

# **FINAL REGISTRATION REPORT**

## **Part A**

### **Risk Management**

**Product code: TERBUT 500 SC**

**Product name(s): La Zina 500 SC; Tekno 500 SC**

**Chemical active substance(s):**

**Terbuthylazine, 500 g/L**

### **Central Zone**

**Zonal Rapporteur Member State: Poland**

### **National Addendum**

**Applicant: Innvigo Sp. z o.o.**

**Submission date: November 2023**

**MS Finalisation date: December 2023; March 2024**

## Version history

When	What
12/2023	ZRMs evaluated dRR submitted by Applicant for the extension of registration.
03/2024	Final Registration Report

## Table of Contents

<b>1</b>	<b>Details of the application .....</b>	<b>5</b>
1.1	Application background.....	5
1.2	Letters of Access .....	5
1.3	Justification for submission of tests and studies .....	5
1.4	Data protection claims .....	5
<b>2</b>	<b>Details of the authorization decision .....</b>	<b>6</b>
2.1	Product identity .....	6
2.2	Conclusion .....	7
2.3	Substances of concern for national monitoring .....	7
2.4	Classification and labelling.....	7
2.4.1	Classification and labelling under Regulation (EC) No 1272/2008 .....	7
2.4.2	Standard phrases under Regulation (EU) No 547/2011.....	8
2.4.3	Other phrases (according to Article 65 (3) of the Regulation (EU) No 1107/2009) .....	8
2.5	Risk management.....	9
2.5.1	Restrictions linked to the PPP.....	9
2.5.2	Specific restrictions linked to the intended uses .....	9
2.6	Intended uses (only NATIONAL GAP) .....	10
<b>3</b>	<b>Background of authorization decision and risk management .....</b>	<b>13</b>
3.1	Physical and chemical properties (Part B, Section 2) .....	13
3.2	Efficacy (Part B, Section 3) .....	13
3.3	Methods of analysis (Part B, Section 5).....	23
3.3.1	Analytical method for the formulation .....	23
3.3.1.1	Determination of the active substances in the plant protection product .....	23
3.3.1.2	Determination of relevant impurities .....	24
3.3.2	Analytical methods for residues.....	27
3.4	Mammalian toxicology (Part B, Section 6) .....	27
3.4.1	Acute toxicity.....	28
3.4.2	Operator exposure .....	28
3.4.3	Worker exposure .....	28
3.4.4	Bystander and resident exposure .....	29
3.5	Residues and consumer exposure (Part B, Section 7).....	29
3.5.1	Residues .....	29
3.5.2	Consumer exposure.....	31
3.6	Environmental fate and behaviour (Part B, Section 8) .....	32
3.6.1	Predicted environmental concentrations in soil (PEC <sub>soil</sub> ) .....	32
3.6.2	Predicted environmental concentrations in groundwater (PEC <sub>gw</sub> ) .....	32
3.6.3	Predicted environmental concentrations in surface water (PEC <sub>sw</sub> ).....	32
3.7	Ecotoxicology (Part B, Section 9) .....	33
3.7.1	Effects on terrestrial vertebrates .....	33
3.7.2	Effects on aquatic species .....	33
3.7.3	Effects on bees .....	33
3.7.4	Effects on other arthropod species other than bees.....	33

3.7.5	Effects on soil organisms .....	33
3.7.6	Effects on non-target terrestrial plants .....	33
3.7.7	Effects on other terrestrial organisms (Flora and Fauna).....	34
3.8	Relevance of metabolites (Part B, Section 10) .....	34
<b>4</b>	<b>Conclusion of the national comparative assessment (Art. 50 of Regulation (EC) No 1107/2009) .....</b>	<b>34</b>
<b>5</b>	<b>Further information to permit a decision to be made or to support a review of the conditions and restrictions associated with the authorization .....</b>	<b>34</b>
<b>Appendix 1</b>	<b>Copy of the product authorization .....</b>	<b>35</b>
<b>Appendix 2</b>	<b>Copy of the product label .....</b>	<b>36</b>
<b>Appendix 3</b>	<b>Letter of Access .....</b>	<b>46</b>
<b>Appendix 4</b>	<b>Lists of data considered for national authorization.....</b>	<b>47</b>



# **PART A**

## **RISK MANAGEMENT**

### **1 Details of the application**

This document describes the acceptable use conditions required for zonal registration of TERBUT 500 SC (TEKNO 500 SC, LA ZINA 500 SC) containing Terbutylazine in POLAND (ZRMS).

The risk assessment conclusions are based on the information, data and assessments provided in Registration Report, Part B Sections 0-10 and Part C. The information, data and assessments provided in Registration Report, Parts B includes assessment of further data or information as required by the EU review. It also includes assessment of data and information relating to TERBUT 500 SC where that data has not been considered in the EU review. Otherwise assessments for the safe use of TERBUT 500 SC have been made using endpoints agreed in the EU review of Terbutylazine.

This document describes the specific conditions of use and labelling required for the registration of (TEKNO 500 SC, LA ZINA 500 SC), product code TERBUT 500 SC.

#### **1.1 Application background**

This application was finalized by PUH CHEMIROL Sp. z o.o. in November 2019. PUH CHEMIROL Sp. z o.o. is a company located at Przemyslowa 3, 88-300, Mogilno, Poland, and registered in the Polish National Court Registry of entrepreneurs (KRS), with the number 0000039784.

The application is for the approval of TERBUT 500 SC a suspension concentrate type formulation (SC) containing 500 g/l Terbutylazine for use as a herbicide for controls a broad-spectrum of dicots weeds in maize. It is applied by spray at BBCH 00 to 05 and BBCH 12-16 ( details GAP table B0 Section)

To obtain authorisation the product TERBUT 500 SC must meet the conditions of Annex I inclusion and be supported by dossiers satisfying the requirements of Annex II and Annex III, with an assessment to Uniform Principles, using Annex I agreed endpoints.

This application was submitted in order to allow the first authorisation of this product in Poland, in accordance with the above.

#### **1.2 Letters of Access**

Not relevant

#### **1.3 Justification for submission of tests and studies**

In accordance with Art. 33 (3), the submitted studies and presented in Appendix 4, are relevant and necessary to obtain the first authorisation the product TERBUT 500 SC in Poland and other countries.

#### **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	TERBUT 500 SC
Product name in MS	La Zina 500 SC; Tekno 500 SC
Authorization number	N/A
Function	herbicide
Applicant	PUH Chemirol Sp. z o.o.
Active substance(s) (incl. content)	Terbuthylazine 500 g/l
Formulation type	Suspension concentrate (SC)
Packaging	188 ml in HDPE jar 250 ml in HDPE bottles 500 ml in HDPE bottles 510 ml in HDPE jar 564 ml in HDPE bottles 600 ml in HDPE bottles 800 ml in HDPE bottles 800 ml in HDPE jar 1000 ml in HDPE bottles 1200 ml in HDPE bottles 3000 ml in HDPE container 2000 ml in HDPE bottle 4000 ml in HDPE cannister 5000 ml in HDPE container/cannisters/bottle 10000 ml in HDPE container/cannisters 11220 ml in HDPE container 20000 ml in HDPE container/cannisters 22000 ml in HDPE container  HDPE/PA: 120 ml HDPE/PA bottles 275 ml HDPE/PA bottles 323 ml HDPE/PA bottles 500 ml HDPE/PA bottles 550 ml HDPE/PA bottles 574 ml HDPE/PA bottles 1000 ml HDPE/PA bottles 1100 ml HDPE/PA bottles 5000 ml HDPE/PA bottles 5000 ml HDPE/PA cannister 5500 ml HDPE/PA bottles 5850 ml HDPE/PA container 10000 ml HDPE/PA container  HDPE/F: 120 ml HDPE/F bottles 312 ml HDPE/F bottles 318 ml HDPE/F bottles

	570 ml HDPE/F bottles 575 ml HDPE/F bottles 580 ml HDPE/F bottles 585 ml HDPE/F bottles 1150 ml HDPE/F bottles 1160 ml HDPE/F bottles 1170 ml HDPE/F bottles 1185 ml HDPE/F bottles 1200 ml HDPE/F bottles 5880 ml HDPE/F cannister 5950 ml HDPE/F bottles 5950 ml HDPE/F cannister 10000 ml HDPE/F cannister  HDPE/EOH: 100 ml HDPE/EOH 250 ml HDPE/EOH 500ml in HDPE/EOH bottles 1000ml in HDPE/EOH bottles 5000ml in HDPE/EOH containers, 10000ml in HDPE/EOH containers 20000ml in HDPE/EOH containers
Coformulants of concern for national authorizations	N/A
Restrictions related to identity	N/A
Mandatory tank mixtures	N/A
Recommended tank mixtures	N/A

## 2.2 Conclusion

**Efficacy section:** Registration of La Zina 500 SC / Tekno 500 SC (product code: Terbut 500 SC) can be extended on solo pre-emergence use to control weeds in maize crops.

## 2.3 Substances of concern for national monitoring

This point is not relevant for authorisation of TERBUT 500 SC.

## 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:	STOT RE 2
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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:	GHS08
Signal word:	Warning
Hazard statement(s):	H373 – May cause damage to organs through prolonged or repeated exposure. H400 – Very toxic to aquatic life. H410 – Very toxic to aquatic life with long lasting effects
Precautionary statement(s):	<b>WARNING SECTION OF THE LABEL:</b> <b>P260</b> – Do not breathe dust/fume/gas/mist/vapours/spray. <b>P314</b> – Get medical advice/attention if you feel unwell.  Other section of the label: <b>P270</b> - Do not eat, drink or smoke when using this product. <b>P501</b> - Dispose of contents/container to ...  <b>And P280 as follows:</b> <b>Operator:</b> „Stosować rękawice ochronne oraz odzież roboczą (kombinezon) w trakcie przygotowywania cieczy roboczej oraz wykonywania zabiegu” “Wear protective gloves and work wear (coverall) during mixing/loading and application”. <b>Worker:</b> „Stosować rękawice ochronne oraz odzież roboczą (długie spodnie, koszula z długim rękawem) podczas inspekcji terenu poddanego opryskowi.” “Wear protective gloves and workwear (long trousers, long-sleeve shirt) during inspection of treated area”. <b>Bystander/resident:</b> „Podczas wykonywania zabiegu należy zachować 5 metrową strefę buforową oraz dysze ograniczające znos”. “Keep a 5 meter buffer zone and drift-reduction nozzles during application”.  <b>Section First aid:</b> <b>P314</b> – Get medical advice/attention if you feel unwell.
Additional labelling phrases:	<b>EUH401</b> – To avoid risks to human health and the environment, comply with the instructions for use. <b>EUH208</b> – Contains 1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction.

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

## 2.4.2 Standard phrases under Regulation (EU) No 547/2011

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).
SPe3	To protect aquatic organisms: - 5 meter vegetated buffer zone should be applied To protect non-target plants 5 meter an unsprayed buffer zone to non-crop land should be applied or 75% drift reduction nozzles

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

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## 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:	
-	Gloves during mixing/loading
Worker protection:	
-	Gloves when handling treated crops
Integrated pest management (IPM)/sustainable use:	
N/A	e.g. The risk of resistance has to be indicated on the package and in the instructions of use. Particularly measures for an appropriate risk management have to be declared.
Environmental protection	
N/A	Aquatic species: - 5 m vegetated buffer zone  NTP: - 5 m buffer zone or - 1 m and use of 75% drift reducing nozzles
Other specific restrictions	
Resident and bystander	Vehicle mounted drift reduction with 5 meters buffer zone.

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

Integrated pest management (IPM)/sustainable use:	
N/A	Before applying should be informed of this fact by all stakeholders, that may be exposed to the spray drift and who have requested such information.

### 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.
N/A	The instructions for use must include a summary of weeds which can be controlled well, less well and insufficiently by the product, as well as a list of species and/or varieties showing which crops are tolerant of the intended application rate and which are not.	use number from GAP table in 2.6
Environmental protection:		Relevant for use no.
N/A	In order to protect non-target plants and other measure is necessary the appointment of a protection zone with a width of 5 m of land not used for agricultural or 1 m and use of 75% drift reducing nozzles. In order to protect aquatic species is necessary to applied 5 m vegetated zone to surface water bodies.	use number from GAP table in 2.6

## 2.6 Intended uses (only NATIONAL GAP)

PPP (product name/code):	La Zina 500 SC/Tekno 500 SC Terbut 500 SC	Formulation type:	GAP rev., date: 2023-11-02 SC <sup>(a, b)</sup>
Active substance 1:	terbuthylazine	Conc. of as 1:	500 g/l <sup>(c)</sup>
Active substance 2:	-	Conc. of as 2:	<sup>(c)</sup>
Active substance 3:	-	Conc. of as 3:	<sup>(c)</sup>
Safener:	-	Conc. of safener:	<sup>(c)</sup>
Synergist:	-	Conc. of synergist:	<sup>(c)</sup>
Applicant:	Innvigo Sp. z o.o.	Professional use:	<input checked="" type="checkbox"/>
Zone(s):	Central <sup>(d)</sup>	Non professional use:	<input type="checkbox"/>
Verified by MS:	no		
Field of use:	herbicide		

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Use- No. *	Member state(s)	Crop and/ or situation  (crop desti- nation / purpose of crop)	F, Fn, G, Gn, Gnp or I **	Pests or Group of pests controlled  (additionally: devel- opmental 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)	zRMS  Conclusion
					Method / Kind	Timing / Growth stage of crop & season	Max. num- ber 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			
Zonal uses (field or outdoor uses, certain types of protected crops)														
1	PL	Maize Zea mays (ZEAMX)	F	Dicotyledonous weeds	Spray, medium sprayer	Spring BBCH 00- 05	a)1 b)1	n/a	a) 1.0 l/ha b) 1.0 l/ha	a) 0.5 kg a.s./ha b) 0.5 kg a.s./ha	200-300	n/a		Eff. section: acceptable
2	PL	Maize Zea mays (ZEAMX)	F	Dicotyledonous weeds	Spray, medium sprayer	Spring BBCH 00- 05	a)1 b)1	n/a	a) 1.0 l/ha + 0,2 % v/v Hydra- vance 100 LQ b) 1.0 l/ha + 0,2 % v/v Hydra- vance 100 LQ	a) 0.5 kg a.s./ha + 0,2 % v/v Hydravance 100 LQ b) 0.5 kg a.s./ha + 0,2 % v/v Hydravance 100 LQ	200-300	n/a		Acceptable. Use already registered.
3	PL	Maize Zea mays (ZEAMX)	F	Dicotyledonous weeds	Spray, medium sprayer	Spring BBCH 12- 16	a)1 b)1	n/a	a) 1.0 l/ha b) 1.0 l/ha	a) 0.5 kg a.s./ha b) 0.5 kg a.s./ha	200-300	n/a		It was not accepted by Ecotox during previous registartion
4	PL	Maize Zea mays (ZEAMX)	F	Dicotyledonous weeds	Spray, medium sprayer	Spring BBCH 12- 16	a)1 b)1	n/a	a) 1.0 l/ha + 0,2 % v/v Hydra- vance 100 LQ b) 1.0 l/ha + 0,2 % v/v Hydra- vance 100 LQ	a) 0.5 kg a.s./ha + 0,2 % v/v Hydravance 100 LQ b) 0.5 kg a.s./ha + 0,2 % v/v Hydravance 100 LQ	200-300	n/a		It was not accepted by Ecotox during previous registartion
Interzonal uses (use as seed treatment, in greenhouses (or other closed places of plant production), as post-harvest treatment or for treatment of empty storage rooms)														
5														
6														
Minor uses according to Article 51 (field uses)														
7														

8														
<b>Minor uses according to Article 51 (interzonal uses)</b>														
9														
10														

Hydravance 100 LQ - Adjuvant

<b>Remarks table heading:</b>	(a)	e.g. wettable powder (WP), emulsifiable concentrate (EC), granule (GR)	(d)	Select relevant
	(b)	Catalogue of pesticide formulation types and international coding system CropLife International Technical Monograph n°2, 6th Edition Revised May 2008	(e)	Use number(s) in accordance with the list of all intended GAPs in Part B, Section 0 should be given in column 1
	(c)	g/kg or g/l	(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.
<b>Remarks columns:</b>	1	Numeration necessary to allow references	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
	2	Use official codes/nomenclatures of EU Member States	8	The maximum number of application possible under practical conditions of use must be provided.
	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)	9	Minimum interval (in days) between applications of the same product
	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	10	For specific uses other specifications might be possible, e.g.: g/m <sup>3</sup> in case of fumigation of empty rooms. See also EPPO-Guideline PP 1/239 Dose expression for plant protection products.
	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.	11	The dimension (g, kg) must be clearly specified. (Maximum) dose of a.s. per treatment (usually g, kg or L product / ha).
	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.	12	If water volume range depends on application equipments (e.g. ULVA or LVA) it should be mentioned under "application: method/kind".
	*	Use number(s) in accordance with the list of all intended GAPs in Part B, Section 0 should be given in column 1.	13	PHI - minimum pre-harvest interval
	**	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	14	Remarks may include: Extent of use/economic importance/restrictions

Column 15: zRMS conclusion.

A	Acceptable
R	Acceptable with further restriction
C	To be confirmed by CMS
N	Not acceptable / evaluation not possible
n.r.	Not relevant for section 3



### **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 homogenous white liquid, with a characteristic odour. It is not explosive, has no oxidising properties. In aqueous solution, it has a pH value around 7.76 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 14 days at 54°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*. Its technical characteristics are acceptable for a *SC* formulation. The intended concentration of use is 0.25% to 0.75%.

#### **3.2 Efficacy (Part B, Section 3)**

The submitted efficacy/selectivity data (reports from field trials) and additional information fulfil requirements and conditions determined in the following EPPO guidelines:

- PP 1/135 (4) Phytotoxicity assessment
- PP 1/152 (4) Design and analysis of efficacy evaluation trials
- PP 1/181 (5) Conduct and reporting of efficacy evaluation trials including good experimental practice

They were carried out on the field in the conditions of natural weeds infestation. The efficacy trials were concluded according to the EPPO standards:

- PP 1/50 (4) Weeds in maize

The studies fulfil also requirements of the Commission Regulation (EC) No 1490/2002 as amended by Commission Regulation (EC) No 1095/2007 implementing Regulation (EC) No 1107/2009 of the European Parliament and of the Council as regards the data requirements for plant protection products

Terbut 500 SC containing 500 g a.s./L, Terbutylazine as the active substance is prepared for the use in agricultural practice as a herbicide in the form SC – soluble concentrate. Terbut is herbicide for the control of most important dicots weeds in maize.

The applicant submitted 38 reports (in total) showing the results in research into product efficacy carried out in 2017, 2019 and 2023 in maize. List of these reports is contained in Appendix 1. Trials were carried out in one season because this herbicide contains terbutylazine which is a well-known active substance that has been used for many years in agricultural practice.

Details are provided in dRR Part B section 3 in KCP point 3.2 and KCP 6.2 point 3.2.3.

##### **○ Efficacy data**

Considering efficacy and crop safety (section 3, there should be no reservations on registering La Zina 500 SC / Tekno 500 SC (product code: Terbut 500 SC) containing of Terbutylazine 500 g/l as the active ingredients, for the control of most important dicots weeds in maize – according to the GAP table and label claim.

Conclusions:

All efficacy/selectivity trials have been performed in accordance with the current requirements and the results are deemed to be acceptable.

Details will be provided in dRR Part B section 3 in KCP 6 point 3.2 and KCP 6.2 point 3.2.3

EPPO Standard PP 1/226 Number of efficacy trials provides guidance on the number of trials in target crops needed to demonstrate the efficacy of a plant protection product at the recommended dose. Where authorization is sought across a range of diverse conditions, such as across an authorization zone (PP 1/278 Principles of zonal data production and evaluation), then the number of trials conducted may need to increase. These trials should be done across the range of climatic and environmental conditions likely to be encountered, and over at least 2 years.

Applicant submitted in total 38 efficacy trials carried out in different growing seasons for pre-emergence and post-emergence use. For pre-emergence used in mixture with adjuvant Applicant submitted in total 14 field studies and for post-emergence used with mixture with adjuvant – 26 field trials, **for pre-emergence used solo Applicant submitted in total 14 field.** All trials were carried out in accordance with EPPO standards: EPPO PP 1/135 (4), EPPO PP 1/181 (5), EPPO PP 1/152 (4) and EPPO PP 1/50 (4).

During trials different doses were studied:

- for pre-emergence use – 1,0 l/ha for support solo use: 0,8 l/ha Terbut 500 SC; 1,0 l/ha Terbut 500 SC; 1,2 l/ha Terbut 500 SC.
- for pre-emergence use – 1,0 l/ha for support solo use and for mixture tank use with adjuvant: 0,8 l/ha Terbut 500 SC+0,2 % adjuvant; 1,0 l/ha Terbut 500 SC+0,2 % adjuvant; 1,2 l/ha Terbut 500 SC+0,2 % adjuvant and 1,5l/ha Terbut 500 SC +0,2 % adjuvant.
- for post -emergence use: 0,8 l/ha; 1,0 l/ha; 1,2 l/ha for solo use and 1,0 l/ha Terbut 500 SC+0,2 % adjuvant for use in the mixture tank with adjuvant.

Below, we presented the list of studied with classification of its sensitivity observed at recommended dose at solo use (1,0 l/ha) and in the mixture tank with adjuvant (1,0 l/ha Terbut 500 SC + 0,2 % adjuvant) weed at pre- and post-emergence use in maize:

- **post emergence use at BBCH 12-16:**

**AMARE** – 10 trials for solo use and 13 trials for use in the mixture tank with adjuvant. It can be concluded that AMARE is a susceptible weed at solo use at recommended dose (1,0 l/ha) and in the mixture tank with adjuvant (dose Terbut 500 SC 1,0 l/ha + Hydravance 100 LQ 0,2 %).

**ANTAR** – lack of trials for solo use and 1 trial for use in the mixture tank with adjuvant. ANTAR should be excluded from label project due to not enough trials.

**CAPBP** – 7 trials for solo use and 11 trials for use in the mixture tank with adjuvant. It can be concluded that CAPBP is a susceptible weed at solo use at recommended dose (1,0 l/ha) and in the mixture tank with adjuvant (dose Terbut 500 SC 1,0 l/ha + Hydravance 100 LQ 0,2 %).

**CENCY** – 2 trials for solo use and 5 trials for use in the mixture tank with adjuvant. It can be concluded that CENCY is a moderately susceptible weed at solo use at recommended dose (1,0 l/ha) and in the mixture tank with adjuvant (dose Terbut 500 SC 1,0 l/ha + Hydravance 100 LQ 0,2 %).

**CHEAL** – 12 trials for solo use and 24 trials for use in the mixture tank with adjuvant. It can be concluded that CHEAL is a susceptible weed at solo use at recommended dose (1,0 l/ha) and in the mixture tank with adjuvant (dose Terbut 500 SC 1,0 l/ha + Hydravance 100 LQ 0,2 %).

**CHEPO** – lack of trials for solo use and 1 trial for use in the mixture tank with adjuvant. CHEPO should be excluded from label project due to not enough trials.

**ECHCG** – lack of trials for solo use and 4 trials for use in the mixture tank with adjuvant. It can be concluded that ECHCG is a tolerant weed at use in the mixture tank with adjuvant (dose Terbut 500 SC 1,0 l/ha + Hydravance 100 LQ 0,2 %).

**GALAP** – 7 trials for solo use and 11 trials for use in the mixture tank with adjuvant. It can be concluded that GALAP is a susceptible weed at solo use at recommended dose (1,0 l/ha) and in the mixture tank

with adjuvant (dose Terbut 500 SC 1,0 l/ha + Hydravance 100 LQ 0,2 %).

**GASPA** – 1 trial for solo use and 2 trials for use in the mixture tank with adjuvant. It can be concluded that GASPA is a susceptible weed at use in the mixture tank with adjuvant (dose Terbut 500 SC 1,0 l/ha + Hydravance 100 LQ 0,2 %).

**GERDI** – lack of trials for solo use and 1 trial for use in the mixture tank with adjuvant. GERDI should be excluded from label project due to not enough trials

**GERPU** – 1 trial for solo use and 5 trials for use in the mixture tank with adjuvant. It can be concluded that GERPU is a moderately susceptible weed at use in the mixture tank with adjuvant (dose Terbut 500 SC 1,0 l/ha + Hydravance 100 LQ 0,2 %).

**LYCAR** – lack of trials for solo use and 1 trial for use in the mixture tank with adjuvant. LYCAR should be excluded from label project due to not enough trials

**MATCH** – 3 trials for solo use and 5 trials for use in the mixture tank with adjuvant. It can be concluded that MATCH is a moderately susceptible weed at solo use at recommended dose (1,0 l/ha) and in the mixture tank with adjuvant (dose Terbut 500 SC 1,0 l/ha + Hydravance 100 LQ 0,2 %).

**MATIN** – 9 trials for solo use and 12 trials for use in the mixture tank with adjuvant. It can be concluded that MATIN is a susceptible weed at solo use at recommended dose (1,0 l/ha) and in the mixture tank with adjuvant (dose Terbut 500 SC 1,0 l/ha + Hydravance 100 LQ 0,2 %).

**POAAN** – lack of trials for solo use and 1 trial for use in the mixture tank with adjuvant. POAAN should be excluded from label project due to not enough trials

**POLAV** – lack of trials for solo use and 1 trial for use in the mixture tank with adjuvant. POLAV should be excluded from label project due to not enough trials

**POLCO** – 6 trials for solo use and 13 trials for use in the mixture tank with adjuvant. It can be concluded that POLCO is a susceptible weed at solo use at recommended dose (1,0 l/ha) and in the mixture tank with adjuvant (dose Terbut 500 SC 1,0 l/ha + Hydravance 100 LQ 0,2 %).

**POLLA** – lack of trials for solo use and 1 trial for use in the mixture tank with adjuvant. POLLA should be excluded from label project due to not enough trials

**POLPE** – lack of trials for solo use and 1 trial for use in the mixture tank with adjuvant. POLPE should be excluded from label project due to not enough trials

**SETPU** – lack of trials for solo use and 1 trial for use in the mixture tank with adjuvant. SETPU should be excluded from label project due to not enough trials

**SOLNI** – 7 trials for solo use and 8 trials for use in the mixture tank with adjuvant. It can be concluded that SOLNI is a susceptible weed at solo use at recommended dose (1,0 l/ha) and in the mixture tank with adjuvant (dose Terbut 500 SC 1,0 l/ha + Hydravance 100 LQ 0,2 %).

**STEME** – 3 trials for solo use and 3 trials for use in the mixture tank with adjuvant. It can be concluded that STEME is a moderately susceptible weed at solo use at recommended dose (1,0 l/ha) and a susceptible weed in the mixture tank with adjuvant (dose Terbut 500 SC 1,0 l/ha + Hydravance 100 LQ 0,2 %).

**VERAR** – 6 trials for solo use and 6 trials for use in the mixture tank with adjuvant. It can be concluded that VERAR is a susceptible weed at solo use at recommended dose (1,0 l/ha) and in the mixture tank with adjuvant (dose Terbut 500 SC 1,0 l/ha + Hydravance 100 LQ 0,2 %).

**VIOAR** – 13 trials for solo use and 18 trials for use in the mixture tank with adjuvant. It can be concluded that VIOAR is a susceptible weed at solo use at recommended dose (1,0 l/ha) and in the mixture tank with adjuvant (dose Terbut 500 SC 1,0 l/ha + Hydravance 100 LQ 0,2 %).

- **pre-emergence use at BBCH 00-05 used solo and in the mixture tank with adjuvant**

**AMARE** – 2 trials for solo use and 5 trials for use in the mixture tank with adjuvant. It can be concluded that AMARE is a susceptible weed at use in the mixture tank with adjuvant (dose Terbut 500 SC 1,0 l/ha + Hydravance 100 LQ 0,2 %).

**ANTAR** – lack of trials for solo use and 1 trial for use in the mixture tank with adjuvant. ANTAR should be excluded from label project due to not enough trials

**CAPBP**– lack of trials for solo use and 4 trials for use in the mixture tank with adjuvant. It can be concluded that CAPBP is a susceptible weed at use in the mixture tank with adjuvant (dose Terbut 500 SC 1,0 l/ha + Hydravance 100 LQ 0,2 %).

**CENCY**– 1 trial for solo use and 4 trials for use in the mixture tank with adjuvant. It can be concluded that CENCY is a susceptible weed at use in the mixture tank with adjuvant (dose Terbut 500 SC 1,0 l/ha + Hydravance 100 LQ 0,2 %).

**CHEAL**– 1 trial for solo use and 13 trials for use in the mixture tank with adjuvant. It can be concluded that CHEAL is a susceptible weed at use in the mixture tank with adjuvant (dose Terbut 500 SC 1,0 l/ha + Hydravance 100 LQ 0,2 %).

**CHEPO** – lack of trials for solo use and 1 trial for use in the mixture tank with adjuvant. CHEPO should be excluded from label project due to not enough trials

**ECHCG**– lack of trials for solo use and 3 trials for use in the mixture tank with adjuvant. ECHCG is a major weed in maize, due to not enough trials this weed should be excluded from label.

**GALAP**– lack of trials for solo use and 4 trials for use in the mixture tank with adjuvant. It can be concluded that GALAP is a susceptible weed at use in the mixture tank with adjuvant (dose Terbut 500 SC 1,0 l/ha + Hydravance 100 LQ 0,2 %).

**GASPA** – lack of trials for solo use and 1 trial for use in the mixture tank with adjuvant. GASPA should be excluded from label project due to not enough trials

**GERDI** – lack of trials for solo use and 1 trial for use in the mixture tank with adjuvant. GERDI should be excluded from label project due to not enough trials

**GERPU**– lack of trials for solo use and 4 trials for use in the mixture tank with adjuvant. It can be concluded that GERPU is a moderately tolerant weed at use in the mixture tank with adjuvant (dose Terbut 500 SC 1,0 l/ha + Hydravance 100 LQ 0,2 %).

**LYCAR** – lack of trials for solo use and 1 trial for use in the mixture tank with adjuvant. LYCAR should be excluded from label project due to not enough trials

**MATCH**– 2 trials for solo use and 4 trials for use in the mixture tank with adjuvant. It can be concluded that MATCH is a susceptible weed at use in the mixture tank with adjuvant (dose Terbut 500 SC 1,0 l/ha + Hydravance 100 LQ 0,2 %).

**MATIN**– 2 trials for solo use and 6 trials for use in the mixture tank with adjuvant. It can be concluded that MATIN is a susceptible weed at use in the mixture tank with adjuvant (dose Terbut 500 SC 1,0 l/ha + Hydravance 100 LQ 0,2 %).

**POAAN** – lack of trials for solo use and 1 trial for use in the mixture tank with adjuvant. POAAN should be excluded from label project due to not enough trials

**POLAV** – lack of trials for solo use and 1 trial for use in the mixture tank with adjuvant. POLAV should be excluded from label project due to not enough trials

**POLCO**– lack of trials for solo use and 6 trials for use in the mixture tank with adjuvant. It can be concluded that POLCO is a moderately susceptible weed at use in the mixture tank with adjuvant (dose Terbut 500 SC 1,0 l/ha + Hydravance 100 LQ 0,2 %).

**POLLA** – lack of trials for solo use and 1 trial for use in the mixture tank with adjuvant. POLLA should be excluded from label project due to not enough trials

**POLPE** – lack of trials for solo use and 1 trial for use in the mixture tank with adjuvant. POLPE should be excluded from label project due to not enough trials

**SETPU** – lack of trials for solo use and 1 trial for use in the mixture tank with adjuvant. SETPU should be excluded from label project due to not enough trials

**SOLNI** – lack of trials for solo use and 1 trial for use in the mixture tank with adjuvant. SOLNI should be excluded from label project due to not enough trials

**STEME**– 2 trials for solo use and 2 trials for use in the mixture tank with adjuvant. It can be concluded that STEME is a susceptible weed at use in the mixture tank with adjuvant (dose Terbut 500 SC 1,0 l/ha + Hydravance 100 LQ 0,2 %).

**VIOAR**– 1 trial for solo use and 7 trials for use in the mixture tank with adjuvant. It can be concluded that VIOAR is a susceptible weed at use in the mixture tank with adjuvant (dose Terbut 500 SC 1,0 l/ha + Hydravance 100 LQ 0,2 %).

#### **pre-emergence use at BBCH 00-05 used solo**

**AMARE** –major weed - 5 trials for solo use. Number of trials is sufficient, level of infestation was acceptable in all trials. It can be concluded that AMARE is a susceptible weed at use in the dose Terbut 500 SC 1,0 l/ha. Dose 0.8 l/ha was characterized by 82.9% efficacy, dose 1.0 l/ha – 93.0% eff. and dose 1.2 l/ha by 95.8% eff. Efficacy of standard ref. product (Lumax 537,5 SE at 3.5 l/ha) was 100%. It can be considered that La Zina / Tekno 500 SC efficiently control AMARE used pre-emergence at dose 1.0 l/ha on maize crops.

**CHEAL**– minor weed - 8 trials for solo use. Number of trials is sufficient, level of infestation was acceptable in all trials. It can be concluded that CHEAL is a susceptible weed at use in the dose Terbut 500 SC 1,0 l/ha. Dose 0.8 l/ha was characterized by 74.3% efficacy, dose 1.0 l/ha – 88.8% eff. and dose 1.2 l/ha by 92.0% eff. Efficacy of standard ref. product (Lumax 537,5 SE at 3,5 l/ha and Tezosar 500 SC at 1.0 l/ha) was accordingly 100% and 85.8%. It can be considered that La Zina / Tekno 500 SC efficiently control CHEAL used pre-emergence at dose 1.0 l/ha on maize crops.

**MATIN**– minor weed - 5 trials for solo use. Number of trials is sufficient, level of infestation was acceptable in all trials. It can be concluded that MATIN is a susceptible weed at use in the dose Terbut 500 SC 1,0 l/ha. Dose 0.8 l/ha was characterized by 81.3% efficacy, dose 1.0 l/ha – 92.3% eff. and dose 1.2 l/ha by 93.4% eff. Efficacy of standard ref. product (Lumax 537,5 SE at 3.5 l/ha and Tezosar 500 SC at 1.0 l/ha) was accordingly 100% and 90.0%. It can be considered that La Zina / Tekno 500 SC efficiently control MATIN used pre-emergence at dose 1.0 l/ha on maize crops.

**MATCH**– minor weed - 5 trials for solo use. Number of trials is sufficient, level of infestation was acceptable in all trials. It can be concluded that MATCH is a susceptible weed at use in the dose Terbut 500 SC 1,0 l/ha. Dose 0.8 l/ha was characterized by 83.2% efficacy, dose 1.0 l/ha – 94.1% eff. and dose 1.2 l/ha by 94.5% eff. Efficacy of standard ref. product (Lumax 537,5 SE at 3.5 l/ha and Tezosar 500 SC at 1.0 l/ha) was accordingly 100% and 91.8%%. It can be considered that La Zina / Tekno 500 SC efficiently control MATCH used pre-emergence at dose 1.0 l/ha on maize crops.

**CENCY**– minor weed - 5 trials for solo use. Number of trials is sufficient, level of infestation was acceptable in all trials. It can be concluded that CENCY is a moderately susceptible weed at use in the dose Terbut 500 SC 1,0 l/ha. Dose 0.8 l/ha was characterized by 68.7% efficacy, dose 1.0 l/ha – 83.0% eff. and dose 1.2 l/ha by 86.3% eff. Efficacy of standard ref. product (Lumax 537,5 SE at 3.5 l/ha and Tezosar 500 SC at 1.0 l/ha) was accordingly 100% and 82.0%%. It can be considered that La Zina / Tekno 500 SC moderately efficiently control CENCY used pre-emergence at dose 1.0 l/ha on maize crops.

**VIOAR**– minor weed - 5 trials for solo use. Number of trials is sufficient, level of infestation was acceptable in all trials. It can be concluded that VIOAR is a susceptible weed at use in the dose Terbut 500 SC 1,0 l/ha. Dose 0.8 l/ha was characterized by 72.4% efficacy, dose 1.0 l/ha – 87.2% eff. and dose 1.2 l/ha by 89.4% eff. Efficacy of standard ref. product (Lumax 537,5 SE at 3.5 l/ha and Tezosar 500 SC at 1.0 l/ha) was accordingly 100% and 83.7%. It can be considered that La Zina / Tekno 500 SC efficiently control VIOAR used pre-emergence at dose 1.0 l/ha on maize crops.

**GALAP** – minor weeds - 7 trials for solo use. Number of trials is sufficient, level of infestation was acceptable in all trials. It can be concluded that GALAP is a susceptible weed at use in the dose Terbut 500 SC 1,0 l/ha. Dose 0.8 l/ha was characterized by 75.8% efficacy, dose 1.0 l/ha – 85.1% eff. and dose 1.2

l/ha by 89.4% eff. Efficacy of standard ref. product (Tezosar 500 SC at 1.0 l/ha) was 83.7%. **It can be considered that La Zina / Tekno 500 SC efficiently control GALAP used pre-emergence at dose 1.0 l/ha on maize crops.**

**CAPBP**– minor weeds - 6 trials for solo use. Number of trials is sufficient, level of infestation was acceptable in all trials. **It can be concluded that CAPBP is a susceptible weed at use in the dose Terbut 500 SC 1,0 l/ha.** Dose 0.8 l/ha was characterized by 80.5% efficacy, dose 1.0 l/ha – 92.4% eff. and dose 1.2 l/ha by 96.5% eff. Efficacy of standard ref. product (Tezosar 500 SC at 1.0 l/ha) was 90.7%. **It can be considered that La Zina / Tekno 500 SC efficiently control CAPBP used pre-emergence at dose 1.0 l/ha on maize crops.**

**POLCO**– major weed - 8 trials for solo use. Number of trials is sufficient, level of infestation was acceptable in all trials. **It can be concluded that POLCO is a susceptible weed at use in the dose Terbut 500 SC 1,0 l/ha.** Dose 0.8 l/ha was characterized by 71.0% efficacy, dose 1.0 l/ha – 85.3% eff. and dose 1.2 l/ha by 90.1% eff. Efficacy of standard ref. product (Tezosar 500 SC at 1.0 l/ha) was 85.1%. **It can be considered that La Zina / Tekno 500 SC efficiently control POLCO used pre-emergence at dose 1.0 l/ha on maize crops.**

**GERPU**– minor weed - 6 trials for solo use. Number of trials is sufficient, level of infestation was acceptable in all trials. **It can be concluded that GERPU is a moderately susceptible weed at use in the dose Terbut 500 SC 1,0 l/ha.** Dose 0.8 l/ha was characterized by 70.4% efficacy, dose 1.0 l/ha – 82.96% eff. and dose 1.2 l/ha by 89.9% eff. Efficacy of standard ref. product (Tezosar 500 SC at 1.0 l/ha) was 83.4%. **It can be considered that La Zina / Tekno 500 SC moderately efficiently control GERPU used pre-emergence at dose 1.0 l/ha on maize crops.**

**STEME**– minor weed - 5 trials for solo use. Number of trials is sufficient, level of infestation was acceptable in all trials. **It can be concluded that STEME is a susceptible weed at use in the dose Terbut 500 SC 1,0 l/ha.** Dose 0.8 l/ha was characterized by 75.4% efficacy, dose 1.0 l/ha – 90.1% eff. and dose 1.2 l/ha by 95.8% eff. Efficacy of standard ref. product (Lumax 537,5 SE at 3.5 l/ha and Tezosar 500 SC at 1.0 l/ha) was accordingly 100% and 89.2%. **It can be considered that La Zina / Tekno 500 SC efficiently control STEME used pre-emergence at dose 1.0 l/ha on maize crops.**

## SUMMARY:

### Accepted weed in Polish label:

- **pre-emergence use:**

✓ **solo use at 1,0 l/ha:** *susceptible weeds:* AMARE, CHEAL, MATIN, MATCH, VIOAR, GALAP, CAPBP, POLCO, STEME and *moderately susceptible weeds:* CENCY, GERPU

✓ **mixture tank use (1,0 l/ha Terbut 500 SC + 0,2% adjuvant):** *susceptible weeds:* AMARE, CAPBP, CENCY, CHEAL, GALAP, MATCH, MATIN, STEME, VIOAR and *moderately susceptible weeds:* POLCO and *moderately tolerant weeds:* GERPU.

- **post-emergence use:**

✓ **solo use at 1,0 l/ha:** *susceptible weeds:* AMARE, CAPBP, CHEAL, GALAP, MATIN, POLCO, SOLNI, VERAR, VIOAR and *moderately susceptible weeds:* CENCY, MATCH, STEME.

✓ **mixture tank use (1,0 l/ha Terbut 500 SC + 0,2% adjuvant):** *susceptible weeds:* AMARE, CAPBP, CHEAL, GALAP, GASPA, MATIN, POLCO, SOLNI, STEME, VERAR, VIOAR and *moderately susceptible weeds:* CENCY, GERPU, MATCH.

**Accepted volume of water:** 200-300 l/ha

**Accepted BBCH of maize:** for pre-emergence used solo BBCH 00-05

**Accepted BBCH of maize:** for pre-emergence BBCH 00-05 and for post-emergence BBCH 12-16.

**Adjuvant:** in all trials as adjuvant was used – Hydravance 100 LQ, so this adjuvant can be included in the label.



▪ **Information on the occurrence or possible occurrence of the development of resistance**

*According to terbuthylazine\_DAR\_04\_Vol3\_B1-B5.public*

Weeds resistance to triazine herbicides were first identified in the late 1960's. This resistance is not due to differential penetration, translocation, or herbicide degradation between the resistant and susceptible biotypes. The difference has been identified to be the result of differential activity at the site of action (chloroplast membrane), impairing binding of the triazines to the protein at the Q<sub>B</sub> binding site. This resistance increases in frequency in the population as the result of natural selection of resistant biotypes. Such resistant biotypes are present as small component of the natural population and are "selected for" when the susceptible biotypes are suppressed by the application of triazine herbicides.

Resistant weeds include<sup>1</sup>: *Abutilon theophrasti*, *Amaranthus* spp., *Ambrosia artemisiifolia*, *Artiplex patula*, *Bidens tripartite*, *Brassica campestris*, *Bromus tectorum*, *Capsella bursa-pastoris*, *Chenopodium* spp., *Chloris inflata*, *Datura stramonium*, *Digitaria sanguinalis*, *Echinochloa crus-galli*, *Fallopia convolvulus*, *Galinsoga ciliate*, *Kochia scoparia*, *Lolium rigidum*, *Panicum* spp., *Phalaris paradoxa*, *Poa annua*, *Polygonum* spp., *Raphanus raphanistrum*, *Senecio vulgaris*, *Setaria* spp., *Sinapis arvensis*, *Solanum nigrum*, *Stellaria media*.

In 2004, terbuthylazine continues to be a major component of herbicide programs in Europe, especially in corn. At a country level, the Netherlands treats almost 100% of corn, while on the low end, Austria treats 35% of corn hectares with terbuthylazine. Approximately 60% of the combined area in corn production in Europe received terbuthylazine, including Germany, Italy, and Belgium. Terbuthylazine is used in more than 45 countries and remains a key weed control tool in crops such as corn, sorghum, pea, bean, lupin, grape, pome fruit, citrus, and vine [Bruce et al. 2008].

Production of maize (*Zea mays* L.) is increasing globally, and this trend is evident throughout the Central Europe [Andr et al. 2014]. We may expect this trend to continue in the future [Tatsumi et al. 2011]. Weed management had a major effect on success of maize growth because the competition ability of maize is relatively low [Ghanizadeh et al. 2014]. With respect to weed control, due to its sowing period in Europe [Mars Bulletin 2012], this crop is very often characterised by a complex plurispecific weed flora, composed of grass and broadleaved weeds [Baghestani et al. 2007, Kolářová et al. 2014, Pannacci and Tei 2014]. This weed flora has been traditionally controlled with pre-emergence applications based on terbuthylazine, because of its broad controlled weed spectrum, superior residual activity, excellent crop tolerance, perceivable speed of efficacy, and suitability as partner for other active ingredients [Schulte et al. 2012]. However, short rotation cycles or monoculture of maize with repeated applications of the same pre-emergence herbicides have determined a strong increase in the frequency of several 'difficult to control' weed species, forcing farmers to adopt less simplified weed control strategies [Meissle et al. 2010].

Terbuthylazine belongs to the chemical group of Triazines. Terbuthylazine is rapidly translocated to the chloroplasts of the plant cell. Terbuthylazine is primarily interrupting the electron transport in photosystem II (Hill-reaction) and consequently an inhibitor of photosynthesis. The herbicidal activity of Terbuthylazine was first reported in 1966. It is applied world-wide in a wide range of crops like maize, sorghum, vines, orchards, forest and potatoes as a broad-spectrum herbicide against broad-leaved weeds.

The Herbicide Resistance Action Committee (HRAC) grouped the mode of action of terbuthylazine in the international HRAC group C1. Following herbicides are included in HRAC group C1/5:

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.

Photosystem II inhibitors (C1/5) group comprises of very large number of herbicidal active ingredients and terbuthylazine is just one active substance out of 25. In spite of significant resistance of weeds to herbicides representing photosystem II inhibitors group only 5 weed species and 6 cases were found to develop resistance directly to terbuthylazine. **There is no report documenting weeds species resistant to terbuthylazine from Poland.**

### Management Strategy

Herbicide resistance commonly develops in situations where the pressure imposed by herbicides on target weeds is high. Continuous monocultures or perennial crops where the same herbicide or herbicides with the same mode of action have been used over several years impose high selection pressure. Triazine resistance was first reported as a field problem in the late 1960's, about 10 years after the commercial introduction of this class of herbicides. The development of resistance was associated with the extensive and continuous use of triazine herbicides on the same fields over years.

Risk factor:

Herbicide resistance may develop due to:

- Continuous annual use of single herbicide or herbicides with the same mode of action for weed control on the same site,
- Multiple applications of a single herbicide or herbicides with the same mode of action to control of multiple weed germination flushes,
- Monocropping, if accompanied by the repeated use of the same herbicide or herbicides with the same mode of action on the same site
- Minimum or no tillage agriculture that rely solely on chemical weed control.
- 

The resistance risk is regarded acceptable if La Zina 500 SC / Tekno 500 SC (product code: Terbut 500 SC) is used under adherence to the management strategy and label recommendations.

To prevent further development of resistance or cross-resistance and to maintain effective control of target weeds:

- apply La Zina 500 SC / Tekno 500 SC (product code: Terbut 500 SC) at the recommended dose rate,
- apply a maximum of 1 application per season in the optimum development phase of weeds,
- use herbicides with different modes of action and overlapping weed spectrum,
- prevent weeds reproduction by seed or by vegetative proliferation,
- control efficacy of the applications. If applications show decreasing efficacy and other reasons (e.g. weather, application timing) can be excluded, consult local advisors,
- use a reasonable crop rotation and mix of different herbicides programs,
- integrate La Zina 500 SC / Tekno 500 SC (product code: Terbut 500 SC) into an overall pest management program,
- clean equipment between sites and avoid movement of plant material between sites,
- implement cultural practices known to reduce weed development,
- monitor publicly available information regarding weed resistance
- often consult local advisors.

**Always follow HRAG guidelines for the prevention and managing herbicide resistant grass and broadleaved weeds.**

#### ▪ Adverse effects on treated crops

Applicant submitted 26 efficacy, selectivity and 10 selectivity trials in Poland. There were not observed any phytotoxicity symptoms on tested product and standard.

Not applicable. The yield was not assessed.

Details are provided in dRR Part B section 3 in KCP 6 point 3

In the evaluation process the fact that the active ingredient – terbuthylazine is used in many plant protection products and has been commonly used in crop protection for many years were taken into consideration. The Applicant submitted in total 10 selectivity studies conducted in two growing seasons (2017 and 2019) on herbicide (La Zina 500 SC / Tekno 500 SC – product code: Terbut 500 SC) containing this active substance. The selectivity evaluation of the herbicide was performed according to appropriate 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 of maize. Dosages N and 2N were studied in all trials. Experimental details and assessments methods were in accordance to EPPO standards. In all trials standard reference products were used (~~Lumax 537,5 SE, Gardo Gold 500 SC and Gardoprim Plus Gold 500 SC~~). No phytotoxicity symptoms were observed for any tested dosage for all tested maize varieties. The crop developed normally and did not involve a loss in yield at harvest. Those trials were already evaluated during first registration and they are still valid for the extension for solo pre-emergence use in maize. Also, phytotoxic effect of Terbut 500 SC was assessed during efficacy trials. No negative effect was observed in all 38 eff. trials (14 of them were for solo pre-emergence use)

#### ▪ Observations on other undesirable or unintended side-effects

No separate studies have been carried out concerning the influence of product Terbut 500 SC on succeeding plants. The owner of the product Terbut 500 SC and of its registration documentation is referring to available sources in literature treating on terbuthylazine.

Details will be provided in dRR Part B section 3 in KCP 6.5 point 3.5.

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 La Zina 500 SC / Tekno 500 SC – product code: Terbut 500 SC 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.

Product decomposes in the soil during the growing season without endangering crops. Therefore, it can be assumed that application La Zina 500 SC / Tekno 500 SC – product code: Terbut 500 SC in maize will pose no risk for succeeding crops.

Lack of additional tests in this range - not submitted by the applicant. The half-life ( $DT_{50}$ ) for terbuthylazine – 77-169 days. As regards effects on succeeding crops the applicant proposed the following label text which was accepted by Evaluator.

Necessary precautions to prevent the negative impact on succeeding crops should be included in the label claim: “The product decomposes in soil during the vegetation period to a level that does not pose a threat to succeeding crops. If a plantation treated with the product has to be liquidated earlier, after ploughing (to a depth of 25 cm), only maize can be cultivated.”

**The impact on succeeding crops was assessed during previous registration of La Zina / Tekno 500 SC, and it is still valid for this extension on pre-emergence solo use. So, no additional trials and information's are not required.**

#### ▪ Impact on other plants including adjacent crops

The product – La Zina 500 SC / Tekno 500 SC – product code: Terbut 500 SC decomposes in soil during the vegetation period to a level that does not pose a threat to succeeding crops. If a plantation treated with the product has to be liquidated earlier, after ploughing (to a depth of 25 cm), only maize can be cultivated. should not be used during wind that may cause drift spray solution on adjacent plants, especially di-

cotyledonous crops / plants. Such recommendation will be contained on the label - instruction of use. Compliance with this basic requirement of producer by users using plant protection products should protect the adjacent crops against unintended and potentially harmful, herbicidal action of product. In addition, the producer's recommendations is that before application of the product, user should in-form of this fact all the interested parties whose property (crops) may be ex-posed to drift of product if they requested such information.

Generally, the product is a foliar herbicide effective on broadleaved weeds. Therefore, warnings to avoid spray drift on adjacent crops should appear on the label.

La Zina 500 SC / Tekno 500 SC – product code: Terbut 500 SC effectively controlled broadleaf and grass plants therefore users must exercise caution to avoid drift or vapours which may cause stunting or discoloration and damage to non-target foliage.

Appropriate buffer zone was provided by Applicant. Detailed assessment of predicted rates of La Zina 500 SC / Tekno 500 SC – product code: Terbut 500 SC in off-field areas, the TER values describing the risk for non-target plants should be described in Ecotoxicological sections.

The impact on adjacent crops was assessed during previous registration of La Zina / Tekno 500 SC, and it is still valid for this extension on pre-emergence solo use. So, no additional trials and information's are not required.

#### ▪ **Effects on transformation processes**

Assuming a long history of safe use of a.s.: terbuthylazine no special trials dedicated to evaluation of effects of La Zina 500 SC / Tekno 500 SC – product code: Terbut 500 SC on transformation process were undertaken. The effect of the residues on processing was not investigated given the low residues in raw crop. Commodities confirmed by number of studies done for the EU evaluation of terbuthylazine.

In the opinion of Evaluator, considering that product is applied at early stage of the crop and maize (BBCH 00-00 for pre-emergence use and BBCH 12-16 for post-emergence use) is not a typical crop used for subsequent processing, it could be agreed that no negative impact on processing is expected. Adverse effects on plant parts (seed) used for propagation purposes did not occur.

The latest time of application for La Zina 500 SC / Tekno 500 SC is crop growth stage BBCH 16. Since applications of La Zina 500 SC / Tekno 500 SC are made at an early stage in the crop's development there is no risk that the actives would be translocated to the grain. The germination of maize seeds will be not negative-ly affected by the application of La Zina 500 SC / Tekno 500 SC, in the opinion of Evaluator.

The effect on transformation processes was assessed during previous registration of La Zina / Tekno 500 SC, but it is still valid for this extension on pre-emergence solo use. So, no additional trials and information's are not required.

#### ▪ **Impact on treated plants or plant products to be used for propagation**

La Zina 500 SC / Tekno 500 SC – product code: Terbut 500 SC is a basically soil-applied, pre-emergence or early post-emergence herbicide of which decomposes in plants to non-toxic metabolites during the vegetation period. Therefore, it can be assumed that application of La Zina 500 SC / Tekno 500 SC in maize - crop of interest in this submission - will pose no risk for maize propagation capabilities.

The active substances: terbuthylazine, is commonly used for many years in many countries. No adverse effects on parts of plant used for propagating purposes were reported.

#### ▪ **Tank cleaning**

**This procedure was already accepted during first registration of La Zina / Tekno 500 SC and it is still valid for this extension on pre-emergence use on maize.** No modification's and any additional information's are required in the opinion of Evaluator.

#### ▪ **Effects on beneficial and other non-target organisms**

Detailed studies on the possible adverse effects to beneficial organisms are submitted and summarised in Part B, Section 9 (Ecotoxicology).

### 3.3 Methods of analysis (Part B, Section 5)

Analytical methods for determination of Terbutylazine impurities and relevance of CIPAC methods in TERBUT 500 SC were not evaluated as part of the EU review of terbutylazine. Therefore all relevant data are provided and are considered adequate.

#### 3.3.1 Analytical method for the formulation

The methods for determination of terbutylazine and relevant impurities in Terbut 500 SC preparation are specific. The validation parameters for linearity, instrument precision, repeatability and accuracy are within the acceptance range. The content of active substance and relevant impurities in Terbut 500 SC determined by developed and validated methods is, respectively:

Terbutylazine :  $46.21 \pm 0.48\%$ ,

Atrazine: < LOQ it means below  $0.0002\% = 2\text{ppm}$ ,

Propazine: < LOQ it means below  $0.0004\% = 4\text{ppm}$ ,

Simazine:  $0.0387 \pm 0.0009\%$ .

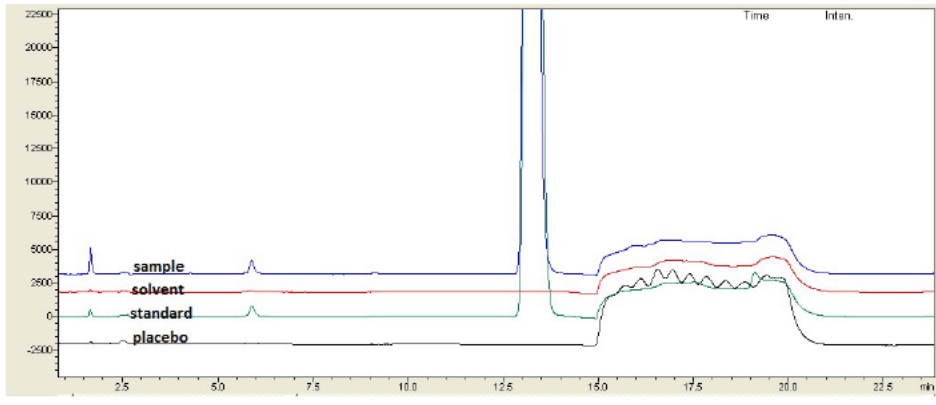
##### 3.3.1.1 Determination of the active substances in the plant protection product

#### Materials and methods

Determination of active substance was performed by HPLC technique with UV/Vis detector using reversed phase column.

#### Validation - Results and discussions

	Terbutylazine
<b>Author(s), year</b>	Wołoszynowska, M., 2018
<b>Principle of method</b>	HPLC
<b>Linearity (linear between mg/L / % range of the declared content) (correlation coefficient, expressed as r)</b>	<p>The linearity of the detector response was assessed using six standard solutions at the concentration range of terbutylazine from 0.0233 mg/mL to 0.1867 mg/mL, which corresponds to the concentration range of 24% to 192% of terbutylazine content in the preparation. All solutions were analysed twice.</p> <p>Correlation coefficient should be <math>R^2 \geq 0.99</math>  <math>y = 44\,800\,109x + 17\,765</math>  <math>R^2 = 0.9999</math></p>
<b>Precision – Repeatability Mean n = 6 (%RSD)</b>	<p>The method repeatability was assessed on the basis of six independent determinations of active substance content in Terbut 500 SC preparation</p> <p>Acceptable relative standard deviation for main ingredient (~ 45%) is <math>\text{RSDr} \leq 1.51\%</math>. The obtained result 0.99% is acceptable.</p>
<b>Accuracy n = 12 (% Recovery)</b>	<p>Accuracy of active substance determination in Terbut 500 SC was assessed by recovery value at two levels of concentration. Each of twelve 10 mL volumetric flasks were charged with approximately 20 mg placebo and weighed. About 0.2 mL of the terbutylazine standard solution at concentration of 1.1669 mg/mL was added to the each of the first six flasks and acetonitrile was added up to the volume. To each of the remaining six flasks 1.6 mL of terbutylazine standard</p>

	<b>Terbuthylazine</b>
	<p>solution at the concentration of 0.7083 mg/mL was added and acetonitrile was added up to the volume. The flasks were put into the ultrasonic bath for 5 min. The concentration of analyte in each solution was calculated from the equation of the calibration curve. Obtained final concentrations were examined and the nominal and calculated contents were compared.</p> <p>For the main ingredient at concentration of &gt; 10 % the average recovery value should be <math>100 \pm 2</math> %. The obtained result of 100.05% is acceptable.</p> <p>For the level I the average recovery was 100.75%, RSD=0.37%</p> <p>For the level II the average recovery was 99.36%, RSD=0.95%</p>
<b>Interference/ Specificity</b>	<p>The chromatograms of placebo, solvent, standard solution and the examined specimen solution were performed and superimposed.</p> 
<b>Comment</b>	

### 3.3.1.2 Determination of relevant impurities

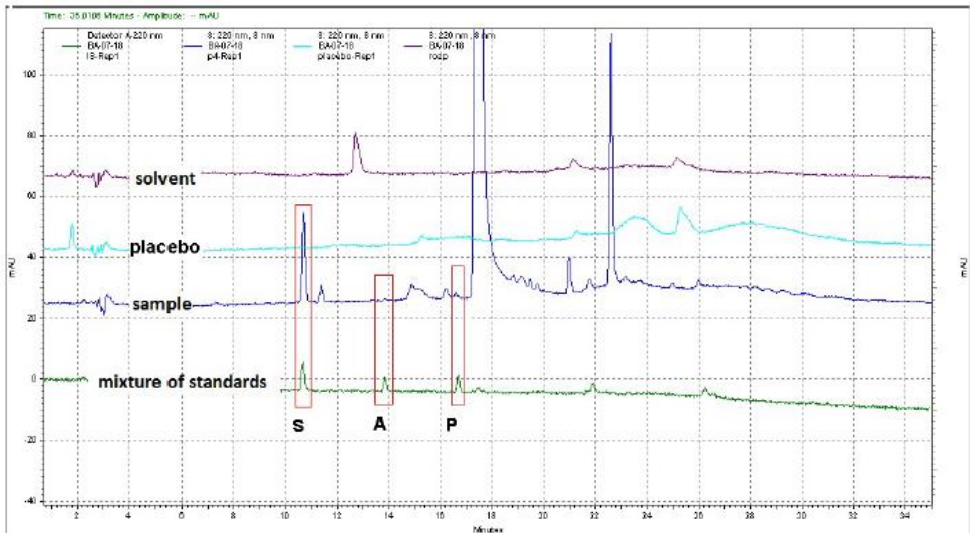
#### Materials and methods

Determination of relevant impurities was performed by HPLC technique with UV/Vis detector using reversed phase column. The validated analytical methods are specific. There are no interferences between the analytes and other components of the specimen. The methods have good precision, accuracy and linearity and fulfil requirements of SANCO/3030/99 rev.4.

#### Validation - Results and discussions

	<b>Atrazine max. 1 g/kg</b>	<b>Propazine max. 10 g/kg</b>	<b>Simazine max. 30 g/kg</b>
<b>Author(s), year</b>	Wołoszynowska, M., 2018 and Wołoszynowska, M., 2020		
<b>Principle of method</b>	HPLC		
<b>Linearity (linear between mg/L) (correlation coefficient, expressed as r)</b>	<p>The linearity of the detector response was assessed using six standard solutions at the concentration range of atrazine from 0.00021 mg/mL to 0.00062 mg/mL. All solutions were analysed twice.</p> <p><math>y = 114\,118\,235x - 419</math></p>	<p>The linearity of the detector response was assessed using six standard solutions at the concentration range of propazine from 0.00028 mg/mL to 0.00071 mg/mL. All solutions were analysed twice.</p> <p><math>y = 171\,529\,773x - 16\,679</math></p>	<p>The linearity of the detector response was assessed using six standard solutions at the concentration range of simazine from 0.00063 mg/mL to 0.0025 mg/mL. All solutions were analysed twice.</p>

	<b>Atrazine max. 1 g/kg</b>	<b>Propazine max. 10 g/kg</b>	<b>Simazine max. 30 g/kg</b>
	$R^2 = 0.9983$ Correlation coefficient should be $R^2 \geq 0.99$ . The obtained result is acceptable	$R^2 = 0.9989$ Correlation coefficient should be $R^2 \geq 0.99$ . The obtained result is acceptable.	$y = 167824326x - 28459$ $R^2 = 0.9982$ Correlation coefficient should be $R^2 \geq 0.99$ . The obtained result is acceptable.
<b>Precision – Repeatability Mean n = 6 (%RSD)</b>	<p>The method repeatability was assessed on the basis of six independent determinations of relevant impurities content in Terbut 500 SC preparation. Because peak of atrazine was not detected above either of the LOQ values in any of the solutions, six weights of placebo (approximately 100 mg) were fortified with atrazine at 10LOQ level (0.00010 mg/mL) were analyzed to determine reproducibility</p> <p>Acceptable relative standard deviation for analyte (~ 0.0015%) is <math>RSDr \leq 7.13\%</math>. The obtained result 6.37% is acceptable.</p>	<p>The method repeatability was assessed on the basis of six independent determinations of relevant impurities content in Terbut 500 SC preparation. Because peak of propazine was not detected above either of the LOQ values in any of the solutions, six weights of placebo (approximately 100 mg) were fortified with propazine at 10LOQ level (0.0002 mg/mL) were analyzed to determine reproducibility</p> <p>Because the RSD value for propazine while determining repeatability of the method for six measurements was higher than the acceptable, in accordance with SANCO document, one of the extreme value was rejected and the RSD for five measurements was calculated. The results obtained was <math>RSD = 3.79\%</math> and is lower than the acceptable relative standard deviation for analyte (~ 0.0018%) <math>RSDr \leq 6.97\%</math>.</p>	<p>The method repeatability was assessed on the basis of six independent determinations of relevant impurities content in Terbut 500 SC preparation.</p> <p>Acceptable relative standard deviation for analyte (~ 0.038%) is <math>RSDr \leq 4.37\%</math>. The obtained result 2.21% is acceptable.</p>
<b>Accuracy n = 12 (% Recovery)</b>	Accuracy of impurities determination in Terbut 500 SC was assessed by recovery value at two levels of concentration. Each of twelve 10 mL volumetric flasks were charged with approximately 20 mg placebo and weighed. About 0.1 mL of the atrazine standard solution at concentration of 0.0272 mg/mL, of the propazine standard solution at concentration of 0.0222 mg/mL and of the simazine standard solution at concentration of 0.0242 mg/mL were added to the each	Accuracy of impurities determination in Terbut 500 SC was assessed by recovery value at two levels of concentration. Each of twelve 10 mL volumetric flasks were charged with approximately 20 mg placebo and weighed. About 0.1 mL of the atrazine standard solution at concentration of 0.0272 mg/mL, of the propazine standard solution at concentration of 0.0222 mg/mL and of the simazine standard solution at concentration of 0.0242 mg/mL were added to the each	Accuracy of impurities determination in Terbut 500 SC was assessed by recovery value at two levels of concentration. Each of twelve 10 mL volumetric flasks were charged with approximately 20 mg placebo and weighed. About 0.1 mL of the atrazine standard solution at concentration of 0.0272 mg/mL, of the propazine standard solution at concentration of 0.0222 mg/mL and of the simazine standard

	<b>Atrazine</b> max. 1 g/kg	<b>Propazine</b> max. 10 g/kg	<b>Simazine</b> max. 30 g/kg
	<p>of the first six flasks and acetonitrile was added up to the volume. To each of the remaining six flasks 0.2 mL of standards solution at the same concentration were added and acetonitrile was added up to the volume. The flasks were put into the ultrasonic bath for 5 min. The concentration of analytes in each solution was calculated from the equation of the calibration curve. Obtained final concentrations were examined and the nominal and calculated contents were compared. For the level I the average recovery was 101.92%, RSD=1.58% For the level II the average recovery was 97.23%, RSD=1.15% Average recovery was 99.57%</p>	<p>of the first six flasks and acetonitrile was added up to the volume. To each of the remaining six flasks 0.2 mL of standards solution at the same concentration were added and acetonitrile was added up to the volume. The flasks were put into the ultrasonic bath for 5 min. The concentration of analytes in each solution was calculated from the equation of the calibration curve. Obtained final concentrations were examined and the nominal and calculated contents were compared. For the level I the average recovery was 97.97%, RSD=2.14% For the level II the average recovery was 93.98%, RSD=0.98% Average recovery was 95.97%</p>	<p>solution at concentration of 0.0242 mg/mL were added to the each of the first six flasks and acetonitrile was added up to the volume. To each of the remaining six flasks 0.2 mL of standards solution at the same concentration were added and acetonitrile was added up to the volume. The flasks were put into the ultrasonic bath for 5 min. The concentration of analytes in each solution was calculated from the equation of the calibration curve. Obtained final concentrations were examined and the nominal and calculated contents were compared. For the level I the average recovery was 123.09%, RSD=0.58% For the level II the average recovery was 80.39%, RSD=0.37% Average recovery was 101.74%</p>
<b>Interference/ Specificity</b>	<p>The chromatograms of placebo, solvent, mixture of standards solutions and the examined specimen solution were performed and superimposed</p> 		
<b>LOQ</b>	<p>The limit of quantification (LOQ) was defined as the lowest quantity of standard (approximately the height of</p>	<p>The limit of quantification (LOQ) was defined as the lowest quantity of standard (approximately the height of</p>	<p>The limit of quantification (LOQ) was defined as the lowest quantity of standard</p>

	<b>Atrazine max. 1 g/kg</b>	<b>Propazine max. 10 g/kg</b>	<b>Simazine max. 30 g/kg</b>
	the peak is a 10-fold amount of the baseline noise) ie. 0.0000119 mg/mL for atrazine  For the impurities at concentration of > 0.1 % the average recovery value should be 100 ± 25 %. The obtained result of 99.57% is acceptable.	the peak is a 10-fold amount of the baseline noise) ie. 0.0000215 mg/mL for propazine  For the impurities at concentration of > 0.1 % the average recovery value should be 100 ± 25 %. The obtained result of 95.97% is acceptable.	(approximately the height of the peak is a 10-fold amount of the baseline noise) ie. 0.0000242 mg/mL for simazine  For the impurities at concentration of > 0.1 % the average recovery value should be 100 ± 25 %. The obtained result of 101.74% is acceptable.
<b>Comment</b>	Acceptable	Acceptable	Acceptable

### 3.3.2 Analytical methods for residues

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

Noticed data gaps are:

- none

<b>Commodity/crop</b>	<b>Supported/ Not supported</b>
Maize	Supported

### 3.4 Mammalian toxicology (Part B, Section 6)

#### Summary of evaluation of the studies on acute toxicity including irritancy and skin sensitisation for TERBUT 500 SC

<b>Type of test, species, model system (Guideline)</b>	<b>Result</b>	<b>Acceptability</b>	<b>Classification (acc. to the criteria in Reg. 1272/2008)</b>	<b>Reference</b>
LD <sub>50</sub> oral, rat (calculation method)	> 2000 mg/kg bw	Yes	None	M. Kolodziej, 2019
LD <sub>50</sub> dermal, rat (calculation method)	> 2000 mg/kg bw	Yes	None	M. Kolodziej, 2019
LC <sub>50</sub> inhalation, rat (calculation method)	> 20 mg/L air	Yes	None	M. Kolodziej, 2019
Skin irritation, (calculation method)	Non Irritant	Yes	None	M. Kolodziej, 2019
Eye corrosive, (calculation method)	Non corrosive	Yes	None	M. Kolodziej, 2019
Skin sensitisation,	Non Sensitising	Yes	Skin Sens 1A, H317	M. Kolodziej,

(calculation method)				2019
Supplementary studies for combinations of plant protection products	No data – not required			

#### Additional toxicological information relevant for classification/labelling of TERBUT 500 SC

	Substance (concentration in product, % w/w)	Classification of the substance (acc. to the criteria in Reg. 1272/2008)	Reference	Classification of product (acc. to the criteria in Reg. 1272/2008)
Toxicological properties of active substance(s) (relevant for classification of product)	Terbutylazine (46 % (w/w))	STOT RE. 2 H373 (≥ 10 %)	DAR Addendum confirmatory data, update November 2015	STOT RE. 2 H373
Toxicological properties of non-active substance(s) (relevant for classification of product)	-	-	-	-
Further toxicological information	-	-	-	-

\* Please use concentration range or concentration limit (e.g. 1-10% or > 1%) as provided in MSDS.

\*\* Material safety data sheet by the applicant

### 3.4.1 Acute toxicity

Acute toxicity studies for TERBUT 500 SC were not evaluated as part of the EU review of terbutylazine. Therefore, all relevant data were provided and are considered adequate.

According to the additivity formula and provisions of the Regulation EC 1272/2008, the formulation TERBUT 500 SC does not requires classification in regards to acute toxicity.

Based on the results of the composition of the product in accordance with the provisions of the Regulation EC 1272/2008, the formulation TERBUT 500 SC requires classification in regards to specific target organ toxicity in case of repetitive exposure as **STOT RE2, H373**.

### 3.4.2 Operator exposure

According to the estimations based on AOEM, the use of Terbut 500 SC **causes acceptable health risk for operator equipped with PPE**. The operator exposure to the active substance amounts to a lower value than the AOEL when **operator is equipped with protective gloves** and work wear during mixing and loading.

Thus, the following sentence regarding the use of PPE is recommended by the evaluator to be placed in the label:

*„Stosować rękawice ochronne oraz odzież roboczą (kombinezon) w trakcie przygotowywania cieczy roboczej oraz wykonywania zabiegu.”*

“Wear protective gloves and work wear (coverall) during mixing/loading and application.”



### 3.4.3 Worker exposure

According to the estimation results, the use of Terbut 500 SC (La Zina 500 SC; Tekno 500 SC) containing terbuthylazine (500 g/L) **does not cause unacceptable health risk for a worker wearing work wear and protective gloves** during field inspection, even in case of 8h exposure.

Nevertheless, it is forbidden to re-enter area treated with Terbut 500 SC (La Zina 500 SC; Tekno 500 SC) until spray deposit on plant surfaces has dried.

Following sentence regarding the use of PPE is recommended by the evaluator to be placed in the **section of precautions for the workers**:

*„Stosować rękawice ochronne oraz odzież roboczą (długie spodnie, koszula z długim rękawem) podczas inspekcji terenu poddanego opryskowi.”*

“Wear protective gloves and workwear (long trousers, long-sleeve shirt) during inspection of treated area.”

### 3.4.4 Bystander and resident exposure

The exposure of bystander and resident (children and adult) to Terbut 500 SC (La Zina 500 SC; Tekno 500 SC) causes acceptable risk to human health if:

- min. 5-meter buffer zone is kept during spraying,
- drift-reduction nozzles are used.

Following sentence regarding the use of risk mitigation measures is recommended by the evaluator to be placed in the section of precautions for bystander/resident:

*„Podczas wykonywania zabiegu należy zachować 5 metrową strefę buforową oraz dysze ograniczające znos.”*

“Keep a 5 meter buffer zone and drift-reduction nozzles during application.”.

## 3.5 Residues and consumer exposure (Part B, Section 7)

### 3.5.1 Residues

#### Stability of residues

According to EFSA, 2011, residues of terbuthylazine and its metabolites in cereal samples are considered to be stable at least for 24 months at -18°C.

#### Metabolism

All metabolism data are active substance data and were evaluated in the EU review. The intended uses are covered by the available metabolism studies reported in the EU.

Plant residue definition for monitoring Terbuthylazine (MT0) (EFSA, 2011, 2020; Reg. (EU) 2021/1795)

Plant residue definition for risk assessment Sum terbuthylazine (MT0), desethyl-terbuthylazine (MT1) and desethyl-hydroxy-terbuthylazine (MT14) (EFSA, 2011, 2017, 2020)

Conversion factor from enforcement to RA Not necessary for maize grains (all residue data <LOQ) (EFSA 2011,2020)

Animal residue definition for monitoring and risk assessment (EFSA Journal 2020;18(1):59800):

Ruminants

Milk: Sum of terbuthylazine and MT1, expressed as terbuthylazine

Muscle, fat, liver and kidney: open

Pigs: not triggered; Poultry: not triggered

#### Magnitude of residues in plants

Proposed GAP: maize, 1 application, BBCH 00-05 and 12-16); Application rate per treatment: 0.5 kg a.s./ha. Proposed GAP is less critical than EU GAP.

Maize is a major crop in Northern Europe. Therefore, 8 NEU trials are required to support the proposed use.

GAP on which MRL/EU a.s. assessment is based: 1 x 0.75 kg as/ha, BBCH 12-16 PHI is not relevant, outdoor

EU unprotected trials results:

E (mg/kg): 8 X <0.02 mg/kg

RA (mg/kg):

MT0: 8x <0.02

MT1: 8x <0.02

MT14: 8x <0.02

Total residues: 8x <0.06 mg/kg

Forage (mg/kg):

MT0: 8x <0.02

MT1: 8x <0.02

MT14: 7x <0.02, 0.03

Total residues: 7x <0.06, 0.07 mg/kg

The data submitted show that no exceedance of the MRL will occur.

The uses are considered acceptable.

#### Magnitude of residues in livestock

The data evaluated during the Annex I inclusion of terbuthylazine are considered sufficient. No further studies are required.

#### Processing studies

EFSA Journal 2020;18(1):5980: *Standard hydrolysis studies are not available and were not considered necessary because residues of terbuthylazine in primary crops were below limit of quantification (LOQ).*

No significant residues, i.e. >0.1 mg/kg, were found in grain and therefore processing studies are not required. No further studies have been performed

#### Magnitude of residues in representative succeeding crops

EFSA Journal 2020;18(1):5980: *Residues in following crops are expected to be low. However, residues of MT1 and MT14 above the LOQ occur in sunflower seeds, rape seeds, sugar beet tops and cereal straw however not at PBIs above 1 year.*

Risk mitigation measures recommended for rotational crops: one year plant-back interval or deep ploughing (more than 20 cm soil mixing) to dilute soil concentrations noting that a ploughing depth of 30 cm reduces soil residues by a factor of 1.5 and a ploughing depth of 40 cm by 50 %. (according to the EFSA

Journal 2020;18(1):5980)

#### Estimation of exposure through diet and other means

The proposed uses of terbuthylazine in the formulation TERBUT 500 SC do not represent unacceptable acute and chronic risks for the consumer.

#### **11/2021:**

The applicant completed GAP with adjuvant use (Hydravance 100 LQ).

Applicant's position is presented below. The position is accepted. Uses with Hydravance 100 LQ is accepted.

Presented unprotected residues studies for which the application was carried out in the BBCH 12-16 at a dose of 1x 0.75 kg as/ha is a worse case than the currently considered application in the BBCH 00 and the maximum dose of 500 g as/ha with addition of soil adjuvant Hydravance 200. Soils can be naturally hydrophobic in nature; this is often exacerbated when the soil is left to dry for an extended time or has a high organic content. Soil hydrophobicity can lead to water pooling and surface run-off, which has a direct consequence on plant growth through restriction of water infiltration and supply to a plants' root zone in the case of turf grass and field crops. Soil quality and physiochemical properties can directly affect the penetration and percolation of water throughout the soil profile. Agrochemical treatments, in particular pre-emergent herbicides are often applied directly to soil, which is naturally a hydrophobic substrate and doesn't interact favorably with water. The hydrophobic nature of the soil can limit the penetration and infiltration of irrigation-based applications. Consequences of such unfavorable interaction can lead to surface run-off and reduced percolation and distribution of water within the soil. The application of Hydravance 200 enhances the penetration of water into hydrophobic soil, improving the wetting and percolation of water throughout the soil profile. The above mentioned properties allow the application of soil herbicides in drier conditions or with a lower water content than usual and they are not intended to change the properties of the active substance or the prepared working liquid, such as surface tension, residence time on the leaf, drop shape, etc. simply better soil wetting in dry soil conditions. Therefore, it can be predicted that application of 500 g as/ha in tank mix with adjuvant Hydravance 200 at BBCH 00 is not a worse case than application of 750 g as/ha at BBCH 12 without adjuvant.

According to the SANCO/11337/2011 rev 3, 24 March 2021 use should be restricted to once every third year on the same field at a maximum rate of 850 g/ha.

### **3.5.2 Consumer exposure**

TMDI (% ADI) according to EFSA PRIMo rev.3.1	18 % (based on NL toddler)
IEDI (% ADI) according to EFSA PRIMo rev.3.1	-
IESTI (% ARfD) according to EFSA PRIMo* rev.3.1	<p>Unprocessed 31,05% Milk: Cattle</p> <p>Processed (children): 5,8% Maize / oil 0,5% Maize / processed (not specified)</p> <p>Processed (adults): 3,2% Maize / oil</p>

### 3.6 Environmental fate and behaviour (Part B, Section 8)

No new studies are presented; all data were reviewed in the EU review of tertbutylazine. Appropriate endpoints from the EU review were used to calculate PECs for TERBUT 500 SC, terbuthylazine and metabolites of active substance in soil, surface water, ground water and air for the intended use patterns

#### 3.6.1 Predicted environmental concentrations in soil (PEC<sub>soil</sub>)

The PEC<sub>soil</sub> of terbuthylazine and metabolites in soil have been assessed with the DT50 values established in the EU review. Based on the recommended use rate of 500 g a.s./ha.

#### 3.6.2 Predicted environmental concentrations in groundwater (PEC<sub>gw</sub>)

According to PEC<sub>gw</sub> modelling with FOCUS PELMO 5.5.3 and FOCUS PEARL 4.4.4 a groundwater contamination of the active substances terbuthylazine at a concentration of  $\geq 0.1 \mu\text{g/L}$  is not expected in use on maize. For the metabolites a groundwater concentration of  $\geq 0.1 \mu\text{g/L}$  can not be excluded be excluded. The risk assessment for metabolites was performed in B-10 section and concluded that there is no risk to consumer.

According to EFSA Journal 2019;17(9):5817, *Updated peer review of the pesticide risk assessment for the active substance terbuthylazine in light of confirmatory submitted:*

- for the metabolites LM5 and MT1, MT13, MT14, the reference values for terbuthylazine are applicable in consumer risk assessment,
- in the case of metabolites LM3 and LM6 the toxicological data were insufficient to determine reference values, what does not allow to finalise the consumer risk assessment.

The results of consumer risk calculations indicate that the use of TERBUT 500 SC (La Zina 500 SC; Tekno 500 SC) **can cause unacceptable risk for toddlers' and infants' health imposed by the exposure to the metabolite MT13** (assuming normal allocation of total daily intake for chemicals acc. to WHO recommendation). The exposure of infants and toddlers to metabolite MT13 contained in the **food and drinking water will exceed the value of ADI** in the presented scenario.

The critical area of concern includes the results of total exposure estimation to **groundwater metabolites of terbuthylazine (MT1, MT13, MT14, LM5) which account to 46.68 % and 69.91 % for toddler and infants, respectively.**

#### 3.6.3 Predicted environmental concentrations in surface water (PEC<sub>sw</sub>)

The PEC surface water of terbuthylazine and metabolites in surface water (PEC<sub>sw</sub> and PEC<sub>sed</sub>) have been assessed with the FOCUS SW and the DT50 water/sediment values established in the EU review. Based on the maximum recommended use rate of 500 g a.s terbuthylazine/ha the maximum PEC values for surface water and sediment have been calculated according to FOCUS Steps 1,2,3 and 4 for the parent and the metabolites.

The results for PEC surface water for the active substance and its metabolites were used for the ecotoxicological risk assessment

### **3.7 Ecotoxicology (Part B, Section 9)**

#### **3.7.1 Effects on terrestrial vertebrates**

TERBUT 500 SC pose no unacceptable risk to birds with according to the label .

TERBUT 500 SC pose no unacceptable risk for mammals only for pre-emergence application.

**TERBUT 500 SC pose an unacceptable risk for long term exposure for post- emergence application for mammals.**

#### **3.7.2 Effects on aquatic species**

Based on the predicted rates of TERBUT 500 SC in aquatic species, the TER values describing the risk for aquatic species following exposure to TERBUT 500 SC according to the GAP of the formulation TERBUT 500 SC achieve the acceptability criteria  $PEC/RAC < 1$  with applying:

- 5 m vegetated buffer zone to surface water bodies

#### **3.7.3 Effects on bees**

All hazard quotients (HQ) are considerably less than 50, indicating that TERBUT 500 SC applied at the maximum use rate in maize poses low risk to bees. According to Commission regulation (EU) No 284/2013, point 10.3.1. (Effects on bees) the Applicant should provide the chronic test on bees and chronic test for larvae for formulated product should be provided when GD for Bees will be applied.

#### **3.7.4 Effects on other arthropod species other than bees**

All hazard quotients (HQ) are considerably less than 2, indicating that TERBUT 500 SC applied at the maximum use rate in cereals winter poses no risk to non-target arthropods. No risk mitigation needed.

#### **3.7.5 Effects on soil organisms**

The long term risk to earthworms and other non-target soil organisms (meso- and macrofauna) was assessed as low for TERBUT 500 SC in a first-tier risk assessment. But a potential high risk was indicated on the long-term time scale for earthworms, but based on Risk refinement for terbuthylazine it can be concluded that application of formulation TERBUT 500 SC is unlikely to pose a long term risk to earthworms and other non-target soil organisms (meso- and macrofauna).

The Predicted Environmental Concentrations of the formulation TERBUT 500 SC and its active substance terbuthylazine in soil are below the concentrations at which no unacceptable effects ( $< 25\%$ ) regarding the soil microbial activity were observed after 28 days or more of exposure, indicating that the proposed use of TERBUT 500 SC poses an acceptable risk to soil microorganisms.

#### **3.7.6 Effects on non-target terrestrial plants**

Based on the predicted rates of TERBUT 500 SC in off-field areas, the TER values describing the risk for non-target plants following exposure to TERBUT 500 SC according to the GAP of the formulation TERBUT 500 SC achieve the acceptability criteria  $TER \geq 5$  with applying:

- 5 m buffer zone or
- 1 m and use of 75% drift reducing nozzles

### **3.7.7 Effects on other terrestrial organisms (Flora and Fauna)**

Not relevant

### **3.8 Relevance of metabolites (Part B, Section 10)**

The metabolites of terbuthylazine are predicted to occur in groundwater at concentrations above 0.1 µg/L (see PART B Section 8 of TERBUT 500 SC). Assessment of the relevance of these metabolites according.

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

TERBUT 500 SC contains terbuthylazine is not approved as a candidate for substitution. Therefore, national comparative assessment is not required.

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

## **Appendix 1    Copy of the product authorization**



## Appendix 2 Copy of the product label

### Sekcja skuteczności:

Etykieta sor La Zina 500 SC może być rozszerzona o zastosowanie przed-wschodowe solo na kukurydzy. Zaakceptowano wszystkie proponowane zapisy w etykiecie.

Posiadacz zezwolenia:

Innvigo Sp. z o.o., Aleje Jerozolimskie 178, 02-486 Warszawa,  
tel. +xxx e-mail: biuro@innvigo.com


### La Zina 500 SC

Środek przeznaczony do stosowania przez użytkowników profesjonalnych

Zawartość substancji czynnych:

terbutyloazyna (terbutylazyna) (związek z grupy triazyn) – 500 g/L (45,25%)

**Zezwolenie MRiRW nr R - 164/2022 z dnia 16.12.2022 r.**  
**zmienione decyzją MRiRW nr / z dnia r.**

	
Uwaga	
H373	Może spowodować uszkodzenie narządów w następstwie długotrwałego lub powtarzanego narażenia.
H410	Działa bardzo toksycznie na organizmy wodne, powodując długotrwałe skutki.
EUH208	Zawiera 1,2-benzoizotiazol-3(2H)-on. Może powodować wystąpienie reakcji alergicznej.
EUH401	W celu uniknięcia zagrożeń dla zdrowia ludzi i środowiska, należy postępować zgodnie z instrukcją użycia.
P260	Nie wdychać rozpylonej cieczy użytkowej.
P314	W przypadku złego samopoczucia zasięgnąć porady/zgłosić się pod opiekę lekarza.
P391	Zebrać wyciek.

### OPIS DZIAŁANIA

HERBICYD selektywny o działaniu układowym, stosowany dogłębowo lub nalistnie, koncentrat w postaci stężonej zawiesiny do rozcieńczania z wodą (SC). Zgodnie z klasyfikacją HRAC substancja czynna terbutyloazyna (terbutylazyna) zaliczana jest do grupy 5 (dawnej grupy C1).



Środek zawiera substancję czynną zaliczaną do grupy inhibitorów fotosyntezy w fotosystemie II. Środek w głównej mierze pobierany jest przez korzenie roślin i w niewielkim stopniu poprzez ich liście, powodując w pierwszej kolejności chlorozy liści widoczne w szczególności w przestrzeniach między nerwowych, a także na brzegach i wierzchołkach. Często symptomy działania nie są nawet widoczne, gdyż obumieranie chwastów następuje w czasie wschodów. Środek najskuteczniej zwalcza chwasty od fazy kiełkowania do fazy 4 liści. Środek ogranicza wschody chwastów przez 5-8 tygodni.

**Stosowanie solo (bez adiuwanta):**

Chwasty wrażliwe	fiólek polny, gwiazdnica pospolita, komosa biała, maruna bezwonna, przytulia czepna, rumianek pospolity, rdestówka powojowata, szarłat szorstki, tasznik pospolity
Chwasty średniowrażliwe	bodziszek drobny, chaber bławatek

**Stosowanie w mieszaninie z adiuwantem**

Chwasty wrażliwe	chaber bławatek, fiólek polny, gwiazdnica pospolita, komosa biała, maruna bezwonna, przytulia czepna, rumianek pospolity, szarłat szorstki, tasznik pospolity
Chwasty średniowrażliwe	rdestówka powojowata
Chwasty średniodoporne	bodziszek drobny

**STOSOWANIE ŚRODKA**

Środek przeznaczony do opryskiwania przy użyciu samobieżnego lub ciągnikowego opryskiwacza polowego.

**Kukurydza**

**Stosowanie solo (bez adiuwanta):**

Maksymalna/zalecana dawka dla jednorazowego zastosowania: 1,0 l/ha.

La Zina 500 SC w dawce 1,0 l/ha.

**Stosowanie w mieszaninie z adiuwantem:**

Maksymalna/zalecana dawka dla jednorazowego zastosowania: 1,0 l/ha.

La Zina 500 SC w dawce 1,0 l/ha + adiuwant Hydronis w stężeniu 0,2 % (0,2 l na 100 l wody).

Termin stosowania: środek stosować po siewie, ale przed wschodami kukurydzy (BBCH 00-05).

Zalecana ilość wody: 200-300 l/ha.

Zalecane opryskiwanie: średniokropliste.

Liczba zabiegów: 1.

**NASTĘPSTWO ROŚLIN**

Środek rozkłada się w glebie w okresie wegetacji do poziomu nie stanowiącego fitotoksycznego zagrożenia dla roślin następnych.

W normalnym cyklu uprawowym, rośliny następne można siać lub sadzić po upływie roku od zastosowania środka lub wcześniej, po wykonaniu orki głębokiej - wymieszaniu gleby na głębokość co najmniej 20 cm.

W przypadku konieczności wcześniejszej likwidacji plantacji potraktowanej środkiem (w wyniku uszkodzenia roślin przez przymrozki, choroby lub szkodniki) konieczna jest roczna przerwa od zastosowania środka do czasu siewu lub sadzenia roślin następnych.

## **ŚRODKI OSTROŻNOŚCI, OKRESY KARENCJI I SZCZEGÓLNE WARUNKI STOSOWANIA**

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

**Na tym samym polu nie stosować tego ani żadnego innego produktu zawierającego terbutyloazynę częściej niż co 3 lata oraz w dawce przekraczającej 850 g/ha.**

1. Środka nie należy stosować na stanowiskach gdzie występują biotypy chwastów o potwierdzonej odporności na substancje czynne zaliczane zgodnie z klasyfikacją HRAC do grupy 5 (dawnej grupy C1) oraz innych grup chemicznych o tym samym co terbutyloazyna (terbutylazyna) mechanizmie działania. 2. Strategia zarządzania odpornością

W celu zminimalizowania ryzyka wystąpienia i rozwoju odporności chwastów na herbicydy należy zgodnie z Dobrą Praktyką Rolniczą:

- postępować ściśle zgodnie ze wskazówkami zawartymi w etykiecie środka ochrony roślin,
- stosować środek w zalecanej dawce, w zalecanym terminie zapewniającym optymalne zwalczanie chwastów,
- dostosować dobór środka chwastobójczego oraz decyzji o wykonaniu zabiegu do panującego (ewentualnie potencjalnego) zachwaszczenia, z uwzględnieniem gatunków dominujących i progów szkodliwości,
- stosować w rotacji i/lub mieszaninie herbicydy działające na kilka procesów życiowych chwastów (o różnym mechanizmie działania),
- stosować herbicyd o danym mechanizmie działania tylko 1 raz w ciągu sezonu wegetacyjnego rośliny uprawnej,
- dostosować zabiegi uprawowe do warunków panujących na polu, zwłaszcza do rodzaju i nasilenia chwastów,
- używać różnych metod kontroli zachwaszczenia, w tym zmianowania upraw itp.,
- używać kwalifikowanego materiału siewnego,
- czyścić maszyny rolnicze, aby zapobiec przenoszeniu materiału rozmnożeniowego chwastów na inne stanowiska,
- informować posiadacza zezwolenia o niesatysfakcjonującym zwalczaniu chwastów,
- w celu uzyskania szczegółowych informacji należy się skontaktować z doradcą, posiadaczem zezwolenia lub przedstawicielem posiadacza zezwolenia.

3. W celu uzyskania najwyższej skuteczności działania środka, dokładnie pokryć cieczą użytkową zwalczane chwasty.

4. Nie zaleca się stosowania środka w liniach wsobnych kukurydzy i na plantacjach nasiennych bez uprzedniego wykonania próbnego zabiegu w celu sprawdzenia, czy nie występują objawy uszkodzenia roślin lub bez skontaktowania się z doradcą albo przedstawicielem posiadacza zezwolenia.

5. Środka nie stosować:

- w kukurydzy cukrowej,
- na rośliny słabe lub uszkodzone przez przymrozki, choroby lub szkodniki, mokre,
- w czasie opadu deszczu lub przed spodziewanym deszczem,
- w temperaturze (mierzonej przy gruncie) poniżej 12°C i powyżej 25°C,
- w czasie południowych upałów i silnego nasłonecznienia,
- po długotrwałej suszy,
- na glebach bardzo przepuszczalnych.

6. Podczas stosowania środka nie dopuścić do:

- znoszenia cieczy użytkowej na sąsiednie rośliny uprawne,
- nakładania się cieczy użytkowej na stykach pasów zabiegowych i uwrociach.

## **SPORZĄDZANIE CIECZY UŻYTKOWEJ**

Ciecz użytkową przygotować bezpośrednio przed zastosowaniem. Przed użyciem zawartością opakowania wstrząsnąć.

Przed przystąpieniem do sporządzania cieczy użytkowej dokładnie ustalić potrzebną jej objętość wraz z ilością środka. Napełniając opryskiwacz postępować zgodnie z instrukcją producenta opryskiwacza. W

przypadku braku instrukcji odmierzoną ilość środka dodać do zbiornika opryskiwacza napełnionego częściowo wodą (z włączonym mieszadłem).

Opróżnione opakowania przepłukać trzykrotnie wodą, a popłuczyny wlać do zbiornika opryskiwacza z cieczą użytkową, uzupełnić wodą do potrzebnej ilości i dokładnie wymieszać.

W przypadku przerw w opryskiwaniu, przed ponownym przystąpieniem do pracy ciecz użytkową w zbiorniku opryskiwacza dokładnie wymieszać.

### **POSTĘPOWANIE Z RESZTKAMI CIECZY UŻYTKOWEJ I MYCIE APARATURY**

Resztki cieczy użytkowej oraz wodę użytą do mycia aparatury należy:

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

Bezpośrednio po pracy aparaturę dokładnie wymyć oraz przepłukać co najmniej dwukrotnie wodą.

### **ŚRODKI OSTROŻNOŚCI DLA OSÓB STOSUJĄCYCH ŚRODEK, PRACOWNIKÓW ORAZ OSÓB POSTRONNYCH**

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

Nie jeść, nie pić ani nie palić podczas używania produktu.

Stosować rękawice ochronne oraz odzież roboczą (kombinezon) w trakcie przygotowywania cieczy użytkowej oraz wykonywania zabiegu.

W czasie oprysku należy zastosować co najmniej 5 m strefę ochronną od zabudowań mieszkalnych/siedlisk oraz osób postronnych. W czasie oprysku należy zastosować techniki zmniejszające znoszenie preparatu (dysze antyznoszeniowe, mała prędkość pojazdu, stabilna pogoda i inne). Stosować rękawice ochronne oraz odzież roboczą podczas inspekcji terenu poddanego opryskowi.

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

### **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. Unikać niezgodnego z przeznaczeniem uwalniania do środowiska.

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: – 5 m od terenów nieużytkowanych rolniczo lub – 1 m od terenów nieużytkowanych rolniczo z równoczesnym zastosowaniem technik redukujących znoszenie cieczy użytkowej podczas zabiegu o 75%.

### **WARUNKI PRZECIHOBYWANIA I BEZPIECZNEGO USUWANIA ŚRODKA OCHRONY ROŚLIN I OPAKOWANIA**

Chronić przed dziećmi.

Środek ochrony roślin przechowywać:

- w oryginalnych opakowaniach,
- w sposób uniemożliwiający kontakt z żywnością, napojami lub paszą, skażenie środowiska oraz dostęp osób trzecich,
- 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 pojemnik lub etykietę.

W przypadku złego samopoczucia zasięgnąć porady/zgłosić się pod opiekę lekarza.

Okres ważności - 2 lata

Data produkcji - .....

Zawartość netto - .....

Nr partii - .....

**Sekcja skuteczności:**

Etykieta śor Tekno 500 SC może być rozszerzona o zastosowanie przed-wschodowe solo na kukurydzy.  
Zaakceptowano wszystkie proponowane zapisy w etykiecie.

Posiadacz zezwolenia:

Innvigo Sp. z o.o., Aleje Jerozolimskie 178, 02-486 Warszawa,  
tel. +xxx, e-mail: biuro@innvigo.com


## Tekno 500 SC

Środek przeznaczony do stosowania przez użytkowników profesjonalnych

Zawartość substancji czynnych:

terbutyloazyna (terbutylazyna) (związek z grupy triazyn) – 500 g/L (45,25%)

**Zezwolenie MRiRW nr R - 164/2022 z dnia 16.12.2022 r.**  
**zmienione decyzją MRiRW nr / z dnia r.**

	
Uwaga	
H373	Może spowodować uszkodzenie narządów w następstwie długotrwałego lub powtarzanego narażenia.
H410	Działa bardzo toksycznie na organizmy wodne, powodując długotrwałe skutki.
EUH208	Zawiera 1,2-benzoizotiazol-3(2H)-on. Może powodować wystąpienie reakcji alergicznej.
EUH401	W celu uniknięcia zagrożeń dla zdrowia ludzi i środowiska, należy postępować zgodnie z instrukcją użycia.
P260	Nie wdychać rozpylonej cieczy użytkowej.
P314	W przypadku złego samopoczucia zasięgnąć porady/zgłosić się pod opiekę lekarza.
P391	Zebrać wyciek.

### OPIS DZIAŁANIA

HERBICYD selektywny o działaniu układowym, stosowany doglebowo lub nalistnie, koncentrat w postaci stężonej zawiesiny do rozcieńczania z wodą (SC). Zgodnie z klasyfikacją HRAC substancja czynna terbutyloazyna (terbutylazyna) zaliczana jest do grupy 5 (dawnej grupy C1).

Środek zawiera substancję czynną zaliczaną do grupy inhibitorów fotosyntezy w fotosystemie II. Środek w głównej mierze pobierany jest przez korzenie roślin i w niewielkim stopniu poprzez ich liście, powodując w pierwszej kolejności chlorozy liści widoczne w szczególności w przestrzeniach między nerwowych, a także na brzegach i wierzchołkach. Często symptomy działania nie są nawet widoczne,

gdyż obumieranie chwastów następuje w czasie wschodów. Środek najskuteczniej zwalcza chwasty od fazy kielkowania do fazy 4 liści. Środek ogranicza wschody chwastów przez 5-8 tygodni.

**Stosowanie solo (bez adiuwanta):**

Chwasty wrażliwe	fiólek polny, gwiazdnica pospolita, komosa biała, maruna bezwonna, przytulia czepna, rumianek pospolity, rdestówka powojowata, szarłat szorstki, tasznik pospolity
Chwasty średniowrażliwe	bodziszek drobny, chaber bławatek

Stosowanie w mieszaninie z adiuwantem

Chwasty wrażliwe	chaber bławatek, fiólek polny, gwiazdnica pospolita, komosa biała, maruna bezwonna, przytulia czepna, rumianek pospolity, szarłat szorstki, tasznik pospolity
Chwasty średniowrażliwe	rdestówka powojowata
Chwasty średnioodporne	bodziszek drobny

**STOSOWANIE ŚRODKA**

Środek przeznaczony do opryskiwania przy użyciu samobieżnego lub ciągnikowego opryskiwacza polowego.

**Kukurydza**

**Stosowanie solo (bez adiuwanta):**

Maksymalna/zalecana dawka dla jednorazowego zastosowania: 1,0 l/ha.

Tekno 500 SC w dawce 1,0 l/ha.

**Stosowanie w mieszaninie z adiuwantem:**

Maksymalna/zalecana dawka dla jednorazowego zastosowania: 1,0 l/ha.

Tekno 500 SC w dawce 1,0 l/ha + adiuwant Hydronis w stężeniu 0,2 % (0,2 l na 100 l wody).

Termin stosowania: środek stosować po siewie, ale przed wschodami kukurydzy (BBCH 00-05).

Zalecana ilość wody: 200-300 l/ha.

Zalecane opryskiwanie: średniokropliste.

Liczba zabiegów: 1.

**NASTĘPSTWO ROŚLIN**

Środek rozkłada się w glebie w okresie wegetacji do poziomu nie stanowiącego fitotoksycznego zagrożenia dla roślin następnych.

W normalnym cyklu uprawowym, rośliny następne można siać lub sadzić po upływie roku od zastosowania środka lub wcześniej, po wykonaniu orki głębokiej - wymieszaniu gleby na głębokość co najmniej 20 cm.

W przypadku konieczności wcześniejszej likwidacji plantacji potraktowanej środkiem (w wyniku uszkodzenia roślin przez przymrozki, choroby lub szkodniki) konieczna jest roczna przerwa od zastosowania środka do czasu siewu lub sadzenia roślin następnych.

**ŚRODKI OSTROŻNOŚCI, OKRESY KARENCJI I SZCZEGÓLNE WARUNKI STOSOWANIA**

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

**Na tym samym polu nie stosować tego ani żadnego innego produktu zawierającego terbutyloazynę częściej niż co 3 lata oraz w dawce przekraczającej 850 g/ha.**

1. Środka nie należy stosować na stanowiskach gdzie występują biotypy chwastów o potwierdzonej odporności na substancje czynne zaliczane zgodnie z klasyfikacją HRAC do grupy 5 (dawnej grupy C1) oraz innych grup chemicznych o tym samym co terbutyloazyna (terbutylazyna) mechanizmie działania. 2. Strategia zarządzania odpornością

W celu zminimalizowania ryzyka wystąpienia i rozwoju odporności chwastów na herbicydy należy zgodnie z Dobrą Praktyką Rolniczą:

- postępować ściśle zgodnie ze wskazówkami zawartymi w etykiecie środka ochrony roślin,
- stosować środek w zalecanej dawce, w zalecanym terminie zapewniającym optymalne zwalczanie chwastów,
- dostosować dobór środka chwastobójczego oraz decyzji o wykonaniu zabiegu do panującego (ewentualnie potencjalnego) zachwaszczenia, z uwzględnieniem gatunków dominujących i progów szkodliwości,
- stosować w rotacji i/lub mieszaninie herbicydy działające na kilka procesów życiowych chwastów (o różnym mechanizmie działania),
- stosować herbicyd o danym mechanizmie działania tylko 1 raz w ciągu sezonu wegetacyjnego rośliny uprawnej,
- dostosować zabiegi uprawowe do warunków panujących na polu, zwłaszcza do rodzaju i nasilenia chwastów,
- używać różnych metod kontroli zachwaszczenia, w tym zmianowania upraw itp.,
- używać kwalifikowanego materiału siewnego,
- czyścić maszyny rolnicze, aby zapobiec przenoszeniu materiału rozmnożeniowego chwastów na inne stanowiska,
- informować posiadacza zezwolenia o niesatysfakcjonującym zwalczaniu chwastów,
- w celu uzyskania szczegółowych informacji należy się skontaktować z doradcą, posiadaczem zezwolenia lub przedstawicielem posiadacza zezwolenia.

3. W celu uzyskania najwyższej skuteczności działania środka, dokładnie pokryć cieczą użytkową zwalczane chwasty.

4. Nie zaleca się stosowania środka w liniach wsobnych kukurydzy i na plantacjach nasiennych bez uprzedniego wykonania próbnego zabiegu w celu sprawdzenia, czy nie występują objawy uszkodzenia roślin lub bez skontaktowania się z doradcą albo przedstawicielem posiadacza zezwolenia.

5. Środka nie stosować:

- w kukurydzy cukrowej,
- na rośliny słabe lub uszkodzone przez przymrozki, choroby lub szkodniki, mokre,
- w czasie opadu deszczu lub przed spodziewanym deszczem,
- w temperaturze (mierzonej przy gruncie) poniżej 12°C i powyżej 25°C,
- w czasie południowych upałów i silnego nasłonecznienia,
- po długotrwałej suszy,
- na glebach bardzo przepuszczalnych.

6. Podczas stosowania środka nie dopuścić do:

- znoszenia cieczy użytkowej na sąsiednie rośliny uprawne,
- nakładania się cieczy użytkowej na stykach pasów zabiegowych i uwrociach.

## **SPORZĄDZANIE CIECZY UŻYTKOWEJ**

Ciecz użytkową przygotować bezpośrednio przed zastosowaniem. Przed użyciem zawartością opakowania wstrząsnąć.

Przed przystąpieniem do sporządzania cieczy użytkowej dokładnie ustalić potrzebną jej objętość wraz z ilością środka. Napełniając opryskiwacz postępować zgodnie z instrukcją producenta opryskiwacza. W przypadku braku instrukcji odmierzoną ilość środka dodać do zbiornika opryskiwacza napełnionego częściowo wodą (z włączonym mieszadłem).

Opróżnione opakowania przepłukać trzykrotnie wodą, a popłuczyny wlać do zbiornika opryskiwacza z cieczą użytkową, uzupełnić wodą do potrzebnej ilości i dokładnie wymieszać.

W przypadku przerw w opryskiwaniu, przed ponownym przystąpieniem do pracy ciecz użytkową w zbiorniku opryskiwacza dokładnie wymieszać.

### **POSTĘPOWANIE Z RESZTKAMI CIECZY UŻYTKOWEJ I MYCIE APARATURY**

Resztki cieczy użytkowej oraz wodę użytą do mycia aparatury należy:

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

Bezpośrednio po pracy aparaturę dokładnie wymyć oraz przepłukać co najmniej dwukrotnie wodą.

### **ŚRODKI OSTROŻNOŚCI DLA OSÓB STOSUJĄCYCH ŚRODEK, PRACOWNIKÓW ORAZ OSÓB POSTRONNYCH**

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

Nie jeść, nie pić ani nie palić podczas używania produktu.

Stosować rękawice ochronne oraz odzież roboczą (kombinezon) w trakcie przygotowywania cieczy użytkowej oraz wykonywania zabiegu.

W czasie oprysku należy zastosować co najmniej 5 m strefę ochronną od zabudowań mieszkalnych/siedlisk oraz osób postronnych. W czasie oprysku należy zastosować techniki zmniejszające znoszenie preparatu (dysze antyznoszeniowe, mała prędkość pojazdu, stabilna pogoda i inne). Stosować rękawice ochronne oraz odzież roboczą podczas inspekcji terenu poddanego opryskowi.

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

### **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. Unikać niezgodnego z przeznaczeniem uwalniania do środowiska.

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: – 5 m od terenów nieużytkowanych rolniczo lub – 1 m od terenów nieużytkowanych rolniczo z równoczesnym zastosowaniem technik redukujących znoszenie cieczy użytkowej podczas zabiegu o 75%.

### **WARUNKI PRZECHOWYWANIA I BEZPIECZNEGO USUWANIA ŚRODKA OCHRONY ROŚLIN I OPAKOWANIA**

Chronić przed dziećmi.

Środek ochrony roślin przechowywać:



- w oryginalnych opakowaniach,
- w sposób uniemożliwiający kontakt z żywnością, napojami lub paszą, skażenie środowiska oraz dostęp osób trzecich,
- 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 pojemnik lub etykietę.

W przypadku złego samopoczucia zasięgnąć porady/zgłosić się pod opiekę lekarza.

Okres ważności - 2 lata

Data produkcji - .....

Zawartość netto - .....

Nr partii - .....

## **Appendix 3   Letter of Access**

## Appendix 4 Lists of data considered for national authorization

### 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
KCP 2.1 KCP 2.4.2 KCP 2.5.1 KCP 2.5.2 KCP 2.6.1 KCP 2.7.1 KCP 2.7.3 KCP 2.7.4 KCP 2.7.5 KCP 2.8.2 KCP 2.8.3.1 KCP 2.8.3.3 KCP 2.8.5.1.1 KCP 2.8.5.1.2. KCP 2.8.7.2 KCP 2.8.2	Al Amin, I.	2018	Terbut 500 SC Part I: Determination of physicochemical properties of the initial preparation, after accelerated and low temperature storage Study code no. BF-07/18 Institute of Industrial Organic Chemistry, Warsaw, Poland GLP Unpublished	N	Y	Data/study report never submitted before to <PL>	Letter of access from: Synthos Agro

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 2.1 KCP 2.4.2 KCP 2.7.3 KCP 2.8.2 KCP 2.8.3.1 KCP 2.8.3.3 KCP 2.8.5.1.1 KCP 2.8.5.1.2. KCP 2.8.7.2 KCP 2.11	Al Amin, I.	2019	Terbut 500 SC Part II: Determination of physicochemical properties after the first year storage Study code no. BF-07/18 Institute of Industrial Organic Chemistry, Warsaw, Poland GLP Unpublished	N	Y	Data/study report never submitted before to <PL>	Letter of access from Synthos Agro
KCP 2.9.1	I. Knapik	2020	Determination of physicochemical properties Study code: ICB/119/2020 ICB Pharma, Jaworzno, Poland GLP Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemiroł Sp. z o.o.
KCP 2.2.1	Śliwa, P.	2018	Terbut 500 SC Determination of explosive properties Study code: BW-14/18 Institute of Industrial Organic Chemistry, Warsaw, Poland GLP Unpublished	N	Y	Data/study report never submitted before to <PL>	Letter of access from Synthos Agro
KCP 2.3.1 KCP 2.3.3	Flasińska, P.	2018	Terbut 500 SC Determination of flash point and auto-ignition temperature	N	Y	Data/study report never	Letter of access

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
			Study No.: BC-31/18 Institute of Industrial Organic Chemistry, Warsaw, Poland GLP Unpublished			submitted before to <PL>	from Synthos Agro
KCP 2.1 KCP 2.4.2 KCP 2.7.3 KCP 2.8.2 KCP 2.8.3.1 KCP 2.8.3.3 KCP 2.8.5.1.1 KCP 2.8.5.1.2. KCP 2.8.7.2 KCP 2.11	E. Arevalo	2020	Terbut 500 SC Part III: Determination of physicochemical properties after the second year of storage Study No.: Bf-07/18 Łukasiewicz Instytut Przemysłu Organicznego, Warsaw, Poland GLP unpublished	N	Y	Data/study report never submitted before to <PL>	Letter of access from Synthos Agro
KCP 2.4.2 KCP 2.7.1 KCP 2.7.3 KCP 2.7.5 KCP 2.8.2 KCP 2.8.3.1 KCP 2.11	E. Arevalo	2020	TERBUT 500 SC Determination of physicochemical properties of the initial preparation and after accelerated storage Study code: BF-07/20 Łukasiewicz Instytut Przemysłu Organicznego, Warsaw, Poland GLP unpublished	N	Y	Data/study report never submitted before to <PL>	Chemiroł Sp. z o.o.

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 2.9.1	I. Knapik	2020	Determination of physicochemical properties Study code: ICB/119/2020 ICB Pharma, Jaworzno, Poland GLP Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemiroł Sp. z o.o.
KCP 2.7.4	J. Zieliński	2021	TERBUT 500 SC - Determination of dispersion spontaneity of the preparation after low temperature storage Study code FB-49/21 Łukasiewicz Instytut Przemysłu Organicznego, Warsaw, Poland GLP unpublished	N	Y	Data/study report never submitted before to <PL>	Chemiroł Sp. z o.o.
KCP 5.1.1/01	M. Wołoszynowska	2018	Terbut 500 SC Method development and validation for the determination of active substance and relevant impurities content in the formulation Study code: BA-07-18 INSTITUTE OF INDUSTRIAL ORGANIC CHEMISTRY, Analytical Department, 6 Annopol Str., 03-236 Warsaw GLP Unpublished	N	Y	Data/study report never submitted before to <PL>	Letter of access from Synthos Agro Sp. z o.o.
KCP 5.1.1/02	M. Wołoszynowska	2020	Ammendment No. 1 to Final Report: Terbut 500 SC Method development and validation for the determination of active substance and relevant impurities content in the formulation Study code: BA-07-18 INSTITUTE OF INDUSTRIAL ORGANIC CHEMISTRY, Analytical Department, 6 Annopol Str., 03-236	N	Y	Data/study report never submitted before to <PL>	Letter of access from Synthos Agro Sp. z o.o.

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
			Warsaw GLP Unpublished				
KCP 6 KCP 6.2	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Poland, 2017.  SGS Polska Sp. z o.o., ul. Jana Kazimierza 3, 01-248 Warszawa, Poland  Report no.: SGS/2017/145/PL01 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Synthos AGRO Sp. z o.o.; Innvigo Sp. z o.o.
KCP 6 KCP 6.2	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Poland, 2017.  SGS Polska Sp. z o.o., ul. Jana Kazimierza 3, 01-248 Warszawa, Poland  Report no.: SGS/2017/145/PL02 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Synthos AGRO Sp. z o.o.; Innvigo Sp. z o.o.
KCP 6 KCP 6.2	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Poland, 2017.  SGS Polska Sp. z o.o., ul. Jana Kazimierza 3, 01-248	N	Y	Data/study report never submitted before to <PL>	Synthos AGRO Sp. z o.o.; Innvigo Sp. z o.o.

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
			Warszawa, Poland  Report no.: SGS/2017/145/PL03 GEP - yes Unpublished				
KCP 6 KCP 6.2	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Poland, 2017.  SGS Polska Sp. z o.o., ul. Jana Kazimierza 3, 01-248 Warszawa, Poland  Report no.: SGS/2017/145/PL04 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Synthos AGRO Sp. z o.o.; Innvigo Sp. z o.o.
KCP 6 KCP 6.2	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Poland, 2017.  SGS Polska Sp. z o.o., ul. Jana Kazimierza 3, 01-248 Warszawa, Poland  Report no.: SGS/2017/145/PL05 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Synthos AGRO Sp. z o.o.; Innvigo Sp. z o.o.
KCP 6 KCP 6.2	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Poland, 2017.	N	Y	Data/study report never submitted	Synthos AGRO Sp. z o.o.;



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
			SGS Polska Sp. z o.o., ul. Jana Kazimierza 3, 01-248 Warszawa, Poland  Report no.: SGS/2017/145/PL06 GEP - yes Unpublished			before to <PL>	Innvigo Sp. z o.o.
KCP 6 KCP 6.2	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Germany, 2017.  SGS Polska Sp. z o.o., ul. Jana Kazimierza 3, 01-248 Warszawa, Poland (SGS Institut Fresenius GmbH, Europa Allec 12, 49685 Emstek, Germany)  Report no.: SGS2017H001GER01 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Synthos AGRO Sp. z o.o.; Innvigo Sp. z o.o.
KCP 6 KCP 6.2	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Germany, 2017.  SGS Polska Sp. z o.o., ul. Jana Kazimierza 3, 01-248 Warszawa, Poland (SGS Institut Fresenius GmbH, Europa Allec 12, 49685 Emstek, Germany)  Report no.: SGS2017H001GER02 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Synthos AGRO Sp. z o.o.; Innvigo Sp. z o.o.

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 6 KCP 6.2	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Germany, 2017.  SGS Polska Sp. z o.o., ul. Jana Kazimierza 3, 01-248 Warszawa, Poland (SGS Institut Fresenius GmbH, Europa Allec 12, 49685 Emstek, Germany)  Report no.: SGS2017H001GER03 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Synthos AGRO Sp. z o.o.; Innvigo Sp. z o.o.
KCP 6 KCP 6.2	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Germany, 2017.  SGS Polska Sp. z o.o., ul. Jana Kazimierza 3, 01-248 Warszawa, Poland (SGS Institut Fresenius GmbH, Europa Allec 12, 49685 Emstek, Germany)  Report no.: SGS2017H001GER04 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Synthos AGRO Sp. z o.o.; Innvigo Sp. z o.o.
KCP 6 KCP 6.2	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Germany, 2017.  SGS Polska Sp. z o.o., ul. Jana Kazimierza 3, 01-248 Warszawa, Poland (SGS Institut Fresenius GmbH, Europa Allec 12, 49685 Emstek, Germany)	N	Y	Data/study report never submitted before to <PL>	Synthos AGRO Sp. z o.o.; Innvigo Sp. z o.o.

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
			Emstek, Germany)  Report no.: SGS2017H001GER05 GEP - yes Unpublished				
KCP 6 KCP 6.2	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Czech Republic, 2017.  SGS Polska Sp. z o.o., ul. Jana Kazimierza 3, 01-248 Warszawa, Poland (AGRITEC vyzku slechteni a sluzby s.r.o., Zemedelska 2520/16, 787 01 Sumperk/Olomoucky kraj, Czech Republic)  Report no.: SGS2017H001CZ01 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Synthos AGRO Sp. z o.o.; Innvigo Sp. z o.o.
KCP 6 KCP 6.2	Sobiech Ł.	2019	Efficacy of Terbut 500 SC in control of weeds in maize cultivation.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agronomy Department; ul. Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/19/K/14/Ce/04 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemiroł

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 6 KCP 6.2	Sobiech Ł.	2019	Efficacy of Terbut 500 SC in control of weeds in maize cultivation  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agronomy Department; ul. Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/19/K/14/Dziem/03 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemiroł
KCP 6 KCP 6.2	Sobiech Ł.	2019	Efficacy of Terbut 500 SC in control of weeds in maize cultivation  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agronomy Department; ul. Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/19/K/14/Gr/01 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemiroł
KCP 6 KCP 6.2	Sobiech Ł.	2019	Efficacy of Terbut 500 SC in control of weeds in maize cultivation  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agronomy Department; ul. Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/19/K/14/Nw/01 GEP - yes	N	Y	Data/study report never submitted before to <PL>	Chemiroł

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
			Unpublished				
KCP 6 KCP 6.2	Sobiech Ł.	2019	Efficacy of Terbut 500 SC in control of weeds in maize cultivation  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agronomy Department; ul. Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/19/K/14/Nw/05 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemirol
KCP 6 KCP 6.2	Sobiech Ł.	2019	Efficacy of Terbut 500 SC in control of weeds in maize cultivation  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agronomy Department; ul. Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/19/K/14/Ra/02 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemirol
KCP 6 KCP 6.2	Rembisz D.	2019	EVALUATION EFFICACY OF TERBUT 500 SC APPLIED IN MAIZE  SynTech Research Poland Sp. z o.o. 69/1 Jagiellonska 85-027 Bydgoszcz Poland	N	Y	Data/study report never submitted before to <PL>	Chemirol

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
			Report no.: SRPL19-148-336HE GEP - yes Unpublished				
KCP 6 KCP 6.2	Rembisz D.	2019	EVALUATION EFFICACY OF TERBUT 500 SC APPLIED IN MAIZE  SynTech Research Poland Sp. z o.o. 69/1 Jagiellonska 85-027 Bydgoszcz Poland  Report no.: SRPL19-147-336HE GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemirol
KCP 6 KCP 6.2	Rembisz D.	2019	EVALUATION EFFICACY OF TERBUT 500 SC APPLIED IN MAIZE  SynTech Research Poland Sp. z o.o. 69/1 Jagiellonska 85-027 Bydgoszcz Poland  Report no.: SRPL19-152-336HE GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemirol
KCP 6 KCP 6.2	Rembisz D.	2019	EVALUATION EFFICACY OF TERBUT 500 SC APPLIED IN MAIZE	N	Y	Data/study report never	Chemirol

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
			SynTech Research Poland Sp. z o.o. 69/1 Jagiellonska 85-027 Bydgoszcz Poland  Report no.: SRPL19-149-336HE GEP - yes Unpublished			submitted before to <PL>	
KCP 6 KCP 6.2	Rembisz D.	2019	EVALUATION EFFICACY OF TERBUT 500 SC APPLIED IN MAIZE  SynTech Research Poland Sp. z o.o. 69/1 Jagiellonska 85-027 Bydgoszcz Poland  Report no.: SRPL19-150-336HE GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemirol
KCP 6 KCP 6.2	Rembisz D.	2019	EVALUATION EFFICACY OF TERBUT 500 SC APPLIED IN MAIZE  SynTech Research Poland Sp. z o.o. 69/1 Jagiellonska 85-027 Bydgoszcz Poland  Report no.: SRPL19-151-336HE	N	Y	Data/study report never submitted before to <PL>	Chemirol

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
			GEP - yes Unpublished				
KCP 6 KCP 6.2	Rembisz D.	2019	EVALUATION EFFICACY OF TERBUT 500 SC APPLIED IN MAIZE  SynTech Research Poland Sp. z o.o. 69/1 Jagiellonska 85-027 Bydgoszcz Poland  Report no.: SRPL19-153-336HE GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemrol
KCP 6 KCP 6.2	Rembisz D.	2019	EVALUATION EFFICACY OF TERBUT 500 SC APPLIED IN MAIZE  SynTech Research Poland Sp. z o.o. 69/1 Jagiellonska 85-027 Bydgoszcz Poland  Report no.: SRPL19-154-336HE GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemrol
KCP 6 KCP 6.2	Rembisz D.	2019	Evaluation of the selectivity of the product Terbut 500 S.C. in maize.  SynTech Research Poland Sp. z o.o.	N	Y	Data/study report never submitted before to <PL>	Chemrol



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
			69/1 Jagiellonska 85-027 Bydgoszcz Poland  Report no.: SRPL19-155-336HS GEP - yes Unpublished			>	
KCP 6 KCP 6.2	Rembisz D.	2019	Evaluation of the selectivity of the product Terbut 500 S.C. in maize.  SynTech Research Poland Sp. z o.o. 69/1 Jagiellonska 85-027 Bydgoszcz Poland  Report no.: SRPL19-156-336HS GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemiroł
KCP 6 KCP 6.2	Rembisz D.	2019	Evaluation of the selectivity of the product Terbut 500 S.C. in maize.  SynTech Research Poland Sp. z o.o. 69/1 Jagiellonska 85-027 Bydgoszcz Poland  Report no.: SRPL19-157-336HS GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemiroł

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 6 KCP 6.2	Rembisz D.	2019	Evaluation of the selectivity of the product Terbut 500 SC  SynTech Research Poland Sp. z o.o. 69/1 Jagiellonska 85-027 Bydgoszcz Poland  Report no.: SRPL19-158-336HS GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemiroł
KCP 6 KCP 6.2	Rembisz D.	2019	Evaluation of the selectivity of the product Terbut 500 SC in maize  SynTech Research Poland Sp. z o.o. 69/1 Jagiellonska 85-027 Bydgoszcz Poland  Report no.: SRPL19-159-336HS GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemiroł
KCP 6 KCP 6.2	Szymańska B.	2019	Evaluation of the phytotoxicity of the product Terbut 500 SC in the cultivation of corn  Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań	N	Y	Data/study report never submitted before to <PL>	Chemiroł

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
			Report no.: AH/19/K/14/BR/2 GEP - yes Unpublished				
KCP 6 KCP 6.2	Szymańska B.	2019	Evaluation of the phytotoxicity of the product Terbut 500 SC in the cultivation of corn  Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/19/K/14/GR/5 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemiroł
KCP 6 KCP 6.2	Szymańska B.	2019	Evaluation of the phytotoxicity of the product Terbut 500 SC in the cultivation of corn  Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/19/K/14/NW/1 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemiroł
KCP 6 KCP 6.2	Szymańska B.	2019	Evaluation of the phytotoxicity of the product Terbut 500 SC in the cultivation of corn  Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637	N	Y	Data/study report never submitted before to <PL>	Chemiroł

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
			Poznań  Report no.: AH/19/K/14/RA/4 GEP - yes Unpublished				
KCP 6 KCP 6.2	Szymańska B.	2019	Evaluation of the phytotoxicity of the product Terbut 500 SC in the cultivation of corn  Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/19/K/14/ZŁ/3 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemirol
KCP 6 KCP 6.2	Wołowicz K.	2023	Efficacy evaluation of herbicide TERBUT 500 SC when applied into maize to control of weeds, Poland, 2023.  A.T. sp. z o. o., ul. Przemysłowa 3, 88-300 Mogilno, Poland  Report no.: A.T Trial No: A.T/2023 /0 11 KK GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemirol
KCP 6 KCP 6.2	Wołowicz K.	2023	Efficacy evaluation of herbicide TERBUT 500 SC when applied into maize to control of weeds, Poland,	N	Y	Data/study report never	Chemirol

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
			2023.  A.T. sp. z o. o., ul. Przemysłowa 3, 88-300 Mogilno, Poland  Report no.: A.T Trial No: A.T/2023 /0 12 KK GEP - yes Unpublished			submitted before to <PL>	
KCP 6 KCP 6.2	Wołowicz K.	2023	Efficacy evaluation of herbicide TERBUT 500 SC when applied into maize to control of weeds, Poland, 2023.  A.T. sp. z o. o., ul. Przemysłowa 3, 88-300 Mogilno, Poland  Report no.: A.T Trial No: A.T/2023 /0 13 KK GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemirol
KCP 6 KCP 6.2	Wołowicz K.	2023	Efficacy evaluation of herbicide TERBUT 500 SC when applied into maize to control of weeds, Poland, 2023.  A.T. sp. z o. o., ul. Przemysłowa 3, 88-300 Mogilno, Poland  Report no.: A.T Trial No: A.T/2023 /0 14 KK	N	Y	Data/study report never submitted before to <PL>	Chemirol

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
			GEP - yes Unpublished				
KCP 6 KCP 6.2	Wołowicz K.	2023	Efficacy evaluation of herbicide TERBUT 500 SC when applied into maize to control of weeds, Poland, 2023.  A.T. sp. z o. o., ul. Przemysłowa 3, 88-300 Mogilno, Poland  Report no.: A.T Trial No: A.T/2023 /0 15 KK GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemirol
KCP 6 KCP 6.2	Sobiech Ł.	2023	Efficacy of the CHR/H/TERBUT 500 SC herbicide in weed control in maize cultivation  Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/23/K/19/Br/02 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemirol
KCP 6 KCP 6.2	Sobiech Ł.	2023	Efficacy of the CHR/H/TERBUT 500 SC herbicide in weed control in maize cultivation  Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-	N	Y	Data/study report never submitted before to <PL>	Chemirol

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
			637 Poznań  Report no.: AH/23/K/19/Ce/04 GEP - yes Unpublished				
KCP 6 KCP 6.2	Sobiech Ł.	2023	Efficacy of the CHR/H/TERBUT 500 SC herbicide in weed control in maize cultivation  Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/23/K/19/Gr/03 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemirol
KCP 6 KCP 6.2	Sobiech Ł.	2023	Efficacy of the CHR/H/TERBUT 500 SC herbicide in weed control in maize cultivation  Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/23/K/19/JW/07 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemirol
KCP 6 KCP 6.2	Sobiech Ł.	2023	Efficacy of the CHR/H/TERBUT 500 SC herbicide in weed control in maize cultivation	N	Y	Data/study report never submitted	Chemirol

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
			Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/23/K/19/Ma/06 GEP - yes Unpublished			before to <PL >	
KCP 6 KCP 6.2	Sobiech Ł.	2023	Efficacy of the CHR/H/TERBUT 500 SC herbicide in weed control in maize cultivation  Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/23/K/19/Mr/05 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL >	Chemirol
KCP 6 KCP 6.2	Sobiech Ł.	2023	Efficacy of the CHR/H/TERBUT 500 SC herbicide in weed control in maize cultivation  Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/23/K/19/Zł/01 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL >	Chemirol
KCP 7	M. Kolodziej	2019	Toxicological classification of product TERBUT 500	N	Y	Data/study	Chemirol



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
			SC 500 SC based on calculation method taking into consideration health hazards of constituent substances. Chemiroł Sp. z o.o non GLP Unpublished			report never submitted before to <PL>	Sp. z o.o.
KCP 9.1.3	K. Florynski	2019	TERBUT 500 SC 500 SC Predicted environmental concentration of terbuthylazine and its metabolites in soil, ground water and surface water. PUH Chemiroł Sp. z o.o. Study code: TERBU-B8 Non GLP Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemiroł
KCP 9.2.4	K. Florynski	2016	TERBUT 500 SC 500 SC Predicted environmental concentration of terbuthylazine and its metabolites in soil, ground water and surface water. PUH Chemiroł Sp. z o.o. Study code: TERBU-B8 Non GLP Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemiroł
KCP 9.2.5	K. Florynski	2016	TERBUT 500 SC 500 SC Predicted environmental concentration of terbuthylazine and its metabolites in soil, ground water and surface water. PUH Chemiroł Sp. z o.o. Study code: TERBU-B8 Non GLP	N	Y	Data/study report never submitted before to <PL>	Chemiroł

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
			Unpublished				
KCP 10.1.1	K. Florynski	2019	TERBUT 500 SC - TER Calculations for Terrestrial Vertebrates Chemirol GLP No Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemirol
KCP 10.1.2	K. Florynski	2019	TERBUT 500 SC - TER Calculations for Terrestrial Vertebrates Chemirol GLP No Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemirol
KCP 10.2/03	E. Kulec-Płoszczyca	2018	Terbut 500 SC Lemna gibba CPCC 310, Growth inhibition test Study code: W/12/18 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna Department of Ecotoxicological Studies Doświadczalna 27, 43-200 Pszczyna, Poland GLP Unpublished	N	Y	Data/study report never submitted before to <PL>	Letter access from Synthos Agro Sp. z o.o.
KCP 10.3/01	P. Parma	2017	Terbut 500 SC Honeybees (Apis mellifera L.), Acute oral Toxicity Test Study code: B/87/17 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna Department of Ecotoxicological Studies Doświadczalna 27, 43-200 Pszczyna, Poland GLP	N	Y	Data/study report never submitted before to <PL>	Letter access from Synthos Agro Sp. z o.o.

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
			Unpublished				
KCP 10.3/02	P. Parma	2017	Terbut 500 SC Honeybees ( <i>Apis mellifera</i> L.), Acute Contact Toxicity Test Study code: B/88/17 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna Department of Ecotoxicological Studies Doświadczalna 27, 43-200 Pszczyna, Poland GLP Unpublished	N	Y	Data/study report never submitted before to <PL>	Letter access from Synthos Agro Sp. z o.o.
KCP 10.3/03	P. Parma	2018	An extended laboratory test for evaluating Terbut 500 SC on the predatory mite, <i>Typhlodromus pyri</i> (Sch.) Study code: B/90/17 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna Department of Ecotoxicological Studies Doświadczalna 27, 43-200 Pszczyna, Poland GLP Unpublished	N	Y	Data/study report never submitted before to <PL>	Letter access from Synthos Agro Sp. z o.o.
KCP 10.3/04	P. Parma	2018	An extended laboratory test for evaluating the effects of Terbut 500 SC on the parasitic wasp, <i>Aphidius rhopalosiphii</i> (De Stefani-Perez) Study code: B/89/17 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna Department of Ecotoxicological Studies Doświadczalna 27, 43-200 Pszczyna, Poland GLP	N	Y	Data/study report never submitted before to <PL>	Letter access from Synthos Agro Sp. z o.o.

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
			Unpublished				
KCP 10.4/01	A. Gierbuszewska	2018	TERBUT 500 SC Earthworm Reproduction Test (Eisenia andrei) Study code: G/284/17 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna Department of Ecotoxicological Studies Doświadczalna 27, 43-200 Pszczyna, Poland GLP Unpublished	N	Y	Data/study report never submitted before to <PL>	Letter access from Synthos Agro Sp. z o.o.
KCP 10.5	A. Gierbuszewska	2018	TERBUT 500 SC Soil Microorganisms: Nitrogen Transformation Test Study code: G/285/17 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna Department of Ecotoxicological Studies Doświadczalna 27, 43-200 Pszczyna, Poland GLP Unpublished	N	Y	Data/study report never submitted before to <PL>	Letter access from Synthos Agro Sp. z o.o.
KCP 10.6/01	W. Dec	2018	TERBUT 500 SC Terrestrial Plant Test: Seedling Emergence and Seedling Growth Test Study code: G/286/17 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna Department of Ecotoxicological Studies Doświadczalna 27, 43-200 Pszczyna, Poland GLP Unpublished	N	Y	Data/study report never submitted before to <PL>	Letter access from Synthos Agro Sp. z o.o.

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 10.6/02	W. Dec	2018	TERBUT 500 SC Terrestrial Plant Test: Vegetative Vigour Test Study code: G/287/17 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna Department of Ecotoxicological Studies Doświadczalna 27, 43-200 Pszczyna, Poland GLP Unpublished	N	Y	Data/study report never submitted before to <PL>	Letter access from Synthos Agro Sp. z o.o.
KCP 6 KCP 6.2	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Poland, 2017.  SGS Polska Sp. z o.o., ul. Jana Kazimierza 3, 01-248 Warszawa, Poland  Report no.: SGS/2017/145/PL01 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Synthos AGRO Sp. z o.o.; Innvigo Sp. z o.o.
KCP 6 KCP 6.2	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Poland, 2017.  SGS Polska Sp. z o.o., ul. Jana Kazimierza 3, 01-248 Warszawa, Poland  Report no.: SGS/2017/145/PL02 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Synthos AGRO Sp. z o.o.; Innvigo Sp. z o.o.

<b>Data point</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Company Report No. Source (where different from company) GLP or GEP status Published or not</b>	<b>Vertebrate study Y/N</b>	<b>Data protection claimed Y/N</b>	<b>Justification if data protection is claimed</b>	<b>Owner</b>
KCP 6 KCP 6.2	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Poland, 2017.  SGS Polska Sp. z o.o., ul. Jana Kazimierza 3, 01-248 Warszawa, Poland  Report no.: SGS/2017/145/PL03 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Synthos AGRO Sp. z o.o.; Innvigo Sp. z o.o.
KCP 6 KCP 6.2	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Poland, 2017.  SGS Polska Sp. z o.o., ul. Jana Kazimierza 3, 01-248 Warszawa, Poland  Report no.: SGS/2017/145/PL04 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Synthos AGRO Sp. z o.o.; Innvigo Sp. z o.o.
KCP 6 KCP 6.2	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Poland, 2017.  SGS Polska Sp. z o.o., ul. Jana Kazimierza 3, 01-248 Warszawa, Poland  Report no.: SGS/2017/145/PL05 GEP - yes	N	Y	Data/study report never submitted before to <PL>	Synthos AGRO Sp. z o.o.; Innvigo Sp. z o.o.

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
			Unpublished				
KCP 6 KCP 6.2	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Poland, 2017.  SGS Polska Sp. z o.o., ul. Jana Kazimierza 3, 01-248 Warszawa, Poland  Report no.: SGS/2017/145/PL06 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Synthos AGRO Sp. z o.o.; Innvigo Sp. z o.o.
KCP 6 KCP 6.2	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Germany, 2017.  SGS Polska Sp. z o.o., ul. Jana Kazimierza 3, 01-248 Warszawa, Poland (SGS Institut Fresenius GmbH, Europa Allec 12, 49685 Emstek, Germany)  Report no.: SGS2017H001GER01 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Synthos AGRO Sp. z o.o.; Innvigo Sp. z o.o.
KCP 6 KCP 6.2	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Germany, 2017.  SGS Polska Sp. z o.o., ul. Jana Kazimierza 3, 01-248 Warszawa, Poland (SGS Institut Fresenius GmbH, Eu-	N	Y	Data/study report never submitted before to <PL>	Synthos AGRO Sp. z o.o.; Innvigo Sp. z o.o.

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
			ropa Allec 12, 49685 Emstek, Germany)  Report no.: SGS2017H001GER02 GEP - yes Unpublished				
KCP 6 KCP 6.2	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Germany, 2017.  SGS Polska Sp. z o.o., ul. Jana Kazimierza 3, 01-248 Warszawa, Poland (SGS Institut Fresenius GmbH, Europa Allec 12, 49685 Emstek, Germany)  Report no.: SGS2017H001GER03 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Synthos AGRO Sp. z o.o.; Innvigo Sp. z o.o.
KCP 6 KCP 6.2	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Germany, 2017.  SGS Polska Sp. z o.o., ul. Jana Kazimierza 3, 01-248 Warszawa, Poland (SGS Institut Fresenius GmbH, Europa Allec 12, 49685 Emstek, Germany)  Report no.: SGS2017H001GER04 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Synthos AGRO Sp. z o.o.; Innvigo Sp. z o.o.
KCP 6	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre	N	Y	Data/study	Synthos



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 6.2			and post emergence into maize, to control of wide range of broad leaves weeds, Germany, 2017.  SGS Polska Sp. z o.o., ul. Jana Kazimierza 3, 01-248 Warszawa, Poland (SGS Institut Fresenius GmbH, Europa Allec 12, 49685 Emstek, Germany)  Report no.: SGS2017H001GER05 GEP - yes Unpublished			report never submitted before to <PL>	AGRO Sp. z o.o.; Innvigo Sp. z o.o.
KCP 6 KCP 6.2	Emilia Walczak	2017	Efficacy evaluation of Terbut 500 SC when applied pre and post emergence into maize, to control of wide range of broad leaves weeds, Czech Republic, 2017.  SGS Polska Sp. z o.o., ul. Jana Kazimierza 3, 01-248 Warszawa, Poland (AGRITEC vyzku slechteni a sluzby s.r.o., Zemedelska 2520/16, 787 01 Sumperk/Olomoucky kraj, Czech Republic)  Report no.: SGS2017H001CZ01 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Synthos AGRO Sp. z o.o.; Innvigo Sp. z o.o.
KCP 6 KCP 6.2	Sobiech Ł.	2019	Efficacy of Terbut 500 SC in control of weeds in maize cultivation.  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agronomy	N	Y	Data/study report never submitted before to <PL>	Chemiroł

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
			Department; ul. Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/19/K/14/Ce/04 GEP - yes Unpublished				
KCP 6 KCP 6.2	Sobiech Ł.	2019	Efficacy of Terbut 500 SC in control of weeds in maize cultivation  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agronomy Department; ul. Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/19/K/14/Dziem/03 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemrol
KCP 6 KCP 6.2	Sobiech Ł.	2019	Efficacy of Terbut 500 SC in control of weeds in maize cultivation  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agronomy Department; ul. Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/19/K/14/Gr/01 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemrol
KCP 6 KCP 6.2	Sobiech Ł.	2019	Efficacy of Terbut 500 SC in control of weeds in maize cultivation	N	Y	Data/study report never submitted	Chemrol

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
			Poznań University of Life Sciences, Research and Education Center Gorzyń, Agronomy Department; ul. Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/19/K/14/Nw/01 GEP - yes Unpublished			before to <PL>	
KCP 6 KCP 6.2	Sobiech Ł.	2019	Efficacy of Terbut 500 SC in control of weeds in maize cultivation  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agronomy Department; ul. Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/19/K/14/Nw/05 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemirol
KCP 6 KCP 6.2	Sobiech Ł.	2019	Efficacy of Terbut 500 SC in control of weeds in maize cultivation  Poznań University of Life Sciences, Research and Education Center Gorzyń, Agronomy Department; ul. Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/19/K/14/Ra/02 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemirol
KCP 6	Rembisz D.	2019	EVALUATION EFFICACY OF TERBUT 500 SC	N	Y	Data/study	Chemirol

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 6.2			APPLIED IN MAIZE  SynTech Research Poland Sp. z o.o. 69/1 Jagiellonska 85-027 Bydgoszcz Poland  Report no.: SRPL19-148-336HE GEP - yes Unpublished			report never submitted before to <PL>	
KCP 6 KCP 6.2	Rembisz D.	2019	EVALUATION EFFICACY OF TERBUT 500 SC APPLIED IN MAIZE  SynTech Research Poland Sp. z o.o. 69/1 Jagiellonska 85-027 Bydgoszcz Poland  Report no.: SRPL19-147-336HE GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemiroł
KCP 6 KCP 6.2	Rembisz D.	2019	EVALUATION EFFICACY OF TERBUT 500 SC APPLIED IN MAIZE  SynTech Research Poland Sp. z o.o. 69/1 Jagiellonska 85-027 Bydgoszcz Poland	N	Y	Data/study report never submitted before to <PL>	Chemiroł

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
			Report no.: SRPL19-152-336HE GEP - yes Unpublished				
KCP 6 KCP 6.2	Rembisz D.	2019	EVALUATION EFFICACY OF TERBUT 500 SC APPLIED IN MAIZE  SynTech Research Poland Sp. z o.o. 69/1 Jagiellonska 85-027 Bydgoszcz Poland  Report no.: SRPL19-149-336HE GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemirol
KCP 6 KCP 6.2	Rembisz D.	2019	EVALUATION EFFICACY OF TERBUT 500 SC APPLIED IN MAIZE  SynTech Research Poland Sp. z o.o. 69/1 Jagiellonska 85-027 Bydgoszcz Poland  Report no.: SRPL19-150-336HE GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemirol
KCP 6 KCP 6.2	Rembisz D.	2019	EVALUATION EFFICACY OF TERBUT 500 SC APPLIED IN MAIZE	N	Y	Data/study report never submitted	Chemirol

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
			SynTech Research Poland Sp. z o.o. 69/1 Jagiellonska 85-027 Bydgoszcz Poland  Report no.: SRPL19-151-336HE GEP - yes Unpublished			before to <PL >	
KCP 6 KCP 6.2	Rembisz D.	2019	EVALUATION EFFICACY OF TERBUT 500 SC APPLIED IN MAIZE  SynTech Research Poland Sp. z o.o. 69/1 Jagiellonska 85-027 Bydgoszcz Poland  Report no.: SRPL19-153-336HE GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL >	Chemiroł
KCP 6 KCP 6.2	Rembisz D.	2019	EVALUATION EFFICACY OF TERBUT 500 SC APPLIED IN MAIZE  SynTech Research Poland Sp. z o.o. 69/1 Jagiellonska 85-027 Bydgoszcz Poland  Report no.: SRPL19-154-336HE GEP - yes	N	Y	Data/study report never submitted before to <PL >	Chemiroł

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
			Unpublished				
KCP 6 KCP 6.2	Rembisz D.	2019	Evaluation of the selectivity of the product Terbut 500 S.C. in maize.  SynTech Research Poland Sp. z o.o. 69/1 Jagiellonska 85-027 Bydgoszcz Poland  Report no.: SRPL19-155-336HS GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemrol
KCP 6 KCP 6.2	Rembisz D.	2019	Evaluation of the selectivity of the product Terbut 500 S.C. in maize.  SynTech Research Poland Sp. z o.o. 69/1 Jagiellonska 85-027 Bydgoszcz Poland  Report no.: SRPL19-156-336HS GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemrol
KCP 6 KCP 6.2	Rembisz D.	2019	Evaluation of the selectivity of the product Terbut 500 S.C. in maize.  SynTech Research Poland Sp. z o.o. 69/1 Jagiellonska	N	Y	Data/study report never submitted before to <PL>	Chemrol

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
			85-027 Bydgoszcz Poland  Report no.: SRPL19-157-336HS GEP - yes Unpublished				
KCP 6 KCP 6.2	Rembisz D.	2019	Evaluation of the selectivity of the product Terbut 500 SC  SynTech Research Poland Sp. z o.o. 69/1 Jagiellonska 85-027 Bydgoszcz Poland  Report no.: SRPL19-158-336HS GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemiroł
KCP 6 KCP 6.2	Rembisz D.	2019	Evaluation of the selectivity of the product Terbut 500 SC in maize  SynTech Research Poland Sp. z o.o. 69/1 Jagiellonska 85-027 Bydgoszcz Poland  Report no.: SRPL19-159-336HS GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemiroł



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 6 KCP 6.2	Szymańska B.	2019	Evaluation of the phytotoxicity of the product Terbut 500 SC in the cultivation of corn  Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/19/K/14/BR/2 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemrol
KCP 6 KCP 6.2	Szymańska B.	2019	Evaluation of the phytotoxicity of the product Terbut 500 SC in the cultivation of corn  Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/19/K/14/GR/5 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemrol
KCP 6 KCP 6.2	Szymańska B.	2019	Evaluation of the phytotoxicity of the product Terbut 500 SC in the cultivation of corn  Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/19/K/14/NW/1 GEP - yes	N	Y	Data/study report never submitted before to <PL>	Chemrol

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
			Unpublished				
KCP 6 KCP 6.2	Szymańska B.	2019	Evaluation of the phytotoxicity of the product Terbut 500 SC in the cultivation of corn  Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/19/K/14/RA/4 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemiroł
KCP 6 KCP 6.2	Szymańska B.	2019	Evaluation of the phytotoxicity of the product Terbut 500 SC in the cultivation of corn  Poznań University of Life Sciences, Research and Education Center Gorzyń, Wojska Polskiego 28, 60-637 Poznań  Report no.: AH/19/K/14/ZŁ/3 GEP - yes Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemiroł
KCP 7	M. Kolodziej	2019	Toxicological classification of product TERBUT 500 SC 500 SC based on calculation method taking into consideration health hazards of constituent substances. Chemiroł Sp. z o.o non GLP Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemiroł Sp. z o.o.
KCP 9.1.3	K. Florynski	2019	TERBUT 500 SC 500 SC Predicted environmental	N	Y	Data/study	Chemiroł

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
			concentration of terbuthylazine and its metabolites in soil, ground water and surface water. PUH Chemirol Sp. z o.o. Study code: TERBU-B8 Non GLP  Unpublished			report never submitted before to <PL>	
KCP 9.2.4	K. Florynski	2016	TERBUT 500 SC 500 SC Predicted environmental concentration of terbuthylazine and its metabolites in soil, ground water and surface water. PUH Chemirol Sp. z o.o. Study code: TERBU-B8 Non GLP  Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemirol
KCP 9.2.5	K. Florynski	2016	TERBUT 500 SC 500 SC Predicted environmental concentration of terbuthylazine and its metabolites in soil, ground water and surface water. PUH Chemirol Sp. z o.o. Study code: TERBU-B8 Non GLP  Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemirol
KCP 10.1.1	K. Florynski	2019	TERBUT 500 SC - TER Calculations for Terrestrial Vertebrates Chemirol GLP No Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemirol

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 10.1.2	K. Florynski	2019	TERBUT 500 SC - TER Calculations for Terrestrial Vertebrates Chemiroł GLP No Unpublished	N	Y	Data/study report never submitted before to <PL>	Chemiroł
KCP 10.2/03	E. Kulec-Płoszczyca	2018	Terbut 500 SC Lemna gibba CPCC 310, Growth inhibition test Study code: W/12/18 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna Department of Ecotoxicological Studies Doświadczalna 27, 43-200 Pszczyna, Poland GLP Unpublished	N	Y	Data/study report never submitted before to <PL>	Letter access from Synthos Agro Sp. z o.o.
KCP 10.2/04	D. Jenota	2019	Terbut 500 SC Navicula pelliculosa SAG 1050-3, Growth inhibition test Study code: W/53/19 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna Department of Ecotoxicological Studies Doświadczalna 27, 43-200 Pszczyna, Poland GLP Unpublished	N	Y	Data/study report never submitted before to <PL>	PUH Chemiroł Sp. z o.o. Synthos Agro Sp. z o.o.
KCP 10.3/01	P. Parma	2017	Terbut 500 SC Honeybees (Apis mellifera L.), Acute oral Toxicity Test Study code: B/87/17 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna Department of	N	Y	Data/study report never submitted before to <PL>	Letter access from Synthos Agro Sp. z o.o.

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
			Ecotoxicological Studies Doświadczalna 27, 43-200 Pszczyna, Poland GLP Unpublished				
KCP 10.3/02	P. Parma	2017	Terbut 500 SC Honeybees ( <i>Apis mellifera</i> L.), Acute Contact Toxicity Test Study code: B/88/17 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna Department of Ecotoxicological Studies Doświadczalna 27, 43-200 Pszczyna, Poland GLP Unpublished	N	Y	Data/study report never submitted before to <PL>	Letter access from Synthos Agro Sp. z o.o.
KCP 10.3/03	P. Parma	2018	An extended laboratory test for evaluating Terbut 500 SC on the predatory mite, <i>Typhlodromus pyri</i> (Sch.) Study code: B/90/17 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna Department of Ecotoxicological Studies Doświadczalna 27, 43-200 Pszczyna, Poland GLP Unpublished	N	Y	Data/study report never submitted before to <PL>	Letter access from Synthos Agro Sp. z o.o.
KCP 10.3/04	P. Parma	2018	An extended laboratory test for evaluating the effects of Terbut 500 SC on the parasitic wasp, <i>Aphidius rhopalosiphii</i> (De Stefani-Perez) Study code: B/89/17 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna Department of	N	Y	Data/study report never submitted before to <PL>	Letter access from Synthos Agro Sp. z o.o.

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
			Ecotoxicological Studies Doświadczenia 27, 43-200 Pszczyna, Poland GLP Unpublished				
KCP 10.3/05	R. Vaughan	2020	TERBUT 50 SC – A rate-response extended laboratory study to determine effects on the ladybird beetle, <i>Coccinella septempunctata</i> (Coleoptera: Coccinellidae) Study code: CHR-19-17 Mambo-Tox A Division of Cawood Scientific Ltd., 2 venture Road, University Science Park, Southampton SO16 7NP, UK GLP Unpublished	N	Y	Data/study report never submitted before to <PL>	PUH Chemirol Sp. z o.o. Synthos Agro Sp z o.o.
KCP 10.3/06	R. Vaughan	2020	TERBUT 50 SC – A rate-response extended laboratory study to determine effects on green lacewing, <i>Chrysoperla carnea</i> (Neuroptera, Chrysopidae) Study code: CHR-19-18 Mambo-Tox A Division of Cawood Scientific Ltd., 2 venture Road, University Science Park, Southampton SO16 7NP, UK GLP Unpublished	N	Y	Data/study report never submitted before to <PL>	PUH Chemirol Sp. z o.o. Synthos Agro Sp z o.o.
KCP 10.3/07	L. Fallowfield	2020	TERBUT 50 SC – An aged-residue extended laboratory study to determine effects on the predatory mite <i>Typhlodromus pyri</i> (Acari: Phytoseiidae) Study code: CHR-19-16 Mambo-Tox A Division of Cawood Scientific Ltd., 2 venture Road, University Science Park, Southampton	N	Y	Data/study report never submitted before to <PL>	PUH Chemirol Sp. z o.o. Synthos Agro Sp z o.o.

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
			SO16 7NP, UK GLP Unpublished				
KCP 10.4/01	A. Gierbuszewska	2018	TERBUT 500 SC Earthworm Reproduction Test (Eisenia andrei) Study code: G/284/17 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna Department of Ecotoxicological Studies Doświadczalna 27, 43-200 Pszczyna, Poland GLP Unpublished	N	Y	Data/study report never submitted before to <PL>	Letter access from Synthos Agro Sp. z o.o.
KCP 10.4/02	M. Wołany	2020	TERBUT 500 SC Collembolan (Folsomia candida) Reproduction Test Study code: G/60/19 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna Department of Ecotoxicological Studies Doświadczalna 27, 43-200 Pszczyna, Poland GLP Unpublished	N	Y	Data/study report never submitted before to <PL>	PUH Chemirol Sp z o.o. Synthos Agro Sp z o.o.
KCP 10.4/03	P. Holewik	2020	TERBUT 500 SC Predatory mite (Hypoaspis (Geolaelaps) aculeifer) reproduction test in soil Study code: G/61/19 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna Department of Ecotoxicological Studies Doświadczalna 27, 43-200 Pszczyna, Poland	N	Y	Data/study report never submitted before to <PL>	PUH Chemirol Sp z o.o. Synthos Agro Sp z o.o.

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
			GLP Unpublished				
KCP 10.5	A. Gierbuszewska	2018	TERBUT 500 SC Soil Microorganisms: Nitrogen Transformation Test Study code: G/285/17 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna Department of Ecotoxicological Studies Doświadczalna 27, 43-200 Pszczyna, Poland GLP Unpublished	N	Y	Data/study report never submitted before to <PL>	Letter access from Synthos Agro Sp. z o.o.
KCP 10.6/01	W. Dec	2018	TERBUT 500 SC Terrestrial Plant Test: Seedling Emergence and Seedling Growth Test Study code: G/286/17 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna Department of Ecotoxicological Studies Doświadczalna 27, 43-200 Pszczyna, Poland GLP Unpublished	N	Y	Data/study report never submitted before to <PL>	Letter access from Synthos Agro Sp. z o.o.
KCP 10.6/02	W. Dec	2018	TERBUT 500 SC Terrestrial Plant Test: Vegetative Vigour Test Study code: G/287/17 Łukasiewicz Research Network – Institute of Industrial Organic Chemistry, Branch Pszczyna Department of Ecotoxicological Studies Doświadczalna 27, 43-200 Pszczyna, Poland GLP	N	Y	Data/study report never submitted before to <PL>	Letter access from Synthos Agro Sp. z o.o.



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

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

<b>Data point</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title</b> <b>Company Report No.</b> <b>Source (where different from company)</b> <b>GLP or GEP status</b> <b>Published or not</b>	<b>Vertebrate study</b> <b>Y/N</b>	<b>Data protection claimed</b> <b>Y/N</b>		<b>Owner</b>
KCP 5.1.2/01	Dieterle, R.	1993	GS13529, Applicability of Multiresidue Method DFG S 19 for determination of GS 13529 in maize( grain and whole plant) Company Report No: 121-92 Novartis Crop Protection AG Basel, Switzerland/Ciba-Geigy Ltd.,Basel Switzerland GLP Unpublished	N	N	-	Syngenta
KCP 5.1.2/02	Ferguson, L.	2009	Terbuthylazine – Independent Laboratory validation of analytical method no. REM 201.01 for the determination of terbuthylazine (GS 13529) and its Metabolites GS26379 and GS28620 in whole Maize Plants and Rape seed. Company Report No: GS13529_10121 Syngenta-Jealott Hill Bracknell UK, Oxon Italia S.p.A.,Pero, Italy Charles River Laboratories, Edinburgh, UK, 30377 GLP Unpublished	N	N	-	Syngenta/ Oxon
KCP 5.1.2/03	Luetolf, W.	1995a	Determination of residues of parent compound by gas chromatography (GC), Soil	N	N	-	Syngenta

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		Owner
			Company Report No: REM 148.05 Novartis Crop Protection AG Basel, Switzerland/Ciba-Geigy Ltd.,Basel Switzrland GLP Unpublished				
KCP 5.1.2/04	Figueiredo J	2003	Determination of GS13529 (Terbuthylazine) and its metabolites GS26379, GS28620 and GS23158 in soil by LC-MS/MS.REM 148.11 Report No: REM 148.11 Syngenta Crop Protection,AG, Basel GLP no Unpublished	N	N	-	Syngenta
KCP 5.1.2/05	Robinson,N.	2004	Residue analytical method for the determiation of residues of terbuthylazine (GS 13529), GS23158, GS26379 and GS28620 in Water Report No: REM 426/01 Syngenta Crop Protection,AG, Basel,Switzerland Syngenta, Jealotts Hill, UK GLP Unpublished	N	N	-	Syngenta
KCP 5.1.2/06	Tribolet, R.	1992	Sampling of air and determination of residues of parent compund by gas chromatography Company Report No: REM 148-03 Novartis Crop Protection AG Basel, Switzerland/Ciba-Geigy Ltd.,Basel Switzrland GLP Unpublished	N	N	-	Syngenta
KCP 5.1.2/07	Tribolet, R.	1996	Validation by analysis of fortified specimens and determination of recoveries. Validation of method REM 148.03 in air Company Report No: 140/95 Novartis Crop Protection AG Basel,	N	N	-	Syngenta

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		Owner
			Switzerland/Ciba-Geigy Ltd.,Basel Switzrland GLP Unpublished				
KCP 5.2/01	Dieterle, R.	1993	GS13529, Applicability of Multiresidue Method DFG S 19 for determination of GS 13529 in maize( grain and whole plant) Company Report No: 121-92 Novartis Crop Protection AG Basel, Switzerland/Ciba-Geigy Ltd.,Basel Switzrland GLP Unpublished	N	N	-	Syngenta
KCP 5.2/02	Ferguson, L.	2009	Terbuthylazine – Independent Laboratory validation of analytical method no. REM 201.01 for the determination of terbuthylazine (GS 13529) and its Metabolites GS26379 and GS28620 in whole Maize Plants and Rape seed. Company Report No: GS13529_10121 Syngenta-Jealott Hill Bracknell UK, Oxon Italia S.p.A.,Pero, Italy Charles River Laboratories, Edinburgh, UK, 30377 GLP Unpublished	N	N	-	Syngenta/ Oxon
KCP 5.2/03	Luetolf, W.	1995a	Determination of residues of parent compund by gas chromatography (GC), Soil Company Report No: REM 148.05 Novartis Crop Protection AG Basel, Switzerland/Ciba-Geigy Ltd.,Basel Switzrland GLP Unpublished	N	N	-	Syngenta
KCP 5.2/04	Figueiredo J	2003	Determination of GS13529 (Terbuthylazine) and its metabolites GS26379, GS28620 and GS23158	N	N	-	Syngenta

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		Owner
			in soil by LC-MS/MS.REM 148.11 Report No: REM 148.11 Syngenta Crop Protection,AG, Basel GLP no Unpublished				
KCP 5.2/05	Todd M.	1999	Validation and determination of residues in soil samples generated from field dissipation trials held in northern Europe. Huntingdon Life Science limited, UK Oxon ItaliaS.P.A, Pero, Italy Report No OXN 228/993260 GLP Unpublished	N	N	-	Oxon
KCP 5.2/06	Todd M.	2002	Terbuthylazine: Validation od methodology for the determination of residues of terbuthylazine and its two major metabolites desethylterbuthylazineand 2-hydroxyterbuthylazine in soil Oxon ItaliaS.P.A, Pero, Italy Report No OXN 229/024125 GLP Unpublished	N	N	-	OXON
KCP 5.2/07	Todd M.	2002	Terbuthylazine: Validation od methodology for the determination of residues of terbuthylazine and its two major metabolites desethylterbuthylazineand 2-hydroxyterbuthylazine in drinking and surface water Oxon ItaliaS.P.A, Pero, Italy Report No OXN 229/024126 GLP Unpublished	N	N	-	OXON

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		Owner
KCP 5.2/08	Robinson,N.	2004	Residue analytical method for the determiation of residues of terbuthylazine (GS 13529), GS23158, GS26379 and GS28620 in Water Report No: REM 426/01 Syngenta Crop Protection,AG, Basel,Switzerland Syngenta, Jealotts Hill, UK GLP Unpublished	N	N	-	Syngenta
KCP 5.2/09	Tribolet, R.	1992	Sampling of air and determination of residues of parent compund by gas chromatography Company Report No: REM 148-03 Novartis Crop Protection AG Basel, Switzerland/Ciba-Geigy Ltd.,Basel Switzzrland GLP Unpublished	N	N	-	Syngenta
KCP 5.2/10	Tribolet, R.	1996	Validation by analysis of fortified specimens and determination of recoveries. Validation of method REM 148.03 in air Company Report No: 140/95 Novartis Crop Protection AG Basel, Switzerland/Ciba-Geigy Ltd.,Basel Switzzrland GLP Unpublished	N	N	-	Syngenta
KCP 5.2/11	Schulz M, and Ullrich-Mitzel A	1995	Analytical method for the determination of terbuthylazine in air RCC AG Itingen, Switzerland Oxon Italia S.P.A, Pero Italy Report no: 385615 GLP Unpublished	N	N	-	Oxon
KCP	Giannone, C.	1998	Stability of residues of terbuthylazine (GS13529)	N	N	-	Syngenta

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		Owner
6.1/01			and GS 26379 (metabolite of terbuthylazine) in plant materials (analytical specimens of wheat grain and wheat straw) stored under deep freeze conditions Novartis Crop Protection AG, Basel, Switzerland Novartis Crop Protection AG, Basel, Switzerland, Report No 136/96 GLP Not Published				
KCP 6.1/02	Giannone, C.	2003	Stability of Residues of GS 28260 (Metabolite of Terbuthylazine) in Deep Freeze Stored Analytical Specimens of Wheat Grain, Beans and Sunflower Seeds Syngenta Crop Protection AG, Basel, Switzerland, Report No 302/01 GLP Not Published	N	N	-	Syngenta
KCP 6.2.1/01	Willems H.	1998	METABOLISM, DISTRIBUTION, AND EXPRESSION OF TERBUTHYLAZINE RESIDUES IN CORN Notox B.V, 's-Hertogenbosch, The Netherlands Oxon Italia S.P.A, Pero, Italy Report-no. 197764 GLP: yes published: no	N	N	-	Oxon
KCP 6.2.2/01	xxx	1970	METABOLISM STUDY OF C14 GS-13529 IN A COW – xxx GLP: no Published: no	Y	N	-	Syngenta/Oxon
KCP 6.3/01	Salvi, M.	2002a	Residue Study with Terbuthylazine (GS 13529) and S-Metolachlor (CGA 77102) in or on Maize in	N	N	-	Syngenta

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		Owner
			Switzerland Syngenta Crop Protection AG, Basel, Switzerland ADME - Bioanalyses, Vergèze, France, Report No 3002/00 GLP Not Published				
KCP 6.3/02	Salvi, M.	2002b	Residue Study with Terbutylazine (GS 13529) and S-Metolachlor (CGA 77102) in or on Maize in Switzerland Syngenta Crop Protection AG, Basel, Switzerland ADME - Bioanalyses, Vergèze, France, Report No 3003/00 GLP Not Published	N	N	-	Syngenta
KCP 6.3/03	Stolze, K	1997a	Residues of CGA 77102 and Terbutylazine (GS 13529) in Maize Novartis Crop Protection AG, Basel, Switzerland Novartis Agro GmbH, Frankfurt, Germany, Report No GR 15596 GLP Not Published	N	N	-	Syngenta
KCP 6.3/04	Stolze, K.	1997b	Residues of CGA 77102 and Terbutylazine (GS 13529) in Maize Novartis Crop Protection AG, Basel, Switzerland Novartis Agro GmbH, Frankfurt, Germany, Report No GR 14196 GLP Not Published	N	N	-	Syngenta

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		Owner
KCP 6.3/05	Mostert, I.	1997a	Magnitude of Residues in Maize and Soil after Application of CGA 77102 and Terbutylazine (GS 13529) as Formulation SC 500 (A-9476 B) Novartis Crop Protection AG, Basel, Switzerland Novartis Crop Protection AG, Basel, Switzerland, Report No 3054/95 GLP Not Published	N	N	-	Syngenta
KCP 6.3/06	Mostert, I.	1997b	Magnitude of Residues in Maize and Soil after Application of CGA 77102 and Terbutylazine (GS 13529) as Formulation SC 500 (A-9476B) Novartis Crop Protection AG, Basel, Switzerland Novartis Crop Protection AG, Basel, Switzerland, Report No 3055/95 GLP Not Published	N	N	-	Syngenta
KCP 6.3/07	Luetolf, W.	1999a	Residue Study with Terbutylazine (GS 13529) in or on Maize in Switzerland Novartis Crop Protection AG, Basel, Switzerland, Report No 3004/96 GLP Not Published	N	N	-	Syngenta
KCP 6.3/08	Luetolf, W.	1999b	Residue Study with Terbutylazine (GS 13529) in or on Maize in Switzerland Novartis Crop Protection AG, Basel, Switzerland, Report No 3005/96 GLP Not Published	N	N	-	Syngenta
KCP 6.3/09	Stolze, K.	2004a	Determination of Residues of CGA 77102 and GS 13529 in Maize after Application of A 12310 A in	N	N	-	Syngenta



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		Owner
			Germany, 2000 Syngenta Crop Protection AG, Basel, Switzerland Syngenta Agro GmbH, Maintal, Germany, Report No gr 06400 GLP Not Published				
KCP 6.3/10	Stolze, K	2004b	Determination of Residues of CGA 77102 and GS 13529 in Maize after Application of A 12310 A in Germany, 2000 Syngenta Crop Protection AG, Basel, Switzerland Syngenta Agro GmbH, Maintal, Germany, Report No gr 06100 GLP Not Published	N	N	-	Syngenta
KCP 6.3/11	Stolze, K.	2004c	Determination of Residues of CGA 77102 and GS 13529 in Maize after Application of A 12310 A in Germany, 2000 Syngenta Crop Protection AG, Basel, Switzerland Syngenta Agro GmbH, Maintal, Germany, Report No gr 06200 GLP Not Published	N	N	-	Syngenta
KCP 6.3/12	Stolze, K	2004d	Determination of Residues of CGA 77102 and GS 13529 in Maize after Application of A 12310 A in Germany, 2000 Syngenta Crop Protection AG, Basel, Switzerland Syngenta Agro GmbH, Maintal, Germany, Report No gr 06300	N	N	-	Syngenta

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		Owner
			GLP Not Published				
KCP 6.3/13	Kuehne-Thu,H.	2003a	Residue Study with Terbutylazine (GS 13529) and S-Metolachlor (CGA 77102) in or on Maize in Switzerland Syngenta Crop Protection AG, Basel, Switzerland, Report No 3037/01 GLP Not Published	N	N	-	Syngenta
KCP 6.3/14	Kuehne-Thu,H.	2003b	Residue Study with Terbutylazine (GS 13529) and S-Metolachlor (CGA 77102) in or on Maize in Switzerland Syngenta Crop Protection AG, Basel, Switzerland, Report No 3038/01 GLP Not Published	N	N	-	Syngenta
KCP 6.3/15	Mostert, I	1997c	Magnitude of residues in maize and silage after application of CGA77102 and GS13529 as formulation SC 500, A-9476 B, Italy Novartis Crop Protection AG, Basel, Switzerland Novartis Crop Protection AG, Basel, Switzerland, Report No 3084/95 GLP Not Published	N	N	-	Syngenta
KCP 6.3/16	Mostert, I.	1997d	Magnitude of Residues in Maize after Application of CGA 77102 and Terbutylazine (GS 13529) as Formulation SC 500 (A-9476 B) Novartis Crop Protection AG, Basel, Switzerland Novartis Crop Protection AG, Basel, Switzerland, Report No 3052/96	N	N	-	Syngenta

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		Owner
			GLP Not Published				
KCP 6.3/17	Mostert, I.	1997e	Magnitude of Residues in Maize and Soil after Application of CGA 77102 and Terbutylazine (GS 13529) as Formulation SC 500 (A-9476 B) Novartis Crop Protection AG, Basel, Switzerland Novartis Crop Protection AG, Basel, Switzerland, Report No 3085/95 GLP Not Published	N	N	-	Syngenta
KCP 6.3/18	Mostert, I.	1997f	Magnitude of Residues in Maize and Soil after Application of CGA 77102 and Terbutylazine (GS 13529) as Formulation SC 500 (A-9476 B) Novartis Crop Protection AG, Basel, Switzerland Novartis Crop Protection AG, Basel, Switzerland, Report No 3053/96 GLP Not Published	N	N	-	Syngenta
KCP 6.3/19	Mostert, I.	1997g	Magnitude of Residues in Maize after Application of CGA 77102 and Terbutylazine (GS 13529) as Formulation SC 500 (A-9476 B) Novartis Crop Protection AG, Basel, Switzerland Novartis Crop Protection AG, Basel, Switzerland, Report No 3051/96 GLP Not Published	N	N	-	Syngenta
KCP 6.3/20	Mostert, I.	1997h	Magnitude of Residues in Maize after Application of CGA 77102 and Terbutylazine (GS 13529) as Formulation SC 500 (A-9476)	N	N	-	Syngenta

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		Owner
			Novartis Crop Protection AG, Basel, Switzerland Novartis Crop Protection AG, Basel, Switzerland, Report No 3083/95 GLP Not Published				
KCP 6.3/21	Salvi, M.	2002c	Residue Study with Terbutylazine (GS 13529) and S-Metolachlor (CGA 77102) in or on Maize in Italy Syngenta Crop Protection AG, Basel, Switzerland ADME - Bioanalyses, Vergèze, France, Report No 3006/00 GLP Not Published	N	N	-	Syngenta
KCP 6.3/22	Salvi, M.	2002d	Residue Study with Terbutylazine (GS 13529) and S-Metolachlor (CGA 77102) in or on Maize in Italy Syngenta Crop Protection AG, Basel, Switzerland ADME - Bioanalyses, Vergèze, France, Report No 3007/00 GLP Not Published	N	N	-	Syngenta
KCP 6.3/23	Salvi, M.	2002e	Residue Study with Terbutylazine (GS 13529) and S-Metolachlor (CGA 77102) in or on Maize in Italy Syngenta Crop Protection AG, Basel, Switzerland ADME - Bioanalyses, Vergèze, France, Report No 3008/00 GLP	N	N	-	Syngenta

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		Owner
			Not Published				
KCP 6.3/24	Salvi, M.	2002f	Residue Study with Terbutylazine (GS 13529) and S-Metolachlor (CGA 77102) in or on Maize in Italy Syngenta Crop Protection AG, Basel, Switzerland ADME - Bioanalyses, Vergèze, France, Report No 3009/00 GLP Not Published	N	N	-	Syngenta
KCP 6.3/25	Kuehne-Thu,H.	2003c	Residue Study with S-Metolachlor (CGA 77102) and Terbutylazine (GS 13529) in or on Maize in Italy Syngenta Crop Protection AG, Basel, Switzerland, Report No 3054/01 GLP Not Published	N	N	-	Syngenta
KCP 6.3/26	Kuehne-Thu,H.	2003d	Residue Study with S-Metolachlor (CGA 77102) and Terbutylazine (GS 13529) in or on Maize in Italy Syngenta Crop Protection AG, Basel, Switzerland, Report No 3053/01 GLP Not Published	N	N	-	Syngenta
KCP 6.3/27	Kuehne-Thu,H.	2003e	Residue Study with S-Metolachlor (CGA 77102) and Terbutylazine (GS 13529) in or on Maize in Italy Syngenta Crop Protection AG, Basel, Switzerland, Report No 3052/01 GLP Not Published	N	N	-	Syngenta

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		Owner
KCP 6.3/28	Kuehne-Thu,H.	2003f	Residue Study with S-Metolachlor (CGA 77102) and Terbutylazine (GS 13529) in or on Maize in Italy Syngenta Crop Protection AG, Basel, Switzerland, Report No 3051/01 GLP Not Published	N	N	-	Syngenta
KCP 6.3/29	Pollmann B.	2001	DETERMINATION OF RESIDUES OF TERBUTHYLAZINE AFTER APPLICATION OF TERBUTHYLAZINE 500 G/L SC AND TERBUTHYLAZINE 75% WG IN MAIZE – 1 SITE IN FRANCE AND 3 SITES IN GERMANY, 2000 ArGe GAB Biotech/IFU, D-75223 Niefern-Öschelbronn Oxon Italia S.P.A, Pero, Italy Report-no. 20001117/E1-FPMA GLP: yes published: no	N	N	-	Oxon
KCP 6.3/30	Freschi G.	2001a	GENERATION OF MAIZE SAMPLES, SUITABLE FOR RESIDUES ANALYSIS FOLLOWING APPLICATION IN POST-EMERGENCE OT TERBUTHYLAZINE 75% WG AND 500 G7L SC Sipcam Experimental Service, Salerano Sul Lambro Lo, Italy Oxon Italia S.P.A, Pero, Italy Report-no. TZ1 GLP: yes published: no	N	N	-	Oxon
KCP 6.3/31	Freschi G.	2000a	RESIDUE ANALYSIS OF TERBUTHYLAZINE IN MAIZE SAMPLES (PLANT)	N	N	-	Oxon

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		Owner
			Sipcam Residue Analysis Unit, Salerano sul Lambro (Lo),Italy Oxon Italia S.P.A, Pero, Italy Report-no. SIP1245 GLP: yes published: no				
KCP 6.3/32	Freschi G.	2000c	RESIDUE ANALYSIS OF TERBUTHYLAZINE IN MAIZE SAMPLES (GRAIN) Sipcam Residue Analysis Unit, Salerano sul Lambro (Lo),Italy Oxon Italia S.P.A, Pero, Italy Report-no. SIP1247 GLP: yes published: no	N	N	-	Oxon
KCP 6.3/32	Domenichini P.	2002	GENERATION OF MAIZE GRAIN OR GREEN SILAGE MAIZE SAMPLES, SUITABLE FOR RESIDUE ANALYSIS FOLLOWING APPLICATION ON POST- EMERGENCE OF TERBUTHYLAZINE 75% WG AND TERBUTHYLAZINE 500 G/L SC (FIELD TRIALS CARRIED OUT IN ITALY IN THE YEAR 2001) Sipcam Experimental Service, Salerano Sul Lambro Lo, Italy Oxon Italia S.P.A, Pero, Italy Report-no. TZ/2 GLP: yes published: no	N	N	-	Oxon
KCP 6.3/33	Freschi G.	2002a	RESIDUE ANALYSIS OF TERBUTHYLAZINE IN MAIZE SAMPLES (GRAIN) Research Centre "E. Gagliardini", Salerano sul Lambro, Italy	N	N	-	Oxon

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		Owner
			Oxon Italia S.P.A, Pero, Italy Report-no. SIP1308 GLP: yes published: no				
KCP 6.3/34	Freschi G.	2002b	RESIDUE ANALYSIS OF TERBUTHYLAZINE IN MAIZE SAMPLES (WHOLE PLANT) Research Centre "E. Gagliardini", Salerano sul Lambro, Italy Oxon Italia S.P.A, Pero, Italy Report-no. SIP1309 GLP: yes published: no	N	N	-	Oxon
KCP 6.3/35	Schulz J	1996	FINAL REPORT ABOUT TESTING THE RESIDUAL BEHAVIOUR OF OXN 924 SC 500 IN MAIZE UNDER FIELD CONDITIONS (FIELD REPORT) Agroplan, Berliner Straße 75, D-47574 Goch-Nierswalde Oxon Italia S.P.A, Pero, Italy Report-no. AGR/RP-H 95/OXN 924 SC 500 GLP: yes published: no	N	N	-	Oxon
KCP 6.3/36	Domenichini P.	2004	DETERMINATION OF THE MAGNITUDE OF THE RESIDUES OF TERBUTHYLAZINE 500G/L SC IN SILAGE MAIZE TREATED IN POST-EMERGENCE Research Centre "E. Gagliardini", Salerano sul Lambro, Italy Oxon Italia S.P.A, Pero, Italy Report-no. SIP1336 GLP: yes published: no	N	N	-	Oxon



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		Owner
KCP 6.6.1/01	Krauss, J.	2000	Outdoor Confined Accumulation Study on Rotational Crops after Bareground Application of [Triazine-(U)-14C]GS 13529 Novartis Crop Protection AG, Basel, Switzerland, Report No 96GN32 GLP Not Published	N	N	-	Syngenta
KCP 6.6.1/02	Salvi, M.	2002 g	Crop Rotation Study with S-Metholachlor (CGA 77102) and Terbutylazine (GS 13529) in or on Follow-up Crop after Treatment of Maize in Italy Syngenta Crop Protection AG, Basel, Switzerland ADME - Bioanalyses, Vergèze, France, Report No 310/00 GLP Not Published	N	N	-	Syngenta
KCP 6.6.1/03	Stolze, K.	2004e	Determination of Residues of CGA 77102 and GS 13529 in Maize and Rotational Crops Winter Barley, Winter Oilseed Rape and Sugar Beet after Application of A 9476 B in Germany, Seasons 2000 and 2001 Syngenta Crop Protection AG, Basel, Switzerland Syngenta Agro GmbH, Maintal, Germany, Report No gr 10200 GLP Not Published	N	N	-	Syngenta
KCP 6.6.1/04	Stolze, K.	2004f	Determination of Residues of CGA 77102 and GS 13529 in Maize and Rotational Crops Winter Barley, Winter Oilseed Rape and Sugar Beet after application of A 9476 B in Germany, Seasons	N	N	-	Syngenta

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		Owner
			2001 and 2002 Syngenta Crop Protection AG, Basel, Switzerland Syngenta Agro GmbH, Maintal, Germany, Report No gmz91001 GLP Not Published				
KCP 6.6.1/05	Sole, C.	2003	Crop Rotation Study with S-Metolachlor (CGA 77102) and Terbutylazine (GS 13529) in or on Follow-up Crop After Treatment of Maize in Spain Syngenta Crop Protection AG, Basel, Switzerland ADME - Bioanalyses, Vergèze, France, Report No 311/00 GLP Not Published	N	N	-	Syngenta
KCP 6.6.1/06	Luetolf, W.	2003	Crop Rotation Study with S-Metholachlor (CGA 77102) and Terbutylazine (GS 13529) in or on follow-up Crop after Treatment of Maize in Switzerland Syngenta Crop Protection AG, Basel, Switzerland, Report No 307/00 GLP Not Published	N	N	-	Syngenta
KCP 6.6.1/07	Mamouni A.	2006	Terbutylazine: Confined accumulation of 14c-terbutylazine in rotational crops. RCC AG., Itingen, Switzerland Oxon Italia S.p.A, Pero, Italy Report-no. A05940 GLP: Yes Published: No	N	N	-	Syngenta

KCP 7.0/01	Verspeek-Rip. C.M.	2002	EVALUATION OF THE MUTAGENIC ACTIVITY OF 2-HYDROXY-TERBUTHYLAZINE IN THE SALMONELLA TYPHIMURIUM REVERSE MUTATION ASSAY AND THE ESCHERICHIA COLI REVERSE MUTATION ASSAY (WITH INDEPENDENT REPEAT) Notox B.V s'Hertogenbosch, The Netherlands Report N. 335543 Oxon Italia S.p.A, Pero, Italy GLP: yes published: no	N	N	-	OXN
KCP 7.0/02	Verspeek-Rip. C.M.	2002	EVALUATION OF THE MUTAGENIC ACTIVITY OF 2-HYDROXY-TERBUTHYLAZINE IN AN <i>IN VITRO</i> MAMMALIAN CELL GENE MUTATION TEST WITH L5178Y MOUSE LYMPHOMA CELLS (WITH INDEPENDENT REPEAT) Notox B.V s'Hertogenbosch, The Netherlands Report N. 335554 Oxon Italia S.p.A, Pero, Italy GLP: yes published: no	N	N	-	OXN
KCP 7.0/03		2002	ASSESSMENT OF ACUTE ORAL TOXICITY WITH 2-HYDROXY-TERBUTHYLAZINE IN THE RAT (ACUTE CLASS METHOD)  Report N. 335532 Oxon Italia S.P.A, Pero, Italy GLP: yes published: no	Y	N	-	OXN

KCP 7.0/04	Meerts I.	2002	EVALUATION OF THE ABILITY OF 2-HYDROXY-TERBUTHYLAZINE TO INDUCE CHROMOSOME ABERRATIONS IN CULTURED PERIPHERAL HUMAN LYMPHOCYTES Notox B.V s'Hertogenbosch, The Netherlands Report N. 335565 Oxon Italia S.p.A, Pero, Italy GLP: yes published: no	N	N	-	OXN
KCP 7.0/05	████████	2003	2-HYDROXY-TERBUTHYLAZINE: REPEATED DOSE 90 DAY ORAL TOXICITY STUDY IN WISTAR RATS ████████ Report N. 3345-01 Oxon Italia S.p.A, Pero, Italy GLP: yes published: no	Y	N	-	OXN
KCP 7.0/06	████████	2001	GS 28620 TECH. (METABOLITE OF GS 13529) - 90-DAY ORAL TOXICITY STUDY IN RATS (ADMINISTRATION IN FOOD), ████████ ████████ 20001005, 14.12.2001	Y	N	-	OXN (SYN access)
KCP 7.0/07	████████	2001	GS 23158 (METABOLITE OF GS 13529): L5178Y TK+/- MOUSE LYMPHOMA MUTATION ASSAY. ██████████ ██ CTL/VV0268/REG/REPT / 20011055, 12.12.2001	Y	N	-	OXN (SYN access)
KCP 7.0/08	Deprade E.	2000	GS 28620 (METABOLITE OF GS 13529) - SALMONELLA AND ESCHERICHIA/MAMMALIAN-MICROSOME MUTAGENICITY TEST, Novartis Crop Protection AG, Stein, Switzerland, 20001001, 21.08.2000	N	N	-	OXN (SYN access)

KCP 7.0/09	Deparade E.	2001	GS 23158 TECH. (METABOLITE OF GS 13529) - SALMONELLA AND ESCHERICHIA/MAMMALIAN-MICROSOME MUTAGENICITY TEST, Syngenta Crop Protection Ag. Stein, Switzerland, 20011054, 12.12.2001	N	N	-	OXN (SYN access)
KCP 7.0/10	Fox V.	2002	GS 23158: IN VITRO CYTOGENETIC ASSAY IN HUMAN LYMPHOCYTES, Central Toxicology Laboratory (CTL), Cheshire, United Kingdom, CTL/SV1087/REG/REPT, 18.01.2002	N	N	-	OXN (SYN access)
KCP 7.0/11	████████	2000	GS 28620 (METABOLITE OF GS 13529): MUTATION AT THE THYMIDINE KINASE (TK) LOCUS OF MOUSE LYMPHOMA L5178Y CELLS (MLA) USING THE MICROTITRE FLUCTUATION TECHNIQUE, ██████████ ██████████ 252/268-D5140 / 20001002, 16.05.2000	N	N	-	OXN (SYN access)
KCP 7.0/12	Marshall R.	2001	GS 28620 (METABOLITE OF GS 13529): INDUCTION OF CHROMOSOME ABERRATIONS IN CULTURED CHINESE HAMSTER OVARY (CHO) CELLS, Covance Laboratories, North Yorkshire, United Kingdom, 252/269-D6172 / 20001003, 07.03.2001	N	N	-	OXN (SYN access)
KCP 7.0/13	████████	2000	GS 28620 TECH. (METABOLITE OF GS 13529) - ACUTE ORAL TOXICITY IN THE RAT (LIMIT TEST), ██████████ ██████████ 20001004, 03.02.2000	Y	N	-	OXN (SYN access)
KCP 7.0/14	████████	2001	GS 23158 TECH. (METABOLITE OF GS 13529) - ACUTE ORAL TOXICITY IN THE RAT (LIMIT TEST), ██████████ ██████████ 20011053, 25.04.2001	Y	N	-	OXN (SYN access)

KCP 7.0/15		2002	GS 23158 TECH. (METABOLITE OF GS 13529) - 90-DAY ORAL TOXICITY STUDY IN RATS (ADMINISTRATION IN FOOD), 20011058, 18.12.2002	Y	N	-	OXN (SYN access)
KCP 7.0/16		2000	GS 28620 tech. (Metabolite of GS 13529) – Acute oral toxicity in the rat (Limit test) Novartis Crop Protection AG, Basel, Switzerland Report No 20001004 GLP Not Published Syngenta File N° GS28620/0005	Y	N	-	SYN
KCP 7.0/17		2001	GS 28620 tech. (Metabolite of GS 13529) – 90-Day oral toxicity study in rats (Administration in food) Syngenta Crop Protection AG, Basel, Switzerland Report No 20001005 GLP Not Published Syngenta File N° GS28620/0012	Y	N	-	SYN
KCP 7.0/18	Deparade E.	2000	GS 28620 (Metabolite of GS 13529) – Salmonella and Escherichia/mammalian-microsome mutagenicity test Novartis Crop Protection AG, Basel, Switzerland Novartis Crop Protection AG, Stein, Switzerland, Report No 20001001 GLP Not Published Syngenta File N° GS28620/0010	N	N	-	SYN

KCP 7.0/19	██████████	2000	GS 28620 (Metabolite of GS 13529): Mutation at the thymidine kinase (tk) locus of mouse lymphoma L5178Y cells (MLA) using the microtitre fluctuation technique Novartis Crop Protection AG, Basel, Switzerland ██████████ ██████████ Report No 252/268-D51409 20001002 GLP Not Published Syngenta File N° GS28620/0007	N	N	-	SYN
KCP 7.0/20	Marshall R.	2001	GS 28620 (Metabolite of GS 13529): Induction of chromosome aberrations in cultured Chinese hamster ovary (CHO) cells Syngenta Crop Protection AG, Basel, Switzerland Covance Laboratories, North Yorkshire, United Kingdom, Report No 252/269-D6172 / 20001003 GLP Not Published Syngenta File N° GS28620/0011	N	N	-	SYN
KCP 7.0/21	██████████	2001	GS 23158 tech. (Metabolite of GS 13529) – Acute oral toxicity in the rat (Limit test) Syngenta Crop Protection AG, Basel, Switzerland ██████████ ██████████ Report No 20011053 GLP Not Published Syngenta File N° GS23158/0010	Y	N	-	SYN

KCP 7.0/22		2002	GS 23158 tech. (Metabolite of GS 13529) – 90-day oral toxicity study in rats (Administration in food) Syngenta Crop Protection AG, Basel, Switzerland Report No 20011058 GLP Not Published Syngenta File N° GS23158/0020	Y	N	-	SYN
KCP 7.0/23	Deparade E.	2001	GS 23158 tech. (Metabolite of GS 13529) – Salmonella and Escherichia/mammalian- microsome mutagenicity test Syngenta Crop Protection AG, Basel, Switzerland Syngenta Crop Protection AG, Stein, Switzerland, Report No 20011054 GLP Not Published Syngenta File N° GS23158/0012	N	N	-	SYN
KCP 7.0/24	Fox V.	2002	GS 23158: In vitro cytogenetic assay in human lymphocytes Syngenta Crop Protection AG, Basel, Switzerland Central Toxicology Laboratory (CTL), Cheshire, United Kingdom, Report No CTL/SV1087/REG/REPT GLP Not Published Syngenta File N° GS23158/0013	N	N	-	SYN



KCP 7.0/25	██████	2001	GS 23158 (Metabolite of GS 13529): L5178Y TK+/- mouse lymphoma mutation assay Syngenta Crop Protection AG, Basel, Switzerland ████████████████████ ████████████████████ Report No CTL/VV0268/REG/REPT / 20011055 GLP Not Published Syngenta File N° GS23158/0011	N	N	-	SYN
KCP 7.0/26	██████	1991	G28273 – Acute oral toxicity study in rats. Novartis Crop Protection AG, Basel, Switzerland ████████████████████ Report No 7801-91 GLP Not Published Syngenta File N° G28273/0034	Y	N	-	SYN
KCP 7.0/27	██████	1991	G28273 Diaminochlorotriazine – 90-day oral toxicity study in rats Novartis Crop Protection AG, Basel, Switzerland ████████████████████ ████████████████████ Report No F-00006 GLP Not Published Syngenta File N° G28273/0017	Y	N	-	SYN
KCP 7.0/28	Deparade E.	1987	G 28273 tech. – Salmonella/mammalian- microsome mutagenicity test Novartis Crop Protection AG, Basel, Switzerland Ciba-Geigy Ltd., Basel, Switzerland, Report No 871372 GLP Not Published Syngenta File N° G28273/0007	N	N	-	SYN

KCP 7.0/29		1988	G28273 technical – Micronucleus test mouse Novartis Crop Protection AG, Basel, Switzerland Report No 871369 GLP Not Published Syngenta File N° G28273/0006	N	N	-	SYN
KCP 7.0/30		2003	GS26379: Acute Oral Toxicity Study in the Rat – Up and Down Procedure Syngenta Crop Protection AG, Basel, Switzerland Report No AR7315 GLP Not Published Syngenta File N° GS26379/0020	Y	N	-	SYN
KCP 7.0/31	Callander R.	2003	GS26379: Bacterial Mutation Assay in S.Typhimurium and E.Coli Syngenta Crop Protection AG, Basel, Switzerland Central Toxicology Laboratory (CTL), Cheshire, United Kingdom, Report No YV6393 GLP Not Published Syngenta File N° GS26379/0021	N	N	-	SYN
KCP 7.0/32	Fox V.	2003	GS 26379: In Vitro Cytogenetic Assay in Human Lymphocytes Syngenta Crop Protection AG, Basel, Switzerland Central Toxicology Laboratory (CTL), Cheshire, United Kingdom, Report No SV1196 GLP Not Published Syngenta File N° GS26379/0022	N	N	-	SYN

KCP 7.0/33		1995	2-year dietary chronic toxicity /oncogenicity study with G34048 technical in rats. Report No. F-00125 GLP: Yes Published: No Syngenta file No. G34048/0046	Y	N	-	SYN
KCP 7.0/34		2004	Assessment of acute oral toxicity with terbuthylazine-desethyl in the rat (acute class method) Oxon Italia S.p.A. GLP, not published File No GS13529_10043	Y	N	-	OXON
KCP 7.0/35	Verspeek-Rip C.M.	2004	Evaluation of the mutagenic activity of terbuthylazine-desethyl in the Salmonella Typhimurium reverse mutation assay and the Escherichia Coli reverse mutation assay (with independent repeat) Oxon Italia S.p.A. NOTOX B.V., Hertogenbosch, Netherlands 400826 GLP, not published File No GS13529_10044	N	N	-	OXON
KCP 7.0/36	Jones E.	2004	GS 26379: L5178Y TK+/- Mouse Lymphoma Mutation Assay Syngenta Crop Protection AG, Basel, Switzerland Central Toxicology Laboratory (CTL), Cheshire, United Kingdom, VV0297-REG GLP, not published File No GS26379/0024	N	N	-	SYN: oxon has data access

YKCP 7.0/37	[REDACTED]	2006	GS26379: Rat Bone Marrow Micronucleus Test Syngenta Crop Protection AG, Basel, Switzerland [REDACTED] GLP, not published File No GS26379/0026	Y	N	-	SYN: oxon has data access
KCP 7.0/38	[REDACTED]	2006a	GS26379: In Vivo Rat Liver Unscheduled DNA Synthesis Assay Syngenta Crop Protection AG, Basel, Switzerland [REDACTED] GLP, not published File No GS26379/0025	Y	N	-	SYN: oxon has data access
KCP 7.0/39	[REDACTED]	1971	90-Day subacute oral toxicity study with GS 26379 technical in albino rats. Novartis Crop Protection AG, Basel, Switzerland [REDACTED] Not GLP, not published File No GS26379/0001	Y	N	-	SYN: oxon has data access
KCP 7.0/40	Verspeek-Rip C.M.	2002a	Evaluation of the mutagenic activity of 2- hydroxy-terbutylazione in the <i>Salmonella</i> <i>typhimurium</i> reverse mutation assay and the <i>Escherichia coli</i> reverse mutation assay (with independent repeat) Notox B.V s'Hertogenbosch, The Netherlands Report N. 335543 Oxon Italia S.p.A, Pero, Italy GLP: Yes published: No	N	N	-	OXON (SYN access)

KCP 7.0/41	Verspeek-Rip C.M.	2002b	Evaluation of the mutagenic activity of 2-hydroxy-terbuthylazine in an <i>in vitro</i> mammalian cell gene mutation test with 15178y mouse lymphoma cells (with independent repeat) Notox B.V s'Hertogenbosch, The Netherlands Report N. 335554 Oxon Italia S.p.A, Pero, Italy GLP: Yes published: No	N	N	-	OXON (SYN access)
KCP 7.0/42	██████████	2002	Assessment of acute oral toxicity with 2-hydroxy-terbuthylazine in the rat (acute class method) ██ Report N. 335532 Oxon Italia S.P.A, Pero, Italy GLP: Yes Published: No	Y	N	-	OXON (SYN access)
KCP 7.0/43	Meerts I.	2002	Evaluation of the ability of 2-hydroxy-terbuthylazine to induce chromosome aberrations in cultured peripheral human lymphocytes. Notox B.V s'Hertogenbosch, The Netherlands Report N. 335565 Oxon Italia S.p.A, Pero, Italy GLP: Yes published: No	N	N	-	OXON (SYN access)
KCP 7.0/44	██████████	2003	2-Hydroxy-terbuthylazine: repeated dose 90 day oral toxicity study in Wistar rats. ██████████ Report N. 3345-01 GLP: Yes Published: No	Y	N	-	OXON (SYN access)

NKCP 7.0/45		2003	GS 13529: Subchronic Neurotoxicity Study in Rats Syngenta Crop Protection AG, Basel, Switzerland [REDACTED] [REDACTED] Report No PR1228 GLP Not Published Syngenta File N° GS13529/1839	N	N	-	SYN
KCP 9.1.1/0 1	Schaffer A. Nicollier G.	1997a	Degradation of <sup>14</sup> C-labelled GS13529 in Gartenacker loam soil under aerobic conditions at 10 and 20 C and under anaerobic/sterile conditions at 20 C. Syngenta Crop Protection AG. Study No. 96AS01. GLP: Yes Published: No Report No. GS135239/1475.	N	N	-	Syngenta
KCP 9.1.1/0 2	Schaffer A. Nicollier G.	1997a	Degradation of <sup>14</sup> C-labelled GS13529 in Gartenacker loam soil under aerobic conditions at 10 and 20 C and under anaerobic/sterile conditions at 20 C. Syngenta Crop Protection AG. Study No. 96AS05. GLP: Yes Published: No Report No. GS135239/1475.	N	N	-	Syngenta

KCP 9.1.1/0 3	Morgenroth, U	2000a	Degradation of [triazine-U-14C]-labelled GS 13529 in two soils under aerobic conditions at 20°C Novartis Crop Protection AG, Basel, Switzerland, Report No 99MO06 GLP Not Published Syngenta File N° GS13529/1673	GS N	N	-	Syngenta
KCP 9.1.1/0 4	Glaenzel, A.	1998	Rate of degradation of GS 13529 in one soil under various conditions Novartis Crop Protection AG, Basel, Switzerland Novartis Crop Protection AG, Basel, Switzerland, Report No 97RP02 GLP Not Published Syngenta File N° GS13529/1582	GS N	N	-	Syngenta
KCP 9.1.1/0 5	Galicía H., Morgenroth, U.	1993	Degradation of 14C-Terbuthylazin Technical (GS 13529): in Four Soils Incubated under Aerobic Conditions Novartis Crop Protection AG, Basel, Switzerland RCC Ltd., Itingen, Switzerland, Report No 243224 GLP Not Published Syngenta File N° GS13529/1219	GS N	N	-	Syngenta

KCP 9.1.1/0 6	Purghart, V.	2000	Terbuthylazine (GS 13529): soil photolysis Novartis Crop Protection AG, Basel, Switzerland Springborn Smithers Laboratories (Europe) AG, Horn, Switzerland, Report No 1047.102.720 GLP Not Published Syngenta File N° GS13529/1706	N	N	-	Syngenta
KCP 9.1.1/0 7	Abildt, U.	1991	Aerobic degradation of GS 13529 in soil under various test-conditions Novartis Crop Protection AG, Basel, Switzerland Ciba-Geigy Ltd., Basel, Switzerland, Report No 38-90 GLP Not Published Syngenta File N° GS13529/0855	N	N	-	Syngenta
KCP 9.1.1/0 8	Reischmann, F.	2000a	Rate of degradation of Triazine-U-14C) labelled GS 26379 in three soils under aerobic laboratory conditions at 20° C Novartis Crop Protection AG, Basel, Switzerland, Report No 99RF04 GLP Not Published Syngenta File N° GS26379/0008	N	N	-	Syngenta



KCP 9.1.1/0 9	Glaenzel, A.	2000a	Rate of degradation of 14C-triazine labelled GS 23158 in three soils under laboratory conditions at 20°C Novartis Crop Protection AG, Basel, Switzerland, Report No 99AG05 GLP Not Published Syngenta File N° GS23158/0006	N	N	-	Syngenta
KCP 9.1.1/1 0	Phaff,R.	2000a	Degradation of 14C-triazine labelled GS 28620 in four soils under aerobic conditions at 20°C Novartis Crop Protection AG, Basel, Switzerland, Report No 99RP05 GLP Not Published Syngenta File N° GS28620/0008	N	N	-	Syngenta
KCP 9.1.1/1 1	Nicollier,G.	1997	Field dissipation of GS 13529 after bareground application of [triazine-(U)-14C] labelled material Novartis Crop Protection AG, Basel, Switzerland Novartis Crop Protection AG, Basel, Switzerland, Report No CMR 08/97 GLP Not Published Syngenta File N° GS13529/1485	N	N	-	Syngenta

KCP 9.1.1/1 2	Offizorz, P., Ressler, H.	1990a	Dissipation rate determination of terbuthylazine Novartis Crop Protection AG, Basel, Switzerland RCC Umweltchemie GmbH & Co. KG, Rossdorf, Germany, Report No 170425 Not GLP Not Published Syngenta File N° GS13529/0924	N	N	-	Syngenta
KCP 9.1.1/1 3	Offizorz, P., Ressler, H.	1990b	Field soil, Dissipation rate determination of terbuthylazine Novartis Crop Protection AG, Basel, Switzerland RCC Umweltchemie GmbH & Co. KG, Rossdorf, Germany, Report No 170414 Not GLP Not Published Syngenta File N° GS13529/0926	N	N	-	Syngenta
KCP 9.1.1/1 4	Offizorz, P., Ressler, H.	1991a	Field soil dissipation rate determination of N terbuthylazine (Exp.-No. 51-90B) Novartis Crop Protection AG, Basel, Switzerland RCC Umweltchemie GmbH & Co. KG, Rossdorf, Germany, Report No 223740 GLP Not Published Syngenta File N° GS13529/0925	N	N	-	Syngenta

KCP 9.1.1/1 5	Offizorz, P., Ressler, H.	1991b	Field soil dissipation rate determination of terbuthylazine (Exp.-No. 25-90B) Novartis Crop Protection AG, Basel, Switzerland RCC Umweltchemie GmbH & Co. KG, Rossdorf, Germany, Report No 223727 GLP Not Published Syngenta File N° GS13529/0927	N	N	-	Syngenta
KCP 9.1.1/1 6	Offizorz, P., Ressler, H.	1991c	Field soil dissipation rate determination of terbuthylazine (Exp.-No. 24-90B) Novartis Crop Protection AG, Basel, Switzerland RCC Umweltchemie GmbH & Co. KG, Rossdorf, Germany, Report No 223716 GLP Not Published Syngenta File N° GS13529/0928	N	N	-	Syngenta
KCP 9.1.1/1 7	Offizorz, P., Ressler, H.	1991d	Field soil dissipation rate determination of terbuthylazine (Exp.-No. 50-90B) Novartis Crop Protection AG, Basel, Switzerland RCC Umweltchemie GmbH & Co. KG, Rossdorf, Germany, Report No 223738 GLP Not Published Syngenta File N° GS13529/0929	N	N	-	Syngenta

KCP 9.1.1/1 8	Evans, P.	2004a	Terbuthylazine (GS13529) and S-Metolachlor (CGA77102): Dissipation Study with Terbuthylazine (GS13529) and S-Metolachlor (CGA77102) in or on Cultivated Soil in France (South) Syngenta Crop Protection AG, Basel, Switzerland Syngenta, Jealott's Hill, United Kingdom, Report No RJ3521B GLP Not Published Syngenta File N° CGA77102/0806	N	N	-	Syngenta
KCP 9.1.1/1 9	Evans, P.	2004b	Terbuthylazine (GS13529) and S-Metolachlor (CGA77102) : Dissipation Study with Terbuthylazine and S-Metolachlor (CGA77102) in or on Cultivated Soil in Italy Syngenta Crop Protection AG, Basel, Switzerland Syngenta, Jealott's Hill, United Kingdom, Report No RJ3522B GLP Not Published Syngenta File N° CGA77102/0807	N	N	-	Syngenta

KCP 9.1.1/2 0	Edwards,P., Evans, P.	2004	Terbuthylazine: Residue Stability Study for Terbuthylazine (GS13529) and its Metabolites (GS26379, GS23158 and GS28620) in Soil under Freezer Storage Conditions - Interim Report Syngenta Crop Protection AG, Basel, Switzerland Syngenta, Jealott's Hill, United Kingdom, Report No RJ3492B GLP Not Published	N	N	-	Syngenta
KCP 9.1.1/2 1	Mamouni A., Morgenroth U.	1995	METABOLISM AND DEGRADATION OF 14C-TERBUTHYLAZINE IN FOUR SOILS INCUBATED UNDER AEROBIC CONDITIONS RCC AG., Itingen, Switzerland Oxon Italia S.P.A, Pero, Italy Report-no. 324505 GLP: yes published: no	N	N	-	Oxon
KCP 9.1.1/2 2	Wonders J.,van Noorloos.B.	2003	ANAEROBIC SOIL METABOLISM OF TERBUTHYLAZINE Notox B.V, 's-Hertogenbosch, The Netherlands Oxon Italia S.P.A, Pero, Italy Report-no. 356906 GLP: yes published: no	N	N	-	Oxon

KCP 9.1.1/2 3	Willems H., Wonders J.	2001	PHOTODEGRADATION OF TERBUTHYLAZINE ON SOIL SURFACES Notox B.V, 's-Hertogenbosch, The Netherlands Oxon Italia S.P.A, Pero, Italy Report-no. 308148 GLP: yes published: no	N	N	-	Oxon
KCP 9.1.1/2 4	Willems H.	1998a	DETERMINATION OF THE METABOLISM AND DEGRADATION RATE OF DESETHYLTERBUTHYLAZINE IN SOIL Notox B.V, 's-Hertogenbosch, The Netherlands Oxon Italia S.P.A, Pero, Italy Report-no. 197786 GLP: yes published: no	N	N	-	Oxon
KCP 9.1.1/2 5	Willems H.	1998b	DETERMINATION OF THE DEGRADATION RATE OF DESETHYLTERBUTHYLAZINE IN THREE SOILS Notox B.V, 's-Hertogenbosch, The Netherlands Oxon Italia S.P.A, Pero, Italy Report-no. 197775 GLP: yes published: no	N	N	-	Oxon
KCP 9.1.1/2 6	Slangen P.J.	2001a	DETERMINATION OF THE DEGRADATION RATE OF 2-HYDROXYTERBUTHYLAZINE IN THREE SOILS Notox B.V, 's-Hertogenbosch, The Netherlands Oxon Italia S.P.A, Pero, Italy Report-no. 308251 GLP: yes published: no	N	N	-	Oxon

KCP 9.1.1/2 6	Glanzel A.	2000	RATE OF DEGRADATION OF 14C- TRIAZINE LABELLED GS 23158 IN THREE SOILS UNDER LABORATORY CONDITIONS AT 20°C. Novartis Crop Protection AG, Basel, Switzerland. Unpublished report No. 99AG05. Study dates: 11 October 1999 – 15 March 2000 Syngenta File N° GS 23158/0006	N	N	-	Oxon
KCP 9.1.1/2 7	Roberts N.L.	1999	CLICK 50 SC: SOIL DISSIPATION WITH TERBUTHYLAZINE IN FRANCE Huntingdon Life Sciences Ltd., Cambridgeshire, UK Oxon Italia S.P.A, Pero, Italy Report-no. OXN 162/983485 GLP: yes published: no	N	N	-	Oxon
KCP 9.1.1/2 8	Roberts N.L.	2000	CLICK 50 SC: SOIL DISSIPATION WITH TERBUTHYLAZINE IN ITALY Huntingdon Life Sciences Ltd., Cambridgeshire, UK Oxon Italia S.P.A, Pero, Italy Report-no. OXN 162/984733 GLP: yes published: no	N	N	-	Oxon
KCP 9.1.1/2 9	Blaschke U.G.	1998	CLICK 50 SC: SOIL DISSIPATION WITH TERBUTHYLAZINE IN GERMANY Huntingdon Life Sciences Ltd., Suffolk, UK Oxon Italia S.P.A, Pero, Italy Report-no. OXN 188/983486 GLP: yes published: no	N	N	-	Oxon

KCP 9.1.1/3 0	Todd M.	1999	2 HYDROXY TERBUTHYLHAZINE: VALIDATION AND DETERMINATION OF RESIDUES IN SOIL SAMPLES GENERATED FROM FIELD DISSIPATION TRIALS HELD IN NORTHERN EUROPE Huntingdon Life Sciences Ltd., Suffolk, UK Oxon Italia S.P.A, Pero, Italy Report-no. OXN 227/993260 GLP: yes published: no	N	N	-	Oxon
KCP 9.1.1/3 1	Lucini L.	2006	LUCINI L. FREEZER STORAGE STABILITY OF TERBUTHYLHAZINE AND ITS METABOLITES DESETHYL- TERBUTHYLHAZINE AND 2-HYDROXY- TERBUTHYLHAZINE IN SOIL INTERIM REPORT 2 YEARS Research Centre "E. Gagliardini" – SIPCAM S.p.A. 26857 Salerano sul Lambro (LO) ITALY Oxon Italia S.P.A, Pero, Italy Report-no. SIP 1433 GLP: yes published: no	N	N	-	Oxon
KCP 9.1.1/3 2	Willems H	2007	Amendment to: Determination of the metabolism and degradation rate of desethylterbuthylazine in soil Oxon Italia, S.p.a, Pero, Italy NOTOX B.V., Hertogenbosch, Netherlands, 197786 GLP, not published	N	N	-	Oxon
KCP 9.1.1/3 3	Hardy I	2007	<i>Terbuthylazine - Overview of FOCUS Kinetic Model- ling of Laboratory and Field Soil Studies and Selec- tion of Modelling Endpoints</i> <i>Syngenta - Jealott's Hill, Bracknell, United Kingdom;</i> <i>Oxon Italia, S.p.a, Pero, Italy</i>	N	N	-	Syn/Oxn



			<i>Battelle UK Ltd., Ongar, United Kingdom, NC/08/006F Not GLP, not published</i>				
KCP 9.1.1/3 4	Hardy I	2008a	Terbuthylazine - Kinetic Modelling Analysis of Data from Aerobic Soil Degradation Studies in Order to Derive DT50 Values and Formation Fractions for Use as Modelling Endpoints Syngenta - Jealott's Hill, Bracknell, United Kingdom; Oxon Italia, S.p.a, Pero, Italy Battelle UK Ltd., Ongar, United Kingdom, NC/08/006A Not GLP, not published	N	N	-	Syn/Oxn
KCP 9.1.1/3 5	Hardy I	2008b	Terbuthylazine - Kinetic Modelling Analysis of Data from Aerobic Soil Degradation Studies With the Metabolite MT1 (GS26379) in Order to Derive DT50 Values and Formation Fractions for Use as Modelling Endpoints Syngenta - Jealott's Hill, Bracknell, United Kingdom; Oxon Italia, S.p.a, Pero, Italy Battelle UK Ltd., Ongar, United Kingdom, NC/08/006B Not GLP, not published	N	N	-	Syn/Oxn
KCP 9.1.1/3 6	Hardy I	2008c	Terbuthylazine - Kinetic Modelling Analysis of Data from Aerobic Soil Degradation Studies With the Metabolite MT13 (GS23158) in Order to Derive DT50 Values for Use as Modelling Endpoints Syngenta - Jealott's Hill, Bracknell, United Kingdom; Oxon Italia S.p.a., Pero, Italy. Battelle UK Ltd., Ongar, United Kingdom, NC/08/006C Not GLP, not published	N	N	-	Syn/Oxn
KCP 9.1.1/3	Hardy I	2008d	Terbuthylazine - Kinetic Modelling Analysis of	N	N	-	Syn/Oxn

7			Data from Aerobic Soil Degradation Studies With the Metabolite MT14 (GS28620) in Order to Derive DT50 Values for Use as Modelling Endpoints Syngenta - Jealott's Hill, Bracknell, United Kingdom; Oxon Italia, S.p.a, Pero, Italy Battelle UK Ltd., Ongar, United Kingdom, NC/08/006D Not GLP, not published				
KCP 9.1.1/38	Hardy I	2008e	Terbutylazine - Kinetic Modelling Analysis of Data from Field Soil Dissipation Studies in Order to Derive Normalised DT50 Values and Formation Fractions for Use as Modelling Endpoints Syngenta - Jealott's Hill, Bracknell, United Kingdom; Oxon Italia, S.p.a, Pero, Italy Battelle UK Ltd., Ongar, United Kingdom, NC/08/006E Not GLP, not published	N	N	-	Syn/Oxn
KCP 9.1.1/39	Lucini L	2007	Characterisation of soils tested in field dissipation studies with Click 50 SC Oxon Italia S.p.a., Pero, Italy , OXO - TBA - AII -0701010202 GLP, not published	N	N	-	Oxon
KCP 9.1.1/40	Trevisan M	2009	Terbutylazine - Multi-site Study for the Monitoring of Terbutylazine and its Metabolites in Soil Syngenta CP S.p.A, Milano, Italy; Oxon Italia S.p.a., Pero, Italy. CERZOO, Piacenza, Italy, CZ/07/020/UCSC/TBASOI/RF, T008420-07 GLP, not published	N	N	-	Syn/Oxn

KCP 9.1.2/0 1	Phaff,R.	2000b	Adsorption / Desorption of GS 13529 in various soils Novartis Crop Protection AG, Basel, Switzerland, Report No 99RP04 GLP Not Published	N	N	-	Syngenta
KCP 9.1.2/0 2	Mueller J.	1991a	Determining the adsorption and desorption of terbuthylazine. Novartis Crop Protection AG. Fraunhofer Institute for Environmental Chemistry and Ecotoxicology. Report No CIB-004/7-13. GLP: Yes Published: No	N	N	-	Syngenta
KCP 9.1.2/0 3	Reischamn F.	2000b	Adsorption / desorption of Triazine-U-14C-labelled GS 26379 in soil lorsch Novartis Crop Protection AG, Basel, Switzerland, Report No 00RF04 GLP Not Published	N	N	-	Syngenta
KCP 9.1.2/0 4	McLaughlin, S., Galicia,H.	1996a	GS 26379: Determination of adsorption and desorption in three soils Novartis Crop Protection AG, Basel, Switzerland Springborn Smithers Laboratories (Europe) AG, Horn, Switzerland, Report No 95-058-1008 GLP Not Published	N	N	-	Syngenta

KCP 9.1.2/0 5	Mueller,J.	1991b	Determination of adsorption/desorption of desethyl-terbuthylazine. Fraunhofer-Institut für Umweltchemie und Ökotoxikologie. Report No. CIB-05/7-13. GLP: Yes Published: No	N	N	-	Syngenta
KCP 9.1.2/0 6	Adam, D.	2000a	Adsorption / desorption of GS 23158 in Borstel soil Novartis Crop Protection AG, Basel, Switzerland, Report No 99DA11 GLP Not Published	N	N	-	Syngenta
KCP 9.1.2/0 7	McLaughlin,S., Galicja,H.	1996b	GS 23158: Determination of adsorption and desorption in three soils Novartis Crop Protection AG, Basel, Switzerland Springborn Smithers Laboratories (Europe) AG, Horn, Switzerland, Report No 95-059-1008 GLP Not Published	N	N	-	Syngenta
KCP 9.1.2/0 8	Morgenroth,U.	2000b	Adsorption / Desorption of Triazine-U-14C labelled GS 28620 in various soils Novartis Crop Protection AG, Basel, Switzerland, Report No 00MO01 GLP Not Published	N	N	-	Syngenta

KCP 9.1.2/0 9	Morgenroth,U.	1995	ADSORPTION/DESORPTION OF 14C- TERBUTHYLAZINE ON FOUR SOILS RCC AG., Itingen, Switzerland Oxon Italia S.P.A, Pero, Italy Report-no. 385582 GLP: yes published: no	N	N	-	Oxon
KCP 9.1.2/1 0	Willems H.	1997	ADSORPTION/DESORPTION OF DESETHYLTERBUTHYLAZINE ON SOIL Notox B.V, 's-Hertogenbosch, The Netherlands Oxon Italia S.P.A, Pero, Italy Report-no. 197797 GLP: yes published: no	N	N	-	Oxon
KCP 9.1.2/1 1	Slangen P.J.	2001b.	ADSORPTION/DESORPTION OF 2- HYDROXYTERBUTHYLAZINE ON SOIL Notox B.V, 's-Hertogenbosch, The Netherlands Oxon Italia S.P.A, Pero, Italy Report-no. 308238 GLP: yes published: no	N	N	-	Oxon
KCP 9.1.2/1 2	McLaughlin S, Lentz N	2008	14C-GS28620 (Desethyl-hydroxy-terbutylazine). Adsorption of 14C-GS28620 (Desethyl-hydroxy- terbutylazine) on Multiple Soils. Syngenta - Jealott's Hill, Bracknell, United Kingdom; ; Oxon Italia S.p.a., Pero, Italy. Springborn Laboratories Inc., Wareham, USA, 1781.6712, T001654-08 GLP, not published	N	N	-	OXON/S YN
KCP	Ulbrich R.	1998	Adsorption / desorption of GS 14260 in various	N	N	-	OXON/S

9.1.2/1 3			soils Novartis Crop Protection AG, Basel, Switzerland Novartis Crop Protection AG, Basel, Switzerland, 97UL03 GLP, not published				YN
KCP 9.1.2/1 4	Simmonds M, Burgess M	2009	Terbuthylazine - Estimation of Adsorption Coefficient (Koc) on Soil of CSCD648241, a Soil Metabolite, by HPLC (OECD 121) Syngenta - Jealott's Hill, Bracknell, United Kingdom; ; Oxon Italia S.p.a., Pero, Italy. Battelle UK Ltd., Ongar, United Kingdom, NC/09/009, T000357-09 GLP, not published	N	N	-	OXON/S YN
KCP 9.1.2/1 5	Simmonds M, Burgess M	2009a	Terbuthylazine - Estimation of Adsorption Coefficient (Koc) on Soil of CSCD692760, a Soil Metabolite, by HPLC (OECD 121) Syngenta - Jealott's Hill, Bracknell, United Kingdom; Oxon Italia S.p.a., Pero, Italy. Battelle UK Ltd., Ongar, United Kingdom, NC/09/008, T000514-09 GLP, not published	N	N	-	OXON/S YN
KCP 9.1.2/1 6	Simmonds M, Burgess M	2009b	Terbuthylazine - Estimation of Adsorption Coefficient (Koc) on Soil of CSCD692760, a Soil Metabolite, by HPLC (OECD 121) Syngenta - Jealott's Hill, Bracknell, United Kingdom; Oxon Italia S.p.a., Pero, Italy. Battelle UK Ltd., Ongar, United Kingdom, NC/09/008, T000514-09 GLP, not published	N	N	-	OXON/S YN

KCP 9.1.2/1 7	Ellgehausen, H.	1988	Leaching model study with GS 13529 in four soil types Novartis Crop Protection AG, Basel, Switzerland Ciba-Geigy Ltd., Basel, Switzerland, Report No 14-88 GLP Not Published	N	N	-	Syngenta
KCP 9.1.2/1 8	Hassink,J.	1992	Outdoor lysimeter study on Terbutylazine Novartis Crop Protection AG, Basel, Switzerland ITA Fraunhofer-Inst., Hannover, Germany, Report No CIB-04/7-11 GLP Not Published	N	N	-	Syngenta
KCP 9.1.2/1 9	Burgener A.	1995	14C-Terbutylazine/14C-Atrazine: Mobility and Degradation in Soil in Outdoor Lysimeters Novartis Crop Protection AG, Basel, Switzerland RCC Ltd., Itingen, Switzerland, Report No 321581 GLP Not Published	N	N	-	Syngenta

KCP 9.1.2/2 0	Resseler, H.	2004	Leaching behaviour of terbuthylazine in a long term field experiment from 1990 to 2001 in Germany Syngenta Crop Protection AG, Basel, Switzerland C.A.U. GmbH, Dreieich, Germany, Report No HR012004 Not GLP Not Published	N	N	-	Syngenta
KCP 9.1.2/2 1	Haaman, H., Gramatte, A. Brodsky.J.	1993	Experimental examinations of the behaviour of terbuthylazine in soil Novartis Crop Protection AG. Battelle Institut, Frankfurt Germany. Report No BE-FLA-20-89-1 GLP: Yes Published: No	N	N	-	Syngenta
KCP 9.1.2/2 2	Ricker, I., Haamann H.	1993	Experimental studies on the behaviour of terbuthylazine in soil – 1992. Battelle Europe, Battelle Institut e.V. Frankfurt/M Germany & C.A.U. GmbH, Frankfurt/M Germany. Report No. T01 FR01. GLP: Yes Published: No	N	N	-	Syngenta



KCP 9.1.2/2 3	Lutolf, W. Haamann, H.	1998	Behaviour of terbuthylazine in soil after application of formulation SC 500 (A-6144C) and potential leaching to groundwater – Determination of terbuthylazine and GS26379. C.A.U. GmbH, Dreieich Germany (field part) & Novartis Crop Protection AG (Laboratory part). Report No. 3053/94. GLP: Yes Published: No	N	N	-	Syngenta
KCP 9.1.2/2 4	Lutolf, W	1999	Behaviour of terbuthylazine and metolachlor in soil after application of formulation SC 500 (A-6144C) and potential leaching to groundwater. C.A.U. GmbH, Dreieich Germany (field part) & Novartis Crop Protection AG, (Laboratory part). Report No. 3060/95. GLP: Yes Published: No	N	N	-	Syngenta
KCP 9.1.2/2 5	Lutolf, W	2000	Behaviour of terbuthylazine and metolachlor in soil after application of formulation SC 500 (A-6144C) and potential leaching to groundwater. C.A.U. GmbH, Dreieich Germany (field part) & Novartis Crop Protection AG. Report No. 3070/96. GLP: Yes Published: No	N	N	-	Syngenta

KCP 9.1.2/2 6	Lutolf, W	2000b	Study on the leaching of terbuthylazine and metolachlor in a long term field experiment. C.A.U. GmbH, Dreieich Germany (field part) & Novartis Crop Protection AG. Report No. 3140/97. GLP: Yes Published: No	N	N	-	Syngenta
KCP 9.1.2/2 7	Lutolf, W	2002	Study on the leaching of terbuthylazine and metolachlor in a long term field experiment. C.A.U. GmbH, Dreieich Germany (field part) & Novartis Crop Protection AG. Report No. 3091/99. GLP: Yes Published: No	N	N	-	Syngenta
KCP 9.1.2/2 8	Tribolet, R.	2003	Study on the leaching of terbuthylazine and metolachlor in a long term field experiment. C.A.U. GmbH, Dreieich Germany (field part) & Novartis Crop Protection AG. Report No. 3040/00. GLP: Yes Published: No	N	N	-	Syngenta
KCP 9.1.2/2 9	Zietz, E.	2000	Monitoring of GS13529 (Terbuthylazine) in Surface Water adjacent Fields susceptible to run-off. Trial Sites Ramholz (Hesse) and Kemading (Bavaria) Novartis Agro GmbH, Frankfurt, Germany Institut Fresenius, Taunusstein, Germany, Report No IF-99/07972-00 GLP Not Published	N	N	-	Syngenta

KCP 9.1.2/3 0	Mamouni, A.	1996	14C-Terbuthylazine: Mobility and Degradation in Soil in Outdoor Lysimeters. RCC AG., Itingen, Switzerland, Report No. 348794, GLP: Yes Published: No	N	N	-	Syngenta
KCP 9.1.2/3 1	Mamouni, A Burgener A.	1996	14C-TERBUTHYLAZINE: MOBILITY AND DEGRADATION IN SOIL IN OUTDOOR LYSIMETERS RCC AG., Itingen, Switzerland Oxon Italia S.P.A, Pero, Italy Report-no. 348794 GLP: yes	N	N	-	Oxon
KCP 9.1.2/3 2	Mamouni, A	2006	TERBUTHYLAZINE:IDENTIFICATION OF LEACHATE METABOLITES AFTER TREATMENT OF SOIL IN OUTDOOR LYSIMETERS RCC AG., Itingen, Switzerland Oxon Italia S.p.A, Pero, Italy Report-no. A04858 GLP: yes	N	N	-	Oxon
KCP 9.1.2/3 3	Hassink J.	1992	OUTDOOR LYSIMETER STUDY ON TERBUTHYLAZINE. Fraunhofer Institut für Umweltchemie und Ökotoxikologie, Germany, CIB-04/7-11, November 1992	N	N	-	Oxon

KCP 9.1.2/3 4	Burgener A.	1995	<sup>14</sup> C-TERBUTHYLAZINE/ <sup>14</sup> C-ATRAZINE: MOBILITY AND DEGRADATION IN SOIL IN OUTDOOR LYSIMETERS, RCC Umweltchemie AG, Itingen, Switzerland, 321581, 06.07.1995	N	-	Oxon
KCP 9.1.2/3 5	Ressler, H.	2004	LEACHING BEHAVIOUR OF TERBUTHYLAZINE (GS 13529) AND METABOLITES IN A LONG TERM FIELD EXPERIMENT FROM 1990 TO 2001 IN GERMANY. Syngenta Agro GmbH, Maintal, Germany Summary Report No. HR012004, 13.01.2004 non GLP, not published	N	N	Oxon
KCP 9.1.2/3 6	Mamouni A	2008	SECOND AMENDMENT TO REPORT Ter- buthylazine: Identification of leachate metabolites after treatment of soil in outdoor lysimeters Oxon Italia S.p.A. RCC Ltd., Itingen, Switzerland, A05848 GLP, not published	N	N	Oxon/Syn genta
KCP 9.1.2/3 7	Saeed M	2009	Confirmation of identity of <sup>14</sup> C-labelled Leachate components LM1, LM2 and LM4 in Leachate water sample extract J7357/03/01 Syngenta; Oxon Italia S.p.a., Pero, Italy. Syngenta - Jealott's Hill, Bracknell, United Kingdom, REP_GLP 10376902, 09AS001 GLP, not published	N	N	Oxon/Syn genta
KCP 9.1.2/3 8	Saeed M	2009a	Confirmation of the identity of the <sup>14</sup> C-labelled Leachate component LM3 in Leachate Water sample extract J7357/03/01 Syngenta; Oxon Italia S.p.a., Pero, Italy. Syngenta - Jealott's Hill, Bracknell, United Kingdom, REP_GLP 10372116, 08AS064 GLP, not published	N	N	Oxon/Syn genta

KCP 9.1.2/3 9	Saeed M	2009b	Confirmation of identity and estimate the quantity of 14C-labelled Leachate components in Leachate water sample extract J7357/03/01 Syngenta; Oxon Italia S.p.a., Pero, Italy. Syngenta - Jealott's Hill, Bracknell, United Kingdom, REP_GLP 10387599, 09AS006 GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.1.2/4 0	Hand L.	2009	Review of the Separation and Identification of Terbutylazine Metabolites Detected in Lysimeter Leachate Samples Syngenta; Oxon Italia S.p.a., Pero, Italy. Syngenta - Jealott's Hill, Bracknell, United Kingdom, T000412-09/3Not GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.1.2/4 1	Sapiets A	2009	Field leaching study to investigate the movement of terbutylazine and its metabolites to shallow groundwater in Northern Italy Syngenta; Oxon Italia S.p.a., Pero, Italy. Syngenta - Jealott's Hill, Bracknell, United Kingdom, T000412-09/3 Not GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.1.2/4 2	Baravelli P L	2009	Terbutylazine - Determination of Residues of Terbutylazine Metabolites GS26379, CSCD648241 and GS16984 in Groundwater Samples Syngenta - Jealott's Hill, Bracknell, United Kingdom; Oxon Italia S.p.a., Pero, Italy. AgriParadigma S.r.l. Ravenna, Italy, AGRI 039/08 GLP, T000450-08 GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/01	Doyle R	1991	Hydrolysis of 14C-Terbutylazine Novartis Crop Protection AG, Basel, Switzerland IIT Research Institute, Newington, United States, Report No IITRI-VTC-9004 GLP Not Published	N	N	-	Syngenta

KCP 9.2/02	Adam D.	2000b	Hydrolysis of [triazine-U-14C]-labelled GS 26379 under laboratory conditions Novartis Crop Protection AG, Basel, Switzerland, Report No 00DA01 GLP Not Published	N	N	-	Syngenta
KCP 9.2/03	Van der Gaauw A.	2002	14C-Triazine Ring labelled GS23158: Hydrolysis at three different pH values Syngenta Crop Protection AG, Basel, Switzerland RCC Ltd., Itingen, Switzerland, Report No 815668 GLP Not Published	N	N	-	Syngenta
KCP 9.2/04	Zetzsch, C., Palm, W.	1993	GS 13529 UV-Absorption spectra of Terbutylazin - estimation of aqueous photolysis maximum rate constant and minimum half-life in sunlight Novartis Crop Protection AG, Basel, Switzerland ITA Fraunhofer-Inst., Hannover, Germany, Report No PC91-3 GLP Not Published	N	N	-	Syngenta

KCP 9.2/05	Mamouni, A.	2002	Aqueous Photolysis of 14C-Triazine Ring Labelled GS 13529 under Laboratory Conditions Syngenta Crop Protection AG, Basel, Switzerland, Report No 820642 GLP Not Published	N	N	-	Syngenta
KCP 9.2/06	Glaenzel	2000b	Aqueous photolysis of 14C-triazine labelled GS 26379 under laboratory conditions Novartis Crop Protection AG, Basel, Switzerland, Report No 99AG06 GLP Not Published	N	N	-	Syngenta
KCP 9.2/07	Bader,U.	1990	GS 13529, Report on the test for ready biodegradability in the Modified Sturm Test Novartis Crop Protection AG, Basel, Switzerland Ciba-Geigy Ltd., Basel, Switzerland, Report No 901360 GLP Not Published	N	N	-	Syngenta
KCP 9.2/08	Mamouni, A,	1998	14C-Terbuthylazine: degradation and metabolism in aquatic systems Novartis Crop Protection AG, Basel, Switzerland RCC Ltd., Itingen, Switzerland, Report No 608207 GLP Not Published	N	N	-	Syngenta

KCP 9.2/09	Reischmann, F.	1995	volatilization of GS 13529 from water (calculation) Novartis Crop Protection AG, Basel, Switzerland Ciba-Geigy Ltd., Basel, Switzerland, Report No 95RF14 GLP Not Published	N	N	-	Syngenta
KCP 9.2/10	Reischmann, F.	1992	Volatilization of GS 13529 from soil surface under controlled laboratory conditions Novartis Crop Protection AG, Basel, Switzerland Ciba-Geigy Ltd., Basel, Switzerland, Report No 17/92 GLP Not Published	N	N	-	Syngenta
KCP 9.2/11	Sandmeier, P.	1992	GS 13529 Volatility from plant and soil surfaces Novartis Crop Protection AG, Basel, Switzerland Ciba-Geigy Ltd., Basel, Switzerland, Report No 92PSA06 GLP Not Published	N	N	-	Syngenta



KCP 9.2/12	Sandmeier, P.	1993	Volatilization of GS 13529 from Plant and Soil after Postemergent Spray Application of 14C-labelled Material on Maize under Indoor Conditions Novartis Crop Protection AG, Basel, Switzerland Ciba-Geigy Ltd., Basel, Switzerland, Report No 93PSA17 GLP Not Published	N	N	-	Syngenta
KCP 9.2/13	Stamm, E.	1997	Atmospheric oxidation of terbuthylazine GS 13529 by hydroxyl radicals; rate estimation Novartis Crop Protection AG, Basel, Switzerland Novartis Crop Protection AG, Basel, Switzerland, Report No 95A97007SM GLP Not Published	N	N	-	Syngenta
KCP 9.2/14	Reese-Staehler, G.	2000	Monitoring of GS13529 (Terbuthylazine) in Surface Water in the Area of Fields Endangered by Run off. Sites: Adenstedt (Lower Saxony) and Süplingen (Sachsen Anhalt) Novartis Agro GmbH, Frankfurt, Germany Biologische Bundesanstalt für Land- und Forstwirtschaft, Braunschweig, Germany, Report No OC9902 GLP: Yes Published: No	N	N	-	Syngenta

KCP 9.2/15	Schmidt, B., Zietz,E.	2000	Monitoring site-related evaluation of terbuthylazine findings in Groundwater. Novartis Agro GmbH, Frankfurt, Germany Institut Fresenius Taunusstein, Germany. Report No. 100-1522-1738 Not GLP Not published	N	N	-	Syngenta
KCP 9.2/16	Anon	2002	Groundwater Survey 2002. Part 5: Pesticides and Degradation Products Pages 57-74 Syngenta Crop Protection AG, Basel, Switzerland Not GLP Published	N	N	-	Syngenta
KCP 9.2/17	Kjaer,J.	2003	The Danish Pesticide Leaching Assessment Programme. Monitoring Results May 1999 - June 2002. Third Report Geological Survey of Denmark and Greenland, the Danish Institute of Agricultural Science and the National Environmental Research Institute <a href="http://pesticidvarsling.dk/monitor_uk/2002_uk/index.html">http://pesticidvarsling.dk/monitor_uk/2002_uk/ /index.html</a> Not GLP Published	N	N	-	Published reference

KCP 9.2/18	Kjaer,J.	2003	The Danish Pesticide Leaching Assessment Programme. Monitoring Results May 1999 - June 2002. Third Report Geological Survey of Denmark and Greenland, the Danish Institute of Agricultural Science and the National Environmental Research Institute <a href="http://pesticidvarsling.dk/monitor_uk/2002_uk/index.html">http://pesticidvarsling.dk/monitor_uk/2002_uk/index.html</a> Not GLP Published	N	N	-	Published reference
KCP 9.2/19	Hennecke D.	2004a	AQUATIC PHOTODEGRADATION AND QUANTUM YIELD OF DESETHYL-TERBUTHYLAZINE Fraunhofer Institut, 57392 Schmallenberg-Grafschaft, Germany Oxon Italia S.P.A, Pero, Italy Report-no. GAB-006/7-05 GLP: yes published: no	N	N	-	Oxon
KCP 9.2/20	Hennecke D.	2004b	AQUATIC PHOTODEGRADATION AND QUANTUM YIELD OF 2-HYDROXY-TERBUTHYLAZINE Fraunhofer Institut, 57392 Schmallenberg-Grafschaft, Germany Oxon Italia S.P.A, Pero, Italy Report-no. GAB-007/7-05 GLP: yes published: no	N	N	-	Oxon

KCP 9.2/21	Desmares-Koopmans M.J.E	2001	DETERMINATION OF 'READY' BIODEGRADABILITY: CARBON DIOXIDE (CO <sub>2</sub> ) EVOLUTION TEST (MODIFIED STURM TEST) WITH TERBUTHYLAZINE TECHNICAL Notox B.V., 's-Hertogenbosch, The Netherlands Oxon Italia S.P.A, Pero, Italy Report-no. 308115 GLP: yes published: no	N	N	-	Oxon
KCP 9.2/22	Mamouni A.	1995	[14C]-TERBUTHYLAZINE DEGRADATION AND METABOLISM IN WATER/SEDIMENT SYSTEMS RCC AG., Itingen, Switzerland Oxon Italia S.P.A, Pero, Italy Report-no. 385593 GLP: yes published: no	N	N	-	Oxon
KCP 9.2/23	Burgener	1995	INVESTIGATION OF THE VOLATILIZATION OF [14C]- TERBUTHYLAZINE FROM SOIL AND DWARF RUNNER BEAN RCC, Itingen, Switzerland Oxon Italia S.P.A, Pero, Italy Report-no. 385604 GLP: yes published: no	N	N	-	Oxon
KCP 9.2/24	Zietz E	2009	Terbuthylazine - Storage Stability Investigation of the Terbuthylazine Metabolites CSCD648241, CSAA404791 and CSCD692760 in Water by Re Analysis of Selected Groundwater Samples Syngenta - Jealott's Hill, Bracknell, United Kingdom; Oxon Italia S.p.a., Pero, Italy. SGS Institut Fresenius GmbH, Geneva, Switzerland, IF-09/01345520, T000403-09 GLP, not published	N	N	-	Oxon/Syn genta
KCP 9.2/25	Phaff R.	2000	Degradation and metabolism of 14C-triazine ring- labelled GS 14260 in two aerobic aquatic systems	N	N	-	Oxon/Syn genta

			under laboratory conditions Novartis Crop Protection AG, Basel, Switzerland Novartis Crop Protection AG, Basel, Switzerland, 97RP07 GLP, not published				
KCP 9.2/26	Adam D.	2010	SYN545666/LM6(Terbuthylazine Metabolite) - Rate of Degradation under aerobic laboratory conditions in three soils at 20°C Syngenta - Jealott's Hill, Bracknell, United Kingdom; Oxon Italia, S.p.a, Pero, Italy Innovative Environmental Services (IES) Ltd., Switzerland. 115 10 023 GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/27	Schmidt B.	2003	Description of selected groundwater monitoring wells and the local hydrogeological situation in Schleswig-Holstein, Germany Syngenta Agro GmbH, Maintal, Germany Institut Fresenius, Taunusstein, Germany, 1688503 Not GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/28	Schmidt B.	2003a	Description of selected groundwater monitoring wells and the local hydrogeological situation in Mecklenburg-West Pomerania, Germany Syngenta Agro GmbH, Maintal, Germany Institut Fresenius, Taunusstein, Germany, 1688504 Not GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/29	Schmidt B. Klaas P.	2004	Description of Groundwater Monitoring Wells and the Local Hydrogeological Conditions in the Southern Upper Rhine Valley (Ortenau und Breisgau), Germany [translated version] Syngenta Crop Protection AG, Basel, Switzerland Institut Fresenius, Taunusstein, Germany, 1488606 Not GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/30	Schmidt B.	2005	Description of Groundwater Monitoring Wells and the Local Hydrogeological Conditions in the Rottal, Germany [translated version]	N	N	-	Oxon/Syngenta

			Syngenta Crop Protection AG, Basel, Switzerland Institut Fresenius, Taunusstein, Germany, 1488602 Not GLP, not published				
KCP 9.2/31	Schmidt B., Klaas P.	2005	Description of Groundwater Monitoring Wells and the Local Hydrogeological Conditions in the Hessian Ried, Germany [translated version] Syngenta Crop Protection AG, Basel, Switzerland Institut Fresenius, Taunusstein, Germany, 1488604 Not GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/32	Schneider M., Klaas P.	2005a	Description of selected groundwater monitoring wells and the local hydrogeological situation in the region Muensterland/ Emsland, Germany Syngenta Crop Protection AG, Basel, Switzerland Institut Fresenius, Taunusstein, Germany, 1488607 Not GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/33	Ressler H	2009a	Terbuthylazine: Results of farmer interviews on the use of terbuthylazine (GS13529) in the vicinity of groundwater monitoring wells in Germany in 2004 - 2006 including characterisation of the monitoring regions Syngenta Agro GmbH, Maintal, Germany , HR 02 2009 Not GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/34	Glaenzel A.	2005	Determination of Terbuthylazine (GS 13529), GS 26379, GS 28260 and GS 23158 in Water Samples from Ground Water Monitoring in Schleswig-Holstein and Bavaria in Germany Syngenta Crop Protection AG, Basel, Switzerland RCC Ltd., Itingen, Switzerland, 856134 GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/35	Schmidt B	2009	Terbuthylazine: Analysis of terbuthylazine (GS13529) and its metabolites CSCD648241 (LM6), GS16984 (LM5), GS26379, GS23158 and GS28620 in groundwater samples from wells with documented uses of terbuthylazine on upstream fields in Germany Syngenta - Jealott's Hill, Bracknell, United Kingdom;	N	N	-	Oxon/Syngenta

			Oxon Italia S.p.a., Pero, Italy. SGS Institut Fresenius GmbH, Geneva, Switzerland , IF-08/01230035 Not GLP, not published				
KCP 9.2/36	Zietz E	2009a	Terbuthylazine: Analysis of CSCD692760 (LM3) in groundwater samples from wells with documented uses of terbuthylazine on upstream fields in Germany Syngenta - Jealott's Hill, Bracknell, United Kingdom; Oxon Italia S.p.a., Pero, Italy. SGS Institut Fresenius GmbH, Geneva, Switzerland, IF-09/01393295, T0001794-09 Not GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/37	Maroni M, Bersani M	1997	Weed Control in Maize Areas of the Po Plain Impact Assessment for Triazines in the Groundwater Table Novartis SpA Italy Syngenta - Jealott's Hill, Bracknell, United Kingdom International Centre for Pesticide Safety, Busto Garolfo, Milano, Italy GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/38	Auteri	2007	Assessment of the Contamination of Groundwater Table by Terbuthylazine, Hydroxyterbuthylazine and Desethylterbuthylazine in the Po Plain Novartis SpA Italy Syngenta - Jealott's Hill, Bracknell, United Kingdom International Centre for Pesticide Safety, Busto Garolfo, Milano, Italy. T019446-04 Not GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/39	Seville A	2009	Water Monitoring Study in the Ribatejo, Beira Litoral, Oeste and Douro Regions of Portugal, 1999-2007 Syngenta - Jealott's Hill International, Bracknell, Berkshire, United Kingdom T004961-02-REG Not GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/40	Various	2000	Groundwater Monitoring Portugal, Hydrogeological Assessment Report: Ribatejo Syngenta Crop Protection AG, Basel, Switzerland	N	N	-	Oxon/Syngenta

			Universidade de Lisboa, Lisboa, Portugal, Ribatejo, Portugal Not GLP, not published				
KCP 9.2/41	Various	2000a	Groundwater Monitoring Portugal, Hydrogeological Assessment Report: Oeste and Douro, Portugal Syngenta Crop Protection AG, Basel, Switzerland Universidade de Lisboa, Lisboa, Portugal, Oeste and Douro Portugal Not GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/42	Various	2000b	Groundwater Monitoring Portugal, Hydrogeological Assessment Report: Biera Litoral, Portugal Syngenta Crop Protection AG, Basel, Switzerland Hidrogeo, Consultores de Hidrogeologia e Ambiente Lda., Lisboa, Portugal, Biera Litoral Portugal Not GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/43	Various	2003	Annex 1, Monitoring Network, Hydrogeological Assessment Report: Biera Litoral, Portugal Syngenta Crop Protection AG, Basel, Switzerland Hidrogeo, Consultores de Hidrogeologia e Ambiente Lda., Lisboa, Portugal, Annex 1 Biera Litoral Portugal Not GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/44	Seville A	2009a	Terbuthylazine (GS13529) - Retrospective Groundwater Monitoring in Southern Spain 2000 to 2003 Syngenta - Jealott's Hill, Bracknell, United Kingdom , T004964-02-REG, T004964-02 Not GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/45	Pulido A	2000	Groundwater Monitoring South Spain ? Hydrological Assessment Syngenta - Jealott's Hill, Bracknell, United Kingdom Not GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/46	Cornejo J	2002	Ground and Surface Water Monitoring in Major Olive Regions in Andalucia Syngenta - Jealott's Hill, Bracknell, United Kingdom Not GLP, not published	N	N	-	Oxon/Syngenta
KCP	Cornejo J	2004	Ground and Surface Water Monitoring in Major Olive	N	N	-	Oxon/Syn



9.2/47			Regions in Andalucia Syngenta - Jealott's Hill, Bracknell, United Kingdom Not GLP, not published				genta
KCP 9.2/48	Seville A	2009b	Terbuthylazine (GS13529) - Retrospective Groundwater Monitoring in South Eastern Regions of Spain 2000 to 2001 Syngenta - Jealott's Hill, Bracknell, United Kingdom , T005761-04-REG, T005761-04 Not GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/49	Ruiz A, de Barreda Diego G	2001	Monitoring Surface Water and Groundwater in Eastern Spain Sampling and Analytical Results Syngenta - Jealott's Hill, Bracknell, United Kingdom Diego Gomez de Barreda Castillo; (2001); I.V.I.A-L.A., Moncada, Valencia, Spain Not GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/50	Robinson N, Wallace D	2009	Terbuthylazine (GS13529) - Retrospective Groundwater Monitoring in Northern Spain, 2000 to 2004 Syngenta - Jealott's Hill, Bracknell, United Kingdom , T004962-02-REG, T004962-02 Not GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/51	Candela L	2000	Regional Hydrological and Hydrogeological Studies Aimed at Monitoring Pesticide Residues <b>Final Report</b> 2000 Syngenta - Jealott's Hill, Bracknell, United Kingdom Department of Geotechnical and Geoscience, Technical University of Catalonia-UPC, Not GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/52	Candela L	2000a	Regional Hydrological and Hydrogeological Studies Aimed at Monitoring Pesticide Residues <b>Appendices</b> Syngenta - Jealott's Hill, Bracknell, United Kingdom Department of Geotechnical and Geoscience, Technical University of Catalonia-UPC, Not GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/53	Candela L	2003	Regional Hydrological and Hydrogeological Studies Aimed at Monitoring Pesticide Residues Addendum	N	N	-	Oxon/Syngenta

			2003 Syngenta - Jealott's Hill, Bracknell, United Kingdom Department of Geotechnical and Geoscience, Technical University of Catalonia-UPC, Not GLP, not published				
KCP 9.2/54	Barcelo D, Lacorte S	2001	Water Monitoring Study in Northern Spain Syngenta - Jealott's Hill, Bracknell, United Kingdom Department of Environmental Chemistry, IIQAB-CSIC, Jordi Girona 18-26, 08034 Barcelona, Spain, Not GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/55	Schmidt B	2009a	Terbuthylazine - Retrospective Groundwater Monitoring in the Fricktal Region (Switzerland) Syngenta - Jealott's Hill, Bracknell, United Kingdom SGS Institut Fresenius GmbH, Geneva, Switzerland, T008940-08-REG2, T008940-08 Not GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/56	Schmidt B	2009b	Terbuthylazine - Retrospective Groundwater Monitoring in the Region Stein-Sisseln-Kaisten (Switzerland) Final Study Report Syngenta - Jealott's Hill, Bracknell, United Kingdom SGS Institut Fresenius GmbH, Geneva, Switzerland, T008940-08-REG1, T008940-08 Not GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/57	Schmidt B	2006	Clarification of Monitoring Point related Findings of Terbuthylazine in the Groundwater in Germany. Syngenta - Jealott's Hill, Bracknell, United Kingdom SGS Institut Fresenius GmbH, Taunusstein, Germany. Final Study Report No. IF-06/00639090. GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/58	Schmidt B	2009c	Clarification of Monitoring Point related Findings of Terbuthylazine / Desethyl terbuthylazine in the Groundwater in Germany 2005-2008. Syngenta Agro GmbH, Maintal, Germany SGS Institut Fresenius GmbH, Taunusstein, Germany. Final Study Report No. IF-08/01287363. Syngenta	N	N	-	Oxon/Syngenta

			Ltd, Bracknell, UK GLP, not published				
KCP 9.2/59	Zietz E.	2007	Monitoring of GS 13529 (terbuthylazine) in surface water adjacent to fields susceptible to run-off Syngenta Agro GmbH, Maintal, Germany SGS Institut Fresenius GmbH, Taunusstein, Germany. Final Study Report No. IF-99/07972-00 GLP, not published	N	N	-	Oxon/Syngenta
KCP 9.2/60	Bischoff G	2006	MONITORING OF GS 13529 (TER-BUTHYLAZINE) IN SURFACE WATER ADJACENT TO FIELDS PRONE TO RUNOFF Sites Adenstedt (Lower Saxony) and Suplingen (Saxony-Anhalt) Syngenta Agro GmbH, Maintal, Germany Federal Biological Research Centre for Agriculture and Forestry, Berlin, Germany, OC9902 GLP, not published	N	N	-	Oxon/Syngenta
KCP 10.1.1/ 01	xxx	1994	Acute oral toxicity study with GS 13529 technical in Japanese quail Novartis Crop Protection AG, Basel, Switzerland [REDACTED] Report No 104412 GLP Not Published	Y	N	-	Syngenta
KCP 10.1.1/ 02	xxx	1983	Acute oral LD50 in Mallard duck Novartis Crop Protection AG, Basel, Switzerland [REDACTED] [REDACTED] Report No 108-213 GLP Not Published	Y	N	-	Syngenta

KCP 10.1.1/ 03	xxx	1994b	5-day Dietary Toxicity Study in Japanese Quail with GS 13529 Technical Novartis Crop Protection AG, Basel, Switzerland [REDACTED] Report No 104434 GLP Not Published	Y	N	-	Syngenta
KCP 10.1.1/ 04	xxx	1983a	8-day dietary LC50 with Bobwhite quail Novartis Crop Protection AG, Basel, Switzerland [REDACTED] [REDACTED] Report No 108-211 Not GLP Not Published	Y	N	-	Syngenta
KCP 10.1.1/ 05	xxx	1983b	8-day Dietary LC50 with Mallard Duck Novartis Crop Protection AG, Basel, Switzerland [REDACTED] [REDACTED] Report No 108-212 Not GLP Not Published	Y	N	-	Syngenta
KCP 10.1.1/ 06	xxx	1995	Reproduction study with GS 13529 technical in the Japanese quail (by dietary admixture) Novartis Crop Protection AG, Basel, Switzerland [REDACTED] Report No 104445 GLP Not Published	Y	N	-	Syngenta

KCP 10.2/0 1	xxx	2002	GS13529 (Terbuthylamine technical): Acute toxicity to rainbow trout ( <i>Oncorhynchus mykiss</i> ) Syngenta Crop Protection AG, Basel, Switzerland [REDACTED] [REDACTED] Report No BL7395/B GLP Not Published	Y	N	-	Syngenta
KCP 10.2/0 2	xxx	2002	GS13529 (Terbuthylazine technical): Acute toxicity to mirror carp ( <i>Cyprinus carpio</i> ) Syngenta Crop Protection AG, Basel, Switzerland [REDACTED] [REDACTED] Report No BL7396/B GLP Not Published	Y	N	-	Syngenta
KCP 10.2/0 3	xxx	1990	GS 13529, Terbuthylazin technical, 21-day prolonged toxicity study in the Rainbow trout under flow-through conditions Novartis Crop Protection AG, Basel, Switzerland [REDACTED] Report No 227248 GLP Not Published	Y	N	-	Syngenta
KCP 10.2/0 4	xxx	1990	Accumulation and elimination of 14C-terbuthylazine by Bluegill sunfish in a dynamic flow-through system Novartis Crop Protection AG, Basel, Switzerland [REDACTED] Report No 217451 GLP Not Published	Y	N	-	Syngenta

KCP 10.2/0 5	An, der Kolk J.	1996	GS 13529, static acute toxicity test with daphnids ( <i>Daphnia magna</i> ) Novartis Crop Protection AG, Basel, Switzerland Springborn Smithers Laboratories (Europe) AG, Horn, Switzerland, Report No 96-075-1008 GLP Not Published	N	N	-	Syngenta
KCP 10.2/0 6	Shillabeer, N, Maynard, S.J, Woodyer, JM	2002	GS13529 (Terbutylazine technical)- Chronic toxicity to <i>Daphnia magna</i> Syngenta Crop Protection AG, Basel, Switzerland Brixham Environmental Laboratory, Brixham, United Kingdom, Report No BL7397/B GLP Not Published	N	N	-	Syngenta
KCP 10.2/0 7	Grade, R.	1993a	Report on the growth inhibition test of GS 13529 tech. to Green algae ( <i>Scenedesmus subspicatus</i> ) Novartis Crop Protection AG, Basel, Switzerland Ciba-Geigy Ltd., Basel, Switzerland, Report No 928431 GLP Not Published	N	N	-	Syngenta
KCP 10.2/0 8	Grade, R.	1993b	Growth inhibition test of GS 13529 tech. to Blue algae ( <i>Microcystis aeruginosa</i> ) Novartis Crop Protection AG, Basel, Switzerland Ciba-Geigy Ltd., Basel, Switzerland, Report No 928432 GLP Not Published	N	N	-	Syngenta

KCP 10.2/0 9	Grade, R.	1993c	Report on the growth inhibition test of GS 13529 tech. to Diatoms (Navicula pelliculosa) Novartis Crop Protection AG, Basel, Switzerland Ciba-Geigy Basel, Oekotoxikologie, Basel, Switzerland, Report No 928433 GLP Not Published	N	N	-	Syngenta
KCP 10.2/1 0	Palmer, S. Kendall, T, Kreuger, H	2001	A 96-Hour Growth Inhibition Test of GS-26379 (Metabolite of GS-13529) to the Green Alga, Selenastrum capricornutum Syngenta Crop Protection AG, Basel, Switzerland Wildlife International Ltd., Easton, MD, United States, Report No 528A-109 GLP Not Published	N	N	-	Syngenta
KCP 10.2/1 1	Grade, R.	2000b	Growth inhibition of GS 23158 (metabolite of GS 13529) to green algae (Selenastrum capricornutum) under static conditions Novartis Crop Protection AG, Basel, Switzerland, Report No 2001571 GLP Not Published	N	N	-	Syngenta
KCP 10.2/1 2	Vial, A.	1991g	Report on the growth inhibition test of GS 28620 to Green algae (Scenedesmus subspicatus) Novartis Crop Protection AG, Basel, Switzerland Ciba-Geigy Ltd., Basel, Switzerland, Report No 918160 GLP Not Published	N	N	-	Syngenta

KCP 10.2/1 3	Vial, A.	1991h	Report on the growth inhibition test of G 28273 to Green algae ( <i>Scenedesmus subspicatus</i> ) Novartis Crop Protection AG, Basel, Switzerland Ciba-Geigy Ltd., Basel, Switzerland, Report No 918140 GLP Not Published	N	N	-	Syngenta
KCP 10.2/1 4	Grade, R.	1997	Growth inhibition test of GS 14260 tech. to green algae ( <i>Selenastrum capricornutum</i> ) under static conditions Novartis Crop Protection AG, Basel, Switzerland Novartis Crop Protection AG, Basel, Switzerland, Report No 961714 GLP Not Published	N	N	-	Syngenta
KCP 10.2/1 5	Memmert, U.	1998	Effects of 14C-labelled GS 13529 (Terbutylazine tech.) on the development of sediment-dwelling larvae of <i>Chironomus riparius</i> in a water-sediment system Novartis Crop Protection AG, Basel, Switzerland RCC Ltd., Itingen, Switzerland, Report No 690524 GLP Not Published	N	N	-	Syngenta



KCP 10.2/1 6	Grade, R.	2000c	Toxicity test of GS 23158 (Metabolite of GS 13529) on sediment-dwelling Chironomus riparius (syn. Chironomus thummi) under static conditions Novartis Crop Protection AG, Basel, Switzerland, Report No 2001572 GLP Not Published	N	N	-	Syngenta
KCP 10.2/1 7	Hoberg, J.	1993	GS 13529 - Toxicity to Duckweed, Lemna gibba Novartis Crop Protection AG, Basel, Switzerland Springborn Laboratories Inc., Wareham, United States, Report No 93-9-4947 GLP Not Published	N	N	-	Syngenta
KCP 10.2/1 8	Douglas M.T., Handley J.W., Macdonald I.A.	1988c	THE ACUTE TOXICITY OF TERBUTHYLAZINE TO DAPHNIA MAGNA Huntingdon Research Centre Ltd., Cambridgeshire, UK Oxon Italia S.P.A, Pero, Italy Report-no. OXN 10(a)/88505 GLP: yes published: no	N	N	-	Oxon
KCP 10.2/1 9	Wuntrich V.	1995b	INFLUENCE OF THE SOIL LEACHATES OF THE LYSIMETER STUDY WITH 14C-TERBUTHYLAZINE ON DAPHNIA MAGNA RCC AG., Itingen, Switzerland Oxon Italia S.P.A, Pero, Italy Report-no. 399778 GLP: yes published: no	N	N	-	Oxon

KCP 10.2/2 0	Bell G.	1995	TERBUTHYLAZINE: PROLONGED TOXICITY TO DAPHNIA MAGNA Huntingdon Research Centre Ltd., Cambridgeshire, UK Oxon Italia S.P.A, Pero, Italy Report-no. OXN 18(a)/942069 GLP: yes published: no	N	N	-	Oxon
KCP 10.2/2 1	Kelly C.	1996	TERBUTHYLAZINE TECHNICAL ALGAL GROWTH INHIBITION Huntingdon Life Sciences Limited, Cambridgeshire, UK Oxon Italia S.P.A, Pero, Italy Report-no. OXN 180/962297 GLP: yes published: no	N	N	-	Oxon
KCP 10.2/2 2	Wuthrich V.	1995c	INFLUENCE OF THE SOIL LEACHATES OF THE LYSIMETER STUDY WITH 14C- TERABUTHYLAZINE ON THE GROWTH OF SCENEDESMUS SUBSPICATUS RCC AG., Itingen, Switzerland Oxon Italia S.P.A, Pero, Italy Report-no. 399791 GLP: yes published: no	N	N	-	Oxon

KCP 10.2/2 3	Dengler D.	2004a	TESTING OF TOXIC EFFECTS OF DESETHYL-TERBUTHYLAZINE ON THE SINGLE CELL GREEN ALGA DESMODESMUS SUBSPICATUS (FORMERLY SCENEDESMUS SUBSPICATUS) GAB Biotechnologie GmbH, Niefern- Öschelbron, Germany Oxon Italia S.P.A, Pero, Italy Report-no. 20041034/01-AADs GLP: yes published: no	N	N	-	Oxon
KCP 10.2/2 4	Dengler D.	2004b	TESTING OF TOXIC EFFECTS OF 2- HYDOXY-TERBUTHYLAZINE ON THE SINGLE CELL GREEN ALGA DESMODESMUS SUBSPICATUS (FORMERLY SCENEDESMUS SUBSPICATUS) GAB Biotechnologie GmbH, Niefern- Öschelbron, Germany Oxon Italia S.P.A, Pero, Italy Report-no. 20041035/01-AADs GLP: yes published: no	N	N	-	Oxon
KCP 10.2/2 5	Migchielsen M.H.J	2002a	120-HOUR FRESH WATER CYANOBACTERIA GROWTH INHIBITION TEST WITH TERBUTHYLAZINE TECHNICAL Notox B.V, 's-Hertogenbosch, The Netherlands Oxon Italia S.P.A, Pero, Italy Report-no. 314055 GLP: yes published: no	N	N	-	Oxon

KCP 10.2/2 6	Migchielsen M.H.J	2002b	FRESH WATER ALGAL GROWTH INHIBITION TEST WITH TERBUTHYLAZINE TECHNICAL Notox B.V, 's-Hertogenbosch, The Netherlands Oxon Italia S.P.A, Pero, Italy Report-no. 346444 GLP: yes published: no	N	N	-	Oxon
KCP 10.2/2 7	Dengler D.	2001	ASSESSMENT OF TOXIC EFFECTS OF TERBUTHYLAZINE TECHNICAL ON THE DUCKWEED LEMNA GIBBA IN A SEMI STATIC TEST AND A RECOVERY PERIOD GAB Biotechnologie GmbH, Niefern- Öschelbron Oxon Italia S.P.A, Pero, Italy Report-no. 20001420/01-ARLg GLP: yes published: no	N	N	-	Oxon
KCP 10.3.1/ 01	Petto,R., Klepka, S.	1994	Laboratory testing for toxicity (acute contact and oral LD50) of GS 13529 to honey bees (Apis mellifera L.) (Hymenoptera, Apidae) Novartis Crop Protection AG, Basel, Switzerland RCC Umweltchemie GmbH & Co. KG, Rossdorf, Germany, Report No 416902 GLP Not Published	N	N	-	Syngenta

KCP 10.3.1/ 02	Bell G.	1994b	TERBUTHYLAZINE: ACUTE TOXICITY TO HONEY BEES (APIS MELLIFERA) Huntingdon Life Sciences Limited, Cambridgeshire, UK Oxon Italia S.P.A, Pero, Italy Report-no. OXN 25/931946 GLP: yes published: no	N	N	-	Oxon
KCP 10.3.1/ 03	Bell G.	1994b	TERBUTHYLAZINE: ACUTE TOXICITY TO HONEY BEES (APIS MELLIFERA) Huntingdon Life Sciences Limited, Cambridgeshire, UK Oxon Italia S.P.A, Pero, Italy Report-no. OXN 25/931946 GLP: yes published: no	N	N	-	Oxon
KCP 10.4/0 1	Rufli, H.	1989	GS 13529, Earthworm, acute toxicity test Novartis Crop Protection AG, Basel, Switzerland Ciba-Geigy Ltd., Basel, Switzerland, Report No 891347 GLP Not Published	N	N	-	Syngenta
KCP 10.4/0 2	Van, Erp Y.	2000a	Acute toxicity study in the earthworm with GS13529 (terbuthylazine) Novartis Crop Protection AG, Basel, Switzerland NOTOX B.V., 'S Hertogenbosch, Netherlands, Report No 281677 GLP Not Published	N	N	-	Syngenta

KCP 10.4/0 3	Knops, M.	2000	Acute toxicity of GS 26379 to the earthworm Eisenia fetida Novartis Crop Protection AG, Basel, Switzerland BioChem GmbH, Cunnorsdorf, Germany, Report No 001048066 GLP Not Published	N	N	-	Syngenta
KCP 10.4/0 4	Van, Erp Y.	2000b	Acute toxicity study in the earthworm with GS 26379 (deethylterbuthylazine) Novartis Crop Protection AG, Basel, Switzerland NOTOX B.V., 'S Hertogenbosch, Netherlands, Report No 281699 GLP Not Published	N	N	-	Syngenta
KCP 10.4/0 5	Van, Erp Y.	2000c	Acute toxicity study in the earthworm with GS 23158 (hydroxy-terbuthylazine) Novartis Crop Protection AG, Basel, Switzerland NOTOX B.V., 'S Hertogenbosch, Netherlands, Report No 281688 GLP Not Published	N	N	-	Syngenta
KCP 10.4/0 6	Van, Erp Y.	2000d	Acute toxicity study in the earthworm with GS 28620 (deethylhydroxyterbuthylazine) Novartis Crop Protection AG, Basel, Switzerland NOTOX B.V., 'S Hertogenbosch, Netherlands, Report No 281701 GLP Not Published	N	N	-	Syngenta

KCP 10.4/0 7	Gossmann, A.	1998	Effects of GS 13529 / CGA 77102 SC 500 (A-9476 B) on reproduction and growth of earthworms <i>Eisenia fetida</i> (Savigny 1826) in artificial soil Novartis Crop Protection AG, Basel, Switzerland IBACON GmbH, Rossdorf, Germany, Report No 3450022 GLP Not Published	N	N	-	Syngenta
KCP 10.4/0 8	Kleiner, R.	2000	Sublethal toxicity (on reproduction and growth) of GS13529 SC 500 (A5435E) to the earthworm <i>Eisenia fetida</i> Novartis Crop Protection AG, Basel, Switzerland BioChem GmbH, Cunnersdorf, Germany, Report No 991048021 GLP Not Published	N	N	-	Syngenta
KCP 10.4/0 9	Klein, O.	2006	S-metolachlor (A9396A), terbuthylazine (A5435E) and S-metolachlor + terbuthylazine (A9476C): A field study to evaluate effects on the earthworm fauna in maize in southern Germany. GAB Biotechnologie GmbH & GAB Analytik GmbH, Niefern-Öschelbronn, Germany. Report No. 20051078/G1-NFEw. GLP: Yes Published: No	N	N	-	Syngenta

KCP 10.4/1 0	Pease G., Foster A., Milanesi F.	2006	S-metolachlor (A9396C), terbuthylazine (A5435E) and s-metolachlor + terbuthylazine (A9476C): A field study to evaluate effects on the earthworm fauna of a maize field in Denmark. Ecotox Limited, Devon, UK. Report No. ER-06-KCB 215. Non GLP report from GLP study. Published: No	N	N	-	Syngenta
KCP 10.4/1 1	Meister, A	2002	Effects of GS 13529/CGA77102 SC 500 (A9476 B) on Reproduction of the Collembola Folsomia candida in Artificial Soil Syngenta Crop Protection AG, Basel, Switzerland IBACON GmbH, Rossdorf, Germany, Report No 11661016 GLP Not Published	N	N	-	Syngenta
KCP 10.4/1 2	Stabler D.	2003	ACUTE TOXICITY OF TERBUTHYLAZINE- DESETHYL ON EARTHWORMS, EISENIA FETIDA USING AN ARTIFICIAL SOIL TEST ArGe GAB Biotech/IFU, D-75223 Niefern- Öschelbronn Oxon Italia S.P.A, Pero, Italy Report-no. 20021389/01-NLEf GLP: yes published: no	N	N	-	Oxon



KCP 10.4/1 3	Stabler D.	2002	ACUTE TOXICITY OF 2-HYDROXY- TERBUTHYLAZINE ON EARTHWORMS, EISENIA FETIDA USING AN ARTIFICIAL SOIL TEST ArGe GAB Biotech/IFU, D-75223 Niefern- Öschelbronn Oxon Italia S.P.A, Pero, Italy Report-no. 20011377/01-NLEf GLP: yes published: no	N	N	-	Oxon
KCP 10.4/1 4	Luhrs U.	1999	EFFECTS OF CLICK (TERBUTHYLAZINE 500 G/L SC) ON REPRODUCTION AND GROWTH OF EARTHWORMS EISENIA FETIDA (SAVIGNY 1826) IN ARTIFICIAL SOIL IBACON, Rossdorf, Germany Oxon Italia S.P.A, Pero, Italy Report-no. 4580022 GLP: yes published: no	N	N	-	Oxon
KCP 10.5/0 1	Lemnitzer, B.	2001	Effects of terbuthylazine tech. (GS 13529 U) on the activity of soil microflora Syngenta Crop Protection AG, Basel, Switzerland BioChem agrar, Gerichshain, Germany, Report No 0110351004 GLP Not Published	N	N	-	Syngenta

KCP 10.5/0 2	Suter, P.	1987	Influence of the herbicide Terbutylazine (GS 13529) on soil microorganisms Novartis Crop Protection AG, Basel, Switzerland Ciba-Geigy Ltd., Basel, Switzerland, Report No 22-87 GLP Not Published	N	N	-	Syngenta
KCP 10.5/0 3	Van, der Kolk J.	2001	GS23158, GS26379 and GS28620 (metabolites of GS13529 Terbutylazine): Determination of effects on soil microflora activity Syngenta Crop Protection AG, Basel, Switzerland Springborn Smithers Laboratories (Europe) AG, Horn, Switzerland, Report No 1047.110.747 GLP Not Published	N	N	-	Syngenta
KCP 10.5/0 4	Carter J.N.	1996	TERBUTHYLAZINE TECHNICAL AI EFFECTS ON SOIL NON-TARGET MICRO-ORGANISMS Huntingdon Life Sciences Limited, Cambridgeshire, UK Oxon Italia S.P.A, Pero, Italy Report-no. OXN 165/952682 GLP: yes published: no	N	N	-	Oxon

KCP 10.5/0 5	Kolzer U.	2003	ASSESSMENT OF THE SIDE EFFECTS OF DESETHYL TERBUTHYLAZINE ON THE ACTIVITY OF THE SOIL MICROFLORA ArGe GAB Biotech/IFU, D-75223 Niefern- Öschelbronn Oxon Italia S.P.A, Pero, Italy Report-no. 20021389/01-ABMF GLP: yes published: no	N	N	-	Oxon
KCP 10.5/0 6	Kolzer U.	2002	ASSESSMENT OF THE SIDE EFFECTS OF 2-HYDROXY-TERBUTHYLAZINE ON THE ACTIVITY OF THE SOIL MICROFLORA ArGe GAB Biotech/IFU, D-75223 Niefern- Öschelbronn Oxon Italia S.P.A, Pero, Italy Report-no. 20011377/01-ABMF GLP: yes published: no	N	N	-	Oxon
KCP 10.5/0 7	Carter J.N.	1996	TERBUTHYLAZINE TECHNICAL AI EFFECTS ON SOIL NON-TARGET MICRO- ORGANISMS Huntingdon Life Sciences Limited, Cambridgeshire, UK Oxon Italia S.P.A, Pero, Italy Report-no. OXN 165/952682 GLP: yes published: no	N	N	-	Oxon

KCP 10.5/0 8	Kolzer U.	2003	ASSESSMENT OF THE SIDE EFFECTS OF DESETHYL TERBUTHYLAZINE ON THE ACTIVITY OF THE SOIL MICROFLORA ArGe GAB Biotech/IFU, D-75223 Niefern- Öschelbronn Oxon Italia S.P.A, Pero, Italy Report-no. 20021389/01-ABMF GLP: yes published: no	N	N	-	Oxon
KCP 10.5/0 9	Kolzer U.	2002	ASSESSMENT OF THE SIDE EFFECTS OF 2-HYDROXY-TERBUTHYLAZINE ON THE ACTIVITY OF THE SOIL MICROFLORA ArGe GAB Biotech/IFU, D-75223 Niefern- Öschelbronn Oxon Italia S.P.A, Pero, Italy Report-no. 20011377/01-ABMF GLP: yes published: no	N	N	-	Oxon

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
KCP XX	Author	YYYY	Title Company Report No Source GLP/non GLP/GEP/non GEP Published/Unpublished	Y/N	Y/N	Data/study report never submitted before to <insert MS>  If previously submitted in <b>this</b> MS: Data protection started with: <insert authorization number of first au- thorization>	Owner

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

<b>Data point</b>	<b>Author(s)</b>	<b>Year</b>	<b>Title Company Report No. Source (where different from company) GLP or GEP status Published or not</b>	<b>Vertebrate study Y/N</b>	<b>Data protection claimed Y/N</b>	<b>Justification if data protection is claimed</b>	<b>Owner</b>
KCP XX	Author	YYYY	Title Company Report No Source GLP/non GLP/GEP/non GEP Published/Unpublished	Y/N	Y/N	Data/study report never submitted before to <insert MS>  If previously submitted in <b>this</b> MS: Data protection started with: <insert authorization number of first authorization>	Owner