied on

Data point	Author(s)	Year	Title Company Report No. Source (where different from company) GLP or GEP status Published or not	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner

List of data relied on and 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	Verte-brate study Y/N	Data protection claimed Y/N	Justification if data protection is claimed	Owner