Section A7.1.1.1.1 Annex Point IIA7.6.2.1	Hydrolysis as a function of pH and identification of breakdown products	
	JUSTIFICATION FOR NON-SUBMISSION OF DATA	Official use only
Other existing data [ ] **Limited exposure [x]**	**Technically not feasible [ ]** **Scientifically unjustified [x]** **Other justification [ ]**	
Detailed justification:	The active substance Z,E-9,12-Tetradecadien-1-yl acetate is used in pheromone traps. These traps consist of a cardboard containing a small amount of the pheromone and are covered with a layer of adhesive glue. When the pheromone trap is activated the pheromone volatises slowly into the air and attracts the target organisms, which are following a concentration gradient to the trap. The total amount in a single trap is 2 mg which is released from the trap over a period of approximately 6 weeks. Then the trap becomes ineffective due to the lack of attraction. The highest concentration of the pheromone can be expected near the traps. Concentrations will decrease exponentially with the distance. Thus concentrations in the air phase over natural water bodies will be very low. The distribution of compounds in the contact area of a liquid and gas phase can be described by the Henry's law constant. The Henry's law constant of Z,E-9,12-Tetradecadien-1-yl acetate for the system water/air is calculated to be 381.76 Pa m³/mole (see May (2006), Doc. IV, A3.2.1), indicating that pheromones reaching the water surface will not be dissolved in water, but remain in the air phase. Thus, contact with water will be negligible. Thus this data requirement is not justified for this pheromone. However, Wilfinger (2006) found that Z,E-9,12-Tetradecadien-1-yl acetate is rapidly hydrolysed at pH values different from the neutral range (see Doc IV, A3.5). This study was performed to determine the water solubility of this pheromone (approx. 0.1 mg/L, 20°C).	x
Undertaking of intended data submission [ ]	No	
	Evaluation by Competent Authorities	
	EVALUATION BY RAPPORTEUR MEMBER STATE	
Date	June 2008	
Evaluation of applicant's justification	Please note that the intended use has changed (cf. Doc. III-A 5). The trap is used over a period of 1 week. (Z,E)-Tetradeca-9,12-dienyl-acetate is used as a pheromone in order to attract specifically the male moths of *Plodia interpunctella* to the adhesive part of a pheromone trap, which is only used indoors. Therefore the Guidance of Data Requirements for Pheromones for Inclusion in Annex I/IA of Directive 98/8/EC applies, according to which testing of "Hydrolysis as a function of pH and identification of breakdown products" is only required if the pheromone is used outdoors or releases to aquatic compartment are possible.	
Conclusion	Agree with the applicant´s version.	
Remarks	-	

Section A7.1.1.1.2 **Annex Point IIA7.6.2.2**	**Phototransformation in water including the identity of the products of transformation**	
	JUSTIFICATION FOR NON-SUBMISSION OF DATA	Official use only
Other existing data [ ] **Limited exposure [x]**	**Technically not feasible [ ]** **Scientifically unjustified [x]** **Other justification [ ]**	
Detailed justification:	The active substance Z,E-9,12-Tetradecadien-1-yl acetate is used in pheromone traps. These traps consist of a cardboard containing a small amount of the pheromone and are covered with a layer of adhesive glue. When the pheromone trap is activated the pheromone volatises slowly into the air and attracts the target organisms, which are following a concentration gradient to the trap. The total amount in a single trap is 2 mg which is released from the trap over a period of approximately 6 weeks. Then the trap becomes ineffective due to the lack of attraction. The highest concentration of the pheromone can be expected near the traps. Concentrations will decrease exponentially with the distance. Thus concentrations in the air phase over natural water bodies will be very low. The distribution of compounds in the contact area of a liquid and gas phase can be described by the Henry's law constant. The Henry's law constant of Z,E-9,12-Tetradecadien-1-yl acetate for the system water/air is calculated to be 381.76 Pa m³/mole (see May (2006), Doc. IV, A3.2.1), indicating that pheromones reaching the water surface will not be dissolved in water, but remain in the air phase. Thus, contact with water will be negligible. Thus this data requirement is not justified for this pheromone.	X
Undertaking of intended data submission [ ]	No	
	Evaluation by Competent Authorities	
	EVALUATION BY RAPPORTEUR MEMBER STATE	
Date	October 2008	
Evaluation of applicant's justification	Please note that the intended use has changed (cf. Doc. III-A 5). The trap is used over a period of 1 week. In addition, ZE-TDA does not display chromophore properties at wavelengths above 290 nm and thus does not absorb light in the range of 290 to 800 nm (study A 3.4, Doc. III-A 3).	
Conclusion	Agree with the applicant's version with the amendments above	
Remarks	-	

Section A7.1.1.2.1/01 Biodegradability (ready)

Annex Point IIA7.6.1.1

			Official use only
		1 REFERENCE	
1.1	**Reference**	Dengler, D. (2009), Assessment of the Ready Biodegradability of Z,E-9,12-Tetradecadienyl Acetate (ZE-TDA) with the Closed Bottle Test, testing facility: eurofins-GAB GmbH, Niefern-Öschelbronn, Germany, unpublished report No. S09-02939	
1.2	**Data protection**	Yes	
1.2.1	Data owner	Aeroxon Insect Control GmbH	
1.2.2	Companies with letter of access	Not applicable	
1.2.3	Criteria for data protection	Data submitted to the MS after 13 May 2000 on existing a.s. for the purpose of its entry into Annex I	
		2 GUIDELINES AND QUALITY ASSURANCE	
2.1	**Guideline study**	Yes OECD Guideline 301 D	
2.2	**GLP**	Yes	
2.3	**Deviations**	No	X
		3 MATERIALS AND METHODS	
3.1	**Test material**	Z,E-9,12-Tetradecadien-1-yl acetate (ZE-TDA)	
3.1.1	Lot/Batch number	Batch No: 2007263-0009	
3.1.2	Specification	As given in section 2	
3.1.3	Purity	Purity: 98.7 %	
3.1.4	Further relevant properties	Liquid, water solubility: 0.143 / 0.119 mg/L, at pH 6.22 / 7.58 and 20 °C	
3.1.5	Composition of Product	Technical active substance	
3.1.6	TS inhibitory to microorganisms	No	
3.1.7	Specific chemical analysis	No chemical analytic was applied	
3.2	**Reference substance**	Yes, Na-benzoate	
3.2.1	Initial concentration of reference substance	2 mg/L	
3.3	**Testing procedure**	*Non-entry field*	
3.3.1	Inoculum / test species	See **Table A7.1.1.2.1.05-2**.	
3.3.2	Test system	BOD flasks, see **Table A7.1.1.2.1.05-3**.	
3.3.3	Test conditions	See **Table A7.1.1.2.05-4**.	

Section A7.1.1.2.1/01 Biodegradability (ready)

Annex Point IIA7.6.1.1

3.3.4	Method of preparation of test solution	Mineral salt stock solutions and oxygen saturated ultra pure grade water and where appropriate inoculum were premixed. ZE-TDA was dissolved in acetone and directly transferred into the BOD flasks. After total evaporation of the solvent the bottles were filled completely with the premix. The treatment groups contained ZE-TDA and/or reference item as follows:

Treatment group	ZE-TDA	Na-benzoate
Inoculum blank	0 mg/L	0 mg/L
Test item	2 mg/L	0 mg/L
Reference item	0 mg/L	2 mg/L
Toxicity control	2 mg/L	2 mg/L

3.3.5	Initial TS concentration	2 mg ZE-TDA /L
3.3.6	Duration of test	28 days
3.3.7	Analytical parameter	O_2 uptake, determined by measuring the concentrations of oxygen
3.3.8	Sampling	Oxygen concentrations were determined at 0 hours, and on days 4, 7, 11, 14, 21, and 28 of the test period
3.3.9	Intermediates/ degradation products	Not identified
3.3.10	Nitrate/nitrite measurement	No, test substance does not contain nitrogen
3.3.11	Controls	Control treatment groups were prepared as presented under point 3.3.4.
3.3.12	Statistics	No statistical methods were employed.

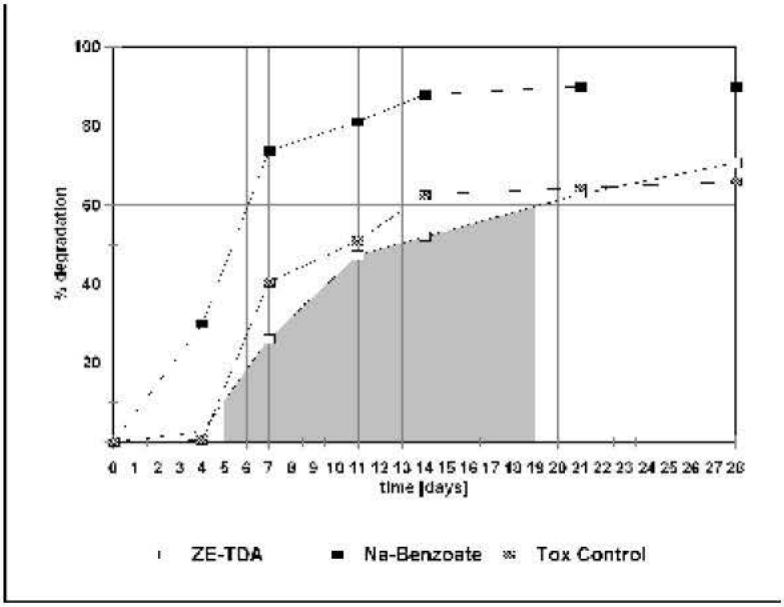
4 RESULTS

4.1 Degradation of test substance

Section A7.1.1.2.1/01 Biodegradability (ready)

Annex Point IIA7.6.1.1

4.1.1 Graph



4.1.2	Degradation	Biological degradation of the test substance, the reference substance and in the toxic control treatment group was 70.7 %, 90.0 and 65.9 %, respectively at the end of the 28-day incubation period.
4.1.3	Other observations	None
4.1.4	Degradation of TS in abiotic control	The average O_2 consumption in the inoculum blank after 28 days was < 1.5 mg/L O_2.
4.1.5	Degradation of reference substance	Degradation was satisfactorily within expected range, see graph in 4.1.1.
4.1.6	Intermediates/ degradation products	No intermediate or degradation products identified.

5 APPLICANT'S SUMMARY AND CONCLUSION

5.1 Materials and methods

Test guideline: OECD Guideline 301 D

The ready biodegradability of Z,E-9,12-Tetradecadienyl Acetate (ZE-TDA) was determined in a mineral test medium which was inoculated with effluent from of a municipal sewage treatment plant. At test start the test solutions were oxygen saturated and kept in completely filled, closed bottles in the dark at 20 ± 3 °C. Degradation of the test item, a reference item (Na-benzoate) and a mixture of both (toxic control) was determined by measuring dissolved oxygen over a 28-d period with an Oximeter and a calibrated electrode. The amount of oxygen taken up by the microbial population during biodegradation of the test item, corrected for uptake by the blank inoculum run in parallel, was expressed as a percentage of the ThOD (theoretical oxygen demand).

Due to its low solubility in water of approximately 0.119 to 0.143 mg/L at 20 °C, ZE-TDA was dissolved in acetone and transferred into the empty glass bottles. Before test media were filled into the bottles the acetone was evaporated completely. The initially introduced amount of ZE-TDA corresponded to 2 mg/L test medium.

Section A7.1.1.2.1/01 Biodegradability (ready)

Annex Point IIA7.6.1.1

5.2	**Results and discussion**	A significant degradation of ZE-TDA and Na-benzoate was observed within the 28 days study period. Within the first 14 days 88.0 % of the ThOD for Na-benzoate was removed, indicating the suitability of the test system and viability of the effluent microorganisms. Within the first 14 days 62.6% of the ThOD was removed in the toxic control which demonstrates that ZE-TDA is not toxic to microorganisms. Within a 14-days time window after an initial degradation of 10 % was observed 60.0% of the ThOD for ZE-TDA was removed, which demonstrates that ZE-TDA was readily biodegraded. Since the solubility of the test item in the neutral range is limited to 0.119 to 0.143 mg/L, no more than 6 – 7 % of the test substance introduced into the test units was solved and bioavailable, while the majority was unsolved. However, the availability to microorganisms is the precondition for degradation. Since dissolution was not enhanced by any means, the test item was not readily dissolved. Despite of low solubility significant degradation exceeding 70 % was observed after 28 days. This corresponds to 10 - 12 times the maximal in water soluble amount and indicates that bioavailable ZE-TDA is readily biodegraded.	x
5.3	**Conclusion**	The test can be considered valid and the results indicate that ZE-TDA is readily biodegradable under aerobic conditions.	x
5.3.1	Reliability	1	
5.3.2	Deficiencies	No	

Section A7.1.1.2.1/01 Biodegradability (ready)

Annex Point IIA7.6.1.1

Evaluation by Competent Authorities	
	EVALUATION BY RAPPORTEUR MEMBER STATE
Date	November 2009
Materials and Methods	2.3 Deviations: Incubation temperature was 21.0 – 22.9°C during the first week.
Results and discussion	The 14-d window may be used instead of the 10-d window when measurements have not been made after 10 days or if the number of needed bottles necessary to evaluate the 10-day window causes the test to become too unwieldy. As information on degradation is available on day 14 the 14-d window shall not apply (cf also A7.1.1.2.1/01-5). Therefore ZE-TDA is considered as readily biodegradable not fulfilling the 10-d window. According to the new CLP Regulation (EC) No 1272/2008 it is also rapidly biodegradable.

Section A7.1.1.2.1/01 Biodegradability (ready)

Annex Point IIA7.6.1.1

Conclusion

Please see amendments above.

In addition, a QSAR calculation with BIOWIN v4.02 of the EPI SUITE™ software indicated that ZE-TDA is readily biodegradable. The probability scores of the different models (1, 2, 4, 5, and 6) are not between 0.4 and 0.6 (because the cut-off point is 0.5). However, the result is limited since the prediction was not exclusively based on substructures known to the model. In general, the prediction for non biodegradability for this QSAR model yields a better validity.

---------- BIOWIN v4.10 Results ----------
SMILES: CC=CCC=CCCCCCCCCOC(=O)C
CHEM: z,e-9,12-Tetradecadien-1yl acetate--
MOL FOR: C16 H28 O2
MOL WT: 252.40
Biowin1 (Linear Model Prediction): Biodegrades Fast
Biowin2 (Non-Linear Model Prediction): Biodegrades Fast
Biowin3 (Ultimate Biodegradation Timeframe): Weeks
Biowin4 (Primary Biodegradation Timeframe): Days
Biowin5 (MITI Linear Model Prediction): Readily Degradable
Biowin6 (MITI Non-Linear Model Prediction): Readily Degradable
Biowin7 (Anaerobic Model Prediction): Does Not Biodegrade Fast
Ready Biodegradability Prediction: YES

TYPE	NUM	Biowin1 FRAGMENT DESCRIPTION	COEFF	VALUE
Frag	1	Linear C4 terminal chain [CCC-CH3]	0.1084	0.1084
Frag	1	Ester [-C(=O)-O-C]	0.1742	0.1742
MolWt	*	Molecular Weight Parameter		-0.1202
Const	*	Equation Constant		0.7475
RESULT	Biowin1 (Linear Biodeg Probability)			0.9100

TYPE	NUM	Biowin2 FRAGMENT DESCRIPTION	COEFF	VALUE
Frag	1	Linear C4 terminal chain [CCC-CH3]	1.8437	1.8437
Frag	1	Ester [-C(=O)-O-C]	4.0795	4.0795
MolWt	*	Molecular Weight Parameter		-3.5841
RESULT	Biowin2 (Non-Linear Biodeg Probability)			0.9953

TYPE	NUM	Biowin3 FRAGMENT DESCRIPTION	COEFF	VALUE
Frag	1	Linear C4 terminal chain [CCC-CH3]	0.2983	0.2983
Frag	1	Ester [-C(=O)-O-C]	0.1402	0.1402
MolWt	*	Molecular Weight Parameter		-0.5578
Const	*	Equation Constant		3.1992
RESULT	Biowin3 (Survey Model - Ultimate Biodeg)			3.0799

TYPE	NUM	Biowin4 FRAGMENT DESCRIPTION	COEFF	VALUE
Frag	1	Linear C4 terminal chain [CCC-CH3]	0.2691	0.2691
Frag	1	Ester [-C(=O)-O-C]	0.2290	0.2290
MolWt	*	Molecular Weight Parameter		-0.3642
Const	*	Equation Constant		3.8477
RESULT	Biowin4 (Survey Model - Primary Biodeg)			3.9816

Result Classification: 5.00 -> hours 4.00 -> days 3.00 -> weeks
(Primary & Ultimate) 2.00 -> months 1.00 -> longer

Section A7.1.1.2.1/01 Biodegradability (ready)

Annex Point IIA7.6.1.1

TYPE | NUM | Biowin5 FRAGMENT DESCRIPTION | COEFF | VALUE
------+-----+---------+---------
Frag | 1 | Ester [-C(=O)-O-C] | 0.3437 | 0.3437
Frag | 2 | Methyl [-CH3] | 0.0004 | 0.0008
Frag | 9 | -CH2- [linear] | 0.0494 | 0.4447
Frag | 4 | -C=CH [alkenyl hydrogen] | 0.0062 | 0.0248
MolWt| * | Molecular Weight Parameter | | -0.7509
Const| * | Equation Constant | | 0.7121
RESULT | Biowin5 (MITI Linear Biodeg Probability)| | 0.7753
------+-----+---------+---------
TYPE | NUM | Biowin6 FRAGMENT DESCRIPTION | COEFF | VALUE
------+-----+---------+---------
Frag | 1 | Ester [-C(=O)-O-C] | 2.4462 | 2.4462
Frag | 2 | Methyl [-CH3] | 0.0194 | 0.0389
Frag | 9 | -CH2- [linear] | 0.4295 | 3.8654
Frag | 4 | -C=CH [alkenyl hydrogen] | 0.0285 | 0.1141
MolWt| * | Molecular Weight Parameter | | -7.2865
RESULT |Biowin6 (MITI Non-Linear Biodeg Probability) | | 0.8460
TYPE | NUM | Biowin7 FRAGMENT DESCRIPTION | COEFF | VALUE
------+-----+---------+---------
Frag | 1 | Linear C4 terminal chain [CCC-CH3] | -0.3177 | -0.3177
Frag | 1 | Ester [-C(=O)-O-C] | 0.1719 | 0.1719
Frag | 2 | Methyl [-CH3] | -0.0796 | -0.1591
Frag | 9 | -CH2- [linear] | 0.0260 | 0.2339
Frag | 4 | -C=CH [alkenyl hydrogen] | -0.0735 | -0.2941
Const| * | Equation Constant | | 0.8361
RESULT | Biowin7 (Anaerobic Linear Biodeg Prob) | | 0.4709
A Probability Greater Than or Equal to 0.5 indicates --> Readily Degradable

A Probability Less Than 0.5 indicates --> NOT Readily Degradable

Acceptability Acceptable

Remarks None

Reliability 1

Table A7.1.1.2.1/05-1: Guideline-methods of EC and OECD for tests on ready/inherent biodegradability (according to OECD criteria); simulation test

Test	EC-method	OECD-Guideline	Test on ready/inherent biodegradability
DOC Die-Away-Test	C.4-A	301A	ready
CO_2 Evolution-Test (Modified Sturm Test)	C.4-C	301B	ready
Modified OECD-Screening-Test	C.4-B	301E	ready
Manometric Respirometry	C.4-D	301F	ready
MITI-I-Test	C.4-F	301C	ready
Closed-Bottle-Test	**C.4-E**	**301D**	**ready**
Zahn-Wellens-test	C.9	302B	Inherent
Modified MITI-Test (II)	-	302C	Inherent
Modified SCAS-Test	C.12	302A	Inherent
Simulation Test with activated Sewage (Coupled Units-Test)	C.10	302A	Simulation Test[1)]

[1)] Test for the determination of the ultimate degradation of test material under conditions which simulate the treatment in an activated sludge plant

Table A7.1.1.2.1/05-2: Inoculum / Test organism

Criteria	Details
Nature	Activated sewage sludge
Species	Not specified
Strain	Not specified
Source	Effluent of the municipal sewage treatment plant of Pforzheim/Germany
Sampling site	See above
Laboratory culture	No
Method of cultivation	Not specified
Preparation of inoculum for exposure	The effluent was kept under aerobic conditions in the period between sampling and application. The inoculum was filtered through a coarse filter, the first 200 mL being discarded, and was aerated by shaking one week in an Erlenmeyer flask.
Pre-treatment	No pre-adaptation took place
Initial cell concentration (corresponding to 30 mg activated sludge/L)	$1.26 \cdot 10^3$ cells in each test vessel (volume approximately 315 mL), corresponding to 4000 cells/L.

Table A7.1.1.2.1/05-3: Test system

Criteria	Details
Culturing apparatus	Glass bottles completely closed with ground-in stoppers
Number of culture flasks/concentration	One - three replicate flasks
Aeration device	None
Measuring equipment	Oximeter and a calibrated electrode
Test performed in closed vessels due to significant volatility of TS	The test was performed in closed bottles.

Table A7.1.1.2.1/05-4: Test conditions

Criteria	Details
Composition of medium	5 mL of each of the following stock solutions was used for in a final volume of 5 L: Stock solution 1: KH_2PO_4 8.5 g/L $K_2HPO_4 \cdot 3H_2O$ 28.5 g/L $Na_2HPO_4 \cdot H_2O$ 33.4 g/L NH_4Cl 0.5 g/L Stock solution 2: $CaCl_2 \cdot 2\ H_2O$ 36.4 g/L Stock solution 3: $MgSO_4 \cdot 7\ H_2O$ 22.5 g/L Stock solution 4: $FeCl_3 \cdot 6\ H_2O$ 0.25 g/L
Additional substrate	No
Test temperature	20 ± 0 °C
pH	No stated
Aeration of dilution water	Strong aeration for 10 minutes
Suspended solids concentration	Not stated
Other relevant criteria	None as specified in report

Table A7.1.1.2.1/01-5: Pass levels and validity criteria for tests on ready biodegradability

Pass levels	Fulfilled	Not fulfilled
70% removal of DOC resp. 60% removal of ThOD or $ThCO_2$	X	
Pass values reached within 10-d window (within 28-d test period) - not applicable to MITI-I-Test - 14-d window acceptable for Closed-Bottle-Test	X	
Criteria for validity		
Difference of extremes of replicate values of TS removal at plateau (at the end of test or end of 10-d window) < 20%	X	
Percentage of removal of reference substance reaches pass level by day 14	X	

Section A7.1.3 Annex Point IIA7.7	Adsorption / Desorption screening test	
	JUSTIFICATION FOR NON-SUBMISSION OF DATA	Official use only
Other existing data [ ] **Limited exposure [x]**	**Technically not feasible [ ]** **Scientifically unjustified [x]** **Other justification [ ]**	
Detailed justification:	The active substance Z,E-9,12-Tetradecadien-1-yl acetate is used in pheromone traps. These traps consist of a cardboard containing a small amount of the pheromone and are covered with a layer of adhesive glue. When the pheromone trap is activated the pheromone volatises slowly into the air and attracts the target organisms, which are following a concentration gradient to the trap. The total amount in a single trap is 2 mg which is released from the trap over a period of approximately 6 weeks. Then the trap becomes ineffective due to the lack of attraction. The highest concentration of the pheromone can be expected near the traps. Concentrations will decrease exponentially with the distance. Thus concentrations in the air phase over natural water bodies will be very low. The distribution of compounds in the contact area of a liquid and gas phase can be described by the Henry's law constant. The Henry's law constant of Z,E-9,12-Tetradecadien-1-yl acetate for the system water/air is calculated to be 381.76 Pa m³/mole (see May (2006), Doc. IV, A3.2.1), indicating that pheromones reaching the water surface will not be dissolved in water, but remain in the air phase. Thus, contact with water will be negligible. Thus this data requirement is not justified for this pheromone. Furthermore, the experimental determination of the adsorption of Z,E-9,12-Tetradecadien-1-yl acetate might be difficult or even impossible, due the its low solubility, high volatility and tendency to be hydrolysed (Wilfinger (2006), see Doc IV, A3.5).	X
Undertaking of intended data submission [ ]	No	

Evaluation by Competent Authorities	
	EVALUATION BY RAPPORTEUR MEMBER STATE
Date	October 2008
Evaluation of applicant's justification	Please note that the intended use has changed (cf. Doc. III-A 5). The trap is used over a period of 1 week. The Guidance of Data Requirements for Pheromones for Inclusion in Annex I/IA of Directive 98/8/EC states that according to the intended use testing of the adsorption/desorption behaviour of the pheromone in a screening test is normally not required.
Conclusion	Agree with the applicant´s version.
Remarks	-

Section A7.3.1 **Annex Point IIIA VII.5**	**Phototransformation in air (estimation method)**	
	1 REFERENCE	Official use only
1.1 Reference	Heintze A. (2006): Pyrethrum extract – Annex IIIA, Point 7.3.1 Estimation of the photochemical oxidative degradation; GAB Consulting, Germany, report number 180332-A3-070301-01 (05 October 2006)	x
1.2 Data protection	Yes	
1.2.1 Data owner	Aeroxon Insect Control GmbH, Waiblingen, Germany	
1.2.2 Companies with letter of access	Not applicable	
1.2.3 Criteria for data protection	Data submitted to the MS after 13 May 2000 on existing a.s. for the purpose of its entry into Annex I	
	2 GUIDELINES AND QUALITY ASSURANCE	
2.1 Guideline study	No guideline available	
2.2 GLP *(only where required)*	GLP is not compulsory for a calculation based report	
2.3 Deviations	Not applicable	
	3 MATERIALS AND METHODS	
3.1 Test material	Not applicable, because the results were obtained exclusively by calculations	
3.1.1 Lot/Batch number	Not applicable	
3.1.2 Specification	Not applicable	
3.1.3Description	Not applicable	
3.1.4Purity	Not applicable	
3.1.5 Stability	Not applicable	
	4 RESULTS	
4.1 Results of estimation	Several mechanisms for degradation of chemicals bound to particles in air or in gas phase are known. Following the physical and chemical properties and the structure of z,e-9,12-Tetradecadien-1yl acetate it is assumed that degradation and persistence of the active substance mainly depends on reaction with hydroxyl radicals. The photochemical degradation of z,e-9,12-Tetradecadien-1yl acetate in air was estimated using the model AOPWIN (version 1.89). **Mechanism** — **k_{OH} [cm³/molec. sec.]** Hydrogen Abstraction — 12.5774×10^{-12} Reaction with N, S and –OH — 0.0000×10^{-12} Addition to triple bonds — 0.0000×10^{-12} Addition to olefinic bonds (Cis isomer) — 112.8000×10^{-12} Addition to olefinic bonds (Trans isomer) — 128.0000×10^{-12} Addition to aromatic bonds — 0.0000×10^{-12} Addition to fused rings — 0.0000×10^{-12} Overall OH rate constant (Cis isomer) — 125.3774×10^{-12} Overall OH rate constant (Trans isomer) — 140.5774×10^{-12}	

Section A7.3.1 Annex Point IIIA VII.5	Phototransformation in air (estimation method)	
	Overall ozone rate constant (Cis isomer) 26.0000 x 10^{-17} Overall ozone rate constant (Trans isomer) 40.0000 x 10^{-17} Total OH rate constant was determined at 125.3774 x 10^{-12} - 140.5774 x 10^{-12} cm^3/molec. sec., mainly due to addition to olefinic bonds (90%) and hydrogen abstraction (10%). Other mechanisms do not contribute to hydroxyl radical estimations. The total rate of both OH- and ozone constant is very low. Half life in the troposphere was calculated to be 1.024h for overall OH rate constant of cis isomer (0.913h for trans isomer) and 1.058h for ozone rate constant. of cis isomer (0.688h for trans isomer).	
	5 APPLICANT'S SUMMARY AND CONCLUSION	
5.1 Materials and methods	For the present estimation the model developed by Atkinson has been used. The model is based on a huge number of experimental data and the analysis involves structure activity relationships of the compounds. The calculation for z,e-9,12-Tetradecadien-1yl acetate was conducted with AOPWIN (version 1.89), a computerised model developed and modified by SRC estimation software.	
5.2 Results and discussion	The total rate of both OH- and ozone constant is very low. Half life in the troposphere was calculated to be 1.024h for overall OH rate constant of cis isomer (0.913h for trans isomer) and 1.058h for ozone rate constant of cis isomer (0.688h for trans isomer).	
5.3 Conclusion	Following the Atkinson calculation, the chemical half life of z,e-9,12-Tetradecadien-1-yl acetate in the troposphere will be in maximum 1 hour. It is therefore concluded that z,e-9,12-Tetradecadien-1-yl acetate will not be accumulated in air and will only be transported on very short distances.	
5.3.1 Reliability	1	
5.3.2 Deficiencies	No	

Evaluation by Competent Authorities

EVALUATION BY RAPPORTEUR MEMBER STATE

Date May 2007

Materials and Methods 1.1:
Titel: ZE-TDA - Estimation of the photochemical oxidative degradation;

Results and discussion
Excerpt from AOP WIN protocol:
"SMILES: CC=CCC=CCCCCCCCCOC(=O)C
---------- SUMMARY (AOP v1.91): **HYDROXYL RADICALS** ----------
OVERALL OH Rate Constant = 125.377 E-12 cm3/molecule-sec [Cis-isomer]
OVERALL OH Rate Constant = 140.577 E-12 cm3/molecule-sec [Trans-isomer]
---------- SUMMARY (AOP v1.91): **OZONE REACTION** ----------
OVERALL OZONE Rate Constant = 26.0000 E-17 cm3/molecule-sec [Cis-]
OVERALL OZONE Rate Constant = 40.0000 E-17 cm3/molecule-sec [Trans-]
HALF-LIFE = 1.058 Hrs (at 7E11 mol/cm3) [Cis-isomer]
HALF-LIFE = 0.688 Hrs (at 7E11 mol/cm3) [Trans-isomer]

NOTE: Reaction with Nitrate Radicals May Be Important!"

Hydroxyl radicals:

cis-isomer:	$T_{1/2}$ = 3.07h	$kdeg_{air}$ = 5.42 d^{-1}	acc. to TGD
trans-isomer:	$T_{1/2}$ = 2.74h	$kdeg_{air}$ = 6.07 d^{-1}	acc. to TGD

with
k_{OH}: specific degradation rate constant with OH-radicals [cm^3 x $molec.^{-1}$ x s^{-1}]
c_{OH} = $5*10^5$ molecules/cm^{-3} acc. to TGD
$kdeg_{air}$ (pseudo first order rate const. for degradation in air) = k_{OH} • c_{OH} • 24 • 3600 [d^{-1}]

Conclusion Acceptable with the amendments given above

Reliability 1

Acceptability Acceptable

Remarks -

Section A7.4.1.1 **Annex Point IIA7.1**	**Acute toxicity to fish**	
	JUSTIFICATION FOR NON-SUBMISSION OF DATA	Official use only
Other existing data [ ] **Limited exposure [x]**	**Technically not feasible [ ]** **Scientifically unjustified [ ]** **Other justification [ ]**	
Detailed justification:	The active substance Z,E-9,12-Tetradecadien-1-yl acetate is used in pheromone traps. These traps consist of a cardboard containing a small amount of the pheromone and are covered with a layer of adhesive glue. When the pheromone trap is activated the pheromone volatises slowly into the air and attracts the target organisms, which are following a concentration gradient to the trap. The total amount in a single trap is 2 mg which is released from the trap over a period of approximately 6 weeks. Then the trap becomes ineffective due to the lack of attraction.	X
	The pheromone traps are exclusively used indoors. Thus direct exposure of natural surface waters can be excluded. The highest concentration of the pheromone can be expected near the traps. Concentrations will decrease exponentially with the distance. Thus concentrations in the air phase over surface water will be very low. The distribution of compounds in the contact area of a liquid and gas phase can be described by the Henry's law constant. The Henry's law constant of Z,E-9,12-Tetradecadien-1-yl acetate for the system water/air is calculated to be 381.76 Pa m^3/mole (see May 2006, Doc. IV, A3.2.1), indicating that pheromones reaching the water surface will not be dissolved in water, but remain in the air phase. Thus, an exposure of fish from the release of the pheromone to air can be excluded.	
	In the absence of literature data, a QSAR calculation has been performed to estimate potential effects on aquatic organisms. Results are presented below. For a reason unknown to us, the CAS number 31654-77-0 is allocated to the structure of "Z,E-9,12-Tetradecadien-1-yl acetate" in the software used.	X

SMILES: O=C(OCCCCCCCCC=CCC=CC)C
CHEM : 9,12-Tetradecadien-1-ol, acetate, (Z,E)-
CAS Num: 031654-77-0
ChemID1:
ChemID2:
ChemID3:
MOL FOR: C16 H28 O2
MOL WT : 252.40
Log Kow: 6.33 (KowWin estimate)
Melt Pt: -47.60 deg C
Wat Sol: 0.15 mg/L (measured)

ECOSAR v0.99f Class(es) Found

Esters

Predicted

ECOSAR Class	Organism	Duration	End Pt	mg/L (ppm)
Neutral Organic SAR (Baseline Toxicity)	: Fish	14-day	LC50	0.057
Esters	: Fish	96-hr	LC50	0.184 *
Esters	: Daphnid	48-hr	LC50	0.023
Esters	: Green Algae	96-hr	EC50	0.017
Esters	: Green Algae		ChV	0.015
Esters	: Fish		ChV	0.004

Note: * = asterick designates: Chemical may not be soluble enough to measure this predicted effect.
Fish and daphnid acute toxicity log Kow cutoff: 5.0
Green algal EC50 toxicity log Kow cutoff: 6.4
Chronic toxicity log Kow cutoff: 8.0
MW cutoff: 1000

Undertaking of intended data submission [ ] No

Evaluation by Competent Authorities

EVALUATION BY RAPPORTEUR MEMBER STATE

Date

October 2008

Evaluation of applicant's justification

Please note that the intended use has changed (cf. Doc. III-A 5). The trap is used over a period of 1 week.

In absence of experimental data the applicant´s SAR estimation is based on the ECOSAR v.099h model which is included in the EPI SUITE™ Software (http://www.epa.gov/oppt/exposure/pubs/episuite.htm) as well as in the OECD Toolbox (http://www.oecd.org/document/23/0,3343,en_2649_34377_33957015_1_1_1_1,00.html).

By manual addition of the measured input values for log Kow (>6.5, input 6.5 and 7) and water solubility (0.14 mg/L), the following results were gained. Based on high log Kow, only the chronic toxicity SAR for fish will yield a valid prediction. However, this SAR is developed on a single toxicity value and therefore less reliable than e.g. the SAR class for neutral organics. Note: The ChV is the geometric mean of the NOEC and LOEC.

Result ECOSAR v0.99h:

SMILES: O=C(OCCCCCCCCC=CCC=CC)C
CHEM : 9,12-Tetradecadien-1-ol, acetate, (Z,E)-
CAS Num: 30507-70-1
MOL FOR: C16 H28 O2
MOL WT: 252.40
Log Kow: 7.00 (User entered)
Melt Pt:
Wat Sol: 0.1 mg/L (measured)

ECOSAR v0.99h Class(es) Found

Esters

ECOSAR Class	Organism	Duration	End Pt	Predicted mg/L (ppm)
Neutral Organic SAR (Baseline Toxicity)	: Fish	14-day	LC50	0.015
Esters	: Fish	96-hr	LC50	0.081
Esters	: Fish		ChV	0.00106

Note: Fish and daphnid acute toxicity log Kow cutoff: 5.0
Chronic toxicity log Kow cutoff: 8.0, MW cutoff: 1000

SMILES: O=C(OCCCCCCCCC=CCC=CC)C
CHEM : 9,12-Tetradecadien-1-ol, acetate, (Z,E)-
CAS Num: 30507-70-1
MOL FOR: C16 H28 O2
MOL WT: 252.40
Log Kow: 6.50 (User entered)
Melt Pt:
Wat Sol: 0.14 mg/L (measured)

ECOSAR v0.99h Class(es) Found

Esters

ECOSAR Class		Organism	Predicted Duration	End Pt	mg/L (ppm)
Neutral Organic SAR (Baseline Toxicity)		: Fish	14-day	LC50	0.041
Esters	:	Fish	96-hr	LC50	0.149 *
Esters	:	Fish		ChV	0.003

Conclusion Though core data according to the TNsG on Data requirement cannot be waived, exemption for pheromones are stipulated in the Guidance for Waiving of Data Requirements for Pheromones for Inclusion in Annex I/IA of Directive 98/8/EC. Thus, the justification for non-submission of data is acceptable because of negligible exposure to aquatic biota. The QSAR prediction indicated high chronic toxicity for fish; however its reliability is limited.

Remarks -

Section A7.4.1.2 **Annex Point IIA7.2**	**Acute toxicity to invertebrates**	
	JUSTIFICATION FOR NON-SUBMISSION OF DATA	Official use only
Other existing data [ ] **Limited exposure [x]**	**Technically not feasible [ ]** **Scientifically unjustified [ ]** **Other justification [ ]**	
Detailed justification:	The active substance Z,E-9,12-Tetradecadien-1-yl acetate is used in pheromone traps. These traps consist of a cardboard containing a small amount of the pheromone and are covered with a layer of adhesive glue. When the pheromone trap is activated the pheromone volatises slowly into the air and attracts the target organisms, which are following a concentration gradient to the trap. The total amount in a single trap is 2 mg which is released from the trap over a period of approximately 6 weeks. Then the trap becomes ineffective due to the lack of attraction.	x
	The pheromone traps are exclusively used indoors. Thus direct exposure of natural surface waters can be excluded. The highest concentration of the pheromone can be expected near the traps. Concentrations will decrease exponentially with the distance. Thus concentrations in the air phase over surface water will be very low. The distribution of compounds in the contact area of a liquid and gas phase can be described by the Henry's law constant. The Henry's law constant of Z,E-9,12-Tetradecadien-1-yl acetate for the system water/air is calculated to be 381.76 Pa m^3/mole (see May 2006, Doc. IV, A3.2.1), indicating that pheromones reaching the water surface will not be dissolved in water, but remain in the air phase. Thus, an exposure of aquatic invertebrates from the release of the pheromone to air can be excluded.	
	In the absence of literature data, a QSAR calculation has been performed to estimate potential effects on aquatic organisms. Results are presented below. For a reason unknown to us, the CAS number 31654-77-0 is allocated to the structure of "Z,E-9,12-Tetradecadien-1-yl acetate" in the software used.	x

SMILES: O=C(OCCCCCCCCC=CCC=CC)C
CHEM : 9,12-Tetradecadien-1-ol, acetate, (Z,E)-
CAS Num: 031654-77-0
ChemID1:
ChemID2:
ChemID3:
MOL FOR: C16 H28 O2
MOL WT : 252.40
Log Kow: 6.33 (KowWin estimate)
Melt Pt: -47.60 deg C
Wat Sol: 0.15 mg/L (measured)

ECOSAR v0.99f Class(es) Found

Esters

Predicted

ECOSAR Class	Organism	Duration	End Pt	mg/L (ppm)
Neutral Organic SAR	: Fish	14-day	LC50	0.057
(Baseline Toxicity)				
Esters	: Fish	96-hr	LC50	0.184 *
Esters	: Daphnid	48-hr	LC50	0.023
Esters	: Green Algae	96-hr	EC50	0.017
Esters	: Green Algae		ChV	0.015
Esters	: Fish		ChV	0.004

Note: * = asterick designates: Chemical may not be soluble
enough to measure this predicted effect.
Fish and daphnid acute toxicity log Kow cutoff: 5.0
Green algal EC50 toxicity log Kow cutoff: 6.4
Chronic toxicity log Kow cutoff: 8.0
MW cutoff: 1000

Undertaking of intended data submission [ ]	No

Evaluation by Competent Authorities	
	EVALUATION BY RAPPORTEUR MEMBER STATE
Date	October 2008
Evaluation of applicant's justification	Please note that the intended use has changed (cf. Doc. III-A 5). The trap is used over a period of 1 week. In absence of experimental data, the applicant´s SAR estimation is based on the ECOSAR v.099h model which is included in the EPI SUITE™ Software (http://www.epa.gov/oppt/exposure/pubs/episuite.htm) as well as in the OECD Toolbox (http://www.oecd.org/document/23/0,3343,en_2649_34377_33957015_1_1_1_1,00.html). Based on the high log Kow, the acute toxicity SAR for daphnides will yield no valid prediction (log Kow cut off is 5).
Conclusion	Though core data according to the TNsG on Data requirement cannot be waived, exemption for pheromones are stipulated in the Guidance for Waiving of Data Requirements for Pheromones for Inclusion in Annex I/IA of Directive 98/8/EC. Thus, the justification for non-submission of data is acceptable due to negligible exposure to aquatic biota. No valid QSAR prediction for acute toxicity of daphnides could be calculated.
Remarks	-

Section A7.4.1.3 **Annex Point IIA7.3**	**Growth inhibition test on algae**	
	JUSTIFICATION FOR NON-SUBMISSION OF DATA	Official use only
Other existing data [ ]	**Technically not feasible [ ]** **Scientifically unjustified [ ]**	
Limited exposure [x]	**Other justification [ ]**	
Detailed justification:	The active substance Z,E-9,12-Tetradecadien-1-yl acetate is used in pheromone traps. These traps consist of a cardboard containing a small amount of the pheromone and are covered with a layer of adhesive glue. When the pheromone trap is activated the pheromone volatises slowly into the air and attracts the target organisms, which are following a concentration gradient to the trap. The total amount in a single trap is 2 mg which is released from the trap over a period of approximately 6 weeks. Then the trap becomes ineffective due to the lack of attraction.	X
	The pheromone traps are exclusively used indoors. Thus direct exposure of natural surface waters can be excluded. The highest concentration of the pheromone can be expected near the traps. Concentrations will decrease exponentially with the distance. Thus concentrations in the air phase over surface water will be very low.	
	The distribution of compounds in the contact area of a liquid and gas phase can be described by the Henry's law constant. The Henry's law constant of Z,E-9,12-Tetradecadien-1-yl acetate for the system water/air is calculated to be 381.76 Pa m³/mole (see May 2006, Doc. IV, A3.2.1), indicating that pheromones reaching the water surface will not be dissolved in water, but remain in the air phase.	
	Thus, an exposure of algae from the release of the pheromone to air can be excluded.	
	In the absence of literature data, a QSAR calculation has been performed to estimate potential effects on aquatic organisms. Results are presented below. For a reason unknown to us, the CAS number 31654-77-0 is allocated to the structure of "Z,E-9,12-Tetradecadien-1-yl acetate" in the software used.	X

```
SMILES: O=C(OCCCCCCCCC=CCC=CC)C
CHEM   : 9,12-Tetradecadien-1-ol, acetate,
(Z,E)-
CAS Num: 031654-77-0
ChemID1:
ChemID2:
ChemID3:
MOL FOR: C16 H28 O2
MOL WT : 252.40
Log Kow: 6.33  (KowWin estimate)
Melt Pt: -47.60 deg C
Wat Sol: 0.15 mg/L  (measured)

ECOSAR v0.99f Class(es) Found
-----------------------------
Esters
```

Section A7.4.1.3 **Annex Point IIA7.3**	**Growth inhibition test on algae**

Predicted

ECOSAR Class	Organism	Duration	End Pt	mg/L (ppm)
Neutral Organic SAR	Fish	14-day	LC50	0.057
(Baseline Toxicity)				
Esters	Fish	96-hr	LC50	0.184 *
Esters	Daphnid	48-hr	LC50	0.023
Esters	Green Algae	96-hr	EC50	0.017
Esters	Green Algae		ChV	0.015
Esters	Fish		ChV	0.004

Note: * = asterick designates: Chemical may not be soluble enough to measure this predicted effect.

Fish and daphnid acute toxicity log Kow cutoff: 5.0

Green algal EC50 toxicity log Kow cutoff: 6.4

Chronic toxicity log Kow cutoff: 8.0

MW cutoff: 1000

Undertaking of intended data submission [ ]	No

Evaluation by Competent Authorities

EVALUATION BY RAPPORTEUR MEMBER STATE

Date

October 2008

Evaluation of applicant's justification

Please note that the intended use has changed (cf. Doc. III-A 5). The trap is used over a period of 1 week.

In absence of experimental data the applicant´s SAR estimation is based on the ECOSAR v.099h model which is included in the EPI SUITE™ Software (http://www.epa.gov/oppt/exposure/pubs/episuite.htm) as well as in the OECD Toolbox (http://www.oecd.org/document/23/0,3343,en_2649_34377_33957015_1_1_1_1,00.html).

By manual addition of the measured input values for log Kow (>6.5, input 6.5 and 7) and water solubility (0.14 mg/L) the below listed results were gained. The cut off for a valid acute toxicity SAR prediction is 6.4. The acute and chronic toxicity SAR for algae is developed on a single toxicity value and therefore limited reliable. Note: The ChV is the geometric mean of the NOEC and LOEC.

Result ECOSAR v0.99h:

SMILES: O=C(OCCCCCCCCC=CCC=CC)C
CHEM : 9,12-Tetradecadien-1-ol, acetate, (Z,E)-
CAS Num: 30507-70-1
MOL FOR: C16 H28 O2
MOL WT : 252.40
Log Kow: **7.00** (User entered)
Melt Pt:
Wat Sol: 0.1 mg/L (measured)

ECOSAR v0.99h Class(es) Found:
Esters

ECOSAR Class	Organism	Predicted Duration	End Pt	mg/L (ppm)
Neutral Organic SAR (Baseline Toxicity)	: Fish	14-day	LC50	0.015
Esters	: Green Algae	96-hr	EC50	0.008
Esters	: Green Algae		ChV	0.007

Note: Green algal EC50 toxicity log Kow cutoff: 6.4
Chronic toxicity log Kow cutoff: 8.0. MW cutoff: 1000

SMILES : O=C(OCCCCCCCCC=CCC=CC)C
CHEM : 9,12-Tetradecadien-1-ol, acetate, (Z,E)-
CAS Num: 30507-70-1
MOL FOR: C16 H28 O2
MOL WT : 252.40
Log Kow: **6.50** (User entered)
Melt Pt:
Wat Sol: 0.14 mg/L (measured)

ECOSAR v0.99h Class(es) Found

Esters

ECOSAR Class	Organism	Predicted Duration	End Pt	mg/L (ppm)
Neutral Organic SAR	: Fish	14-day	LC50	0.041

	(Baseline Toxicity) Esters : Green Algae 96-hr EC50 0.014 Esters : Green Algae ChV 0.012
Conclusion	Though core data according to the TNsG on Data requirement cannot be waived, exemption for pheromones are stipulated in the Guidance for Waiving of Data Requirements for Pheromones for Inclusion in Annex I/IA of Directive 98/8/EC. Thus the justification for non-submission of data is acceptable based on negligible exposure to aquatic biota. The QSAR prediction indicated high chronic toxicity for algae; however its reliability is limited. The log Kow is (slightly) above the validity criteria for the acute toxicity SAR calculation; however the effect values for acute and chronic toxicity were approximately the same.
Remarks	-

Section A7.4.1.4 Annex Point IIA7.4	Inhibition to microbiological activity (aquatic)	
	JUSTIFICATION FOR NON-SUBMISSION OF DATA	Official use only
Other existing data [ ] **Limited exposure [x]**	**Technically not feasible [ ]** **Scientifically unjustified [ ]** **Other justification [ ]**	
Detailed justification:	The active substance Z,E-9,12-Tetradecadien-1-yl acetate is used in pheromone traps. These traps consist of a cardboard containing a small amount of the pheromone and are covered with a layer of adhesive glue. When the pheromone trap is activated the pheromone volatises slowly into the air and attracts the target organisms, which are following a concentration gradient to the trap. The total amount in a single trap is 2 mg which is released from the trap over a period of approximately 6 weeks. Then the trap becomes ineffective due to the lack of attraction. The pheromone traps are exclusively used indoors. Thus direct exposure of natural surface waters can be excluded. The highest concentration of the pheromone can be expected near the traps. Concentrations will decrease exponentially with the distance. Thus concentrations in the air phase over surface water will be very low. The distribution of compounds in the contact area of a liquid and gas phase can be described by the Henry's law constant. The Henry's law constant of Z,E-9,12-Tetradecadien-1-yl acetate for the system water/air is calculated to be 381.76 Pa m³/mole (see May 2006, Doc. IV, A3.2.1), indicating that pheromones reaching the water surface will not be dissolved in water, but remain in the air phase. Thus, an exposure of aquatic micro organisms from the release of the pheromone to air can be excluded.	x
Undertaking of intended data submission [ ]	No	

Evaluation by Competent Authorities	
	EVALUATION BY RAPPORTEUR MEMBER STATE
Date	June 2007
Evaluation of applicant's justification	Please note that the intended use has changed (cf. Doc III-A 5). The trap is used over a period of 1 week. (Z,E)-Tetradeca-9,12-dienyl-acetate is used as a pheromone in order to attract specifically the male moths of *Plodia interpunctella* to the adhesive part of a pheromone trap, which is only used indoors. Therefore the Guidance of Data Requirements for Pheromones for Inclusion in Annex I/IA of Directive 98/8/EC applies, according to which testing of the Inhibition to microbial activity (aquatic) is only required if the pheromone is used outdoors and the exposure assessment indicates concern.
Conclusion	Agree with the applicant´s version.
Remarks	-

Section A7.4.2 **Annex Point IIA7.5**	**Bioconcentration in aquatic organisms**	
	JUSTIFICATION FOR NON-SUBMISSION OF DATA	Official use only
Other existing data [ ] **Limited exposure [x]**	**Technically not feasible [ ]** **Scientifically unjustified [ ]** **Other justification [ ]**	
Detailed justification:	The active substance Z,E-9,12-Tetradecadien-1-yl acetate is used in pheromone traps. These traps consist of a cardboard containing a small amount of the pheromone and are covered with a layer of adhesive glue. When the pheromone trap is activated the pheromone volatises slowly into the air and attracts the target organisms, which are following a concentration gradient to the trap. The total amount in a single trap is 2 mg which is released from the trap over a period of approximately 6 weeks. Then the trap becomes ineffective due to the lack of attraction.	X
	The pheromone traps are exclusively used indoors. Thus direct exposure of natural surface waters can be excluded. The highest concentration of the pheromone can be expected near the traps. Concentrations will decrease exponentially with the distance. Thus concentrations in the air phase over surface water will be very low. The distribution of compounds in the contact area of a liquid and gas phase can be described by the Henry's law constant. The Henry's law constant of Z,E-9,12-Tetradecadien-1-yl acetate for the system water/air is calculated to be 381.76 Pa m³/mole (see May 2006, Doc. IV, A3.2.1), indicating that pheromones reaching the water surface will not be dissolved in water, but remain in the air phase. Thus, an exposure of aquatic organisms from the release of the pheromone to air can be excluded. The log Kow of Z,E-9,12-Tetradecadien-1-yl acetate has been determined experimentally to be exceeding 6.5, indicating the potential to accumulate in aquatic organisms. However, since aquatic organisms can only be exposed via the surrounding water, exposure will be negligible and thus bioaccumulation in aquatic organisms can be excluded.	
	Considering the log Kow of >6.5, the BCF for fish has been calculated according to the equation 74 of the TGD as follows: $\log BCF_{fish} = 0.85 \cdot \log Kow - 0.70$ $= 0.85 \cdot 6.5 - 0.7$ $= 4.825$ $\Rightarrow BCF_{fish} = 66\,834$	X
Undertaking of intended data submission [ ]	No.	

Evaluation by Competent Authorities

EVALUATION BY RAPPORTEUR MEMBER STATE

Date

October 2008

Evaluation of applicant's justification

Please note that the intended use has changed (cf. Doc. III-A 5). The trap is used over a period of 1 week.

The suggested BCF model is based on the low Kow with a range of 1 to 5.5. Chemicals with a log Kow value above 6 do not show a linear correlation for BCF estimation. Thus equation (75) of the TGD, 2003 applies. However it should be noted that this mathematical relationship has a higher degree of uncertainty because of such hydrophobic properties. (log Kow used for the calculation: 6.5)

Log BCF_{fish} = -0.20 x log Kow^2 + 2.75 x log Kow – 4.72

Log BCF_{fish} = 4.7

Based on calculations with the *EPI SUITE™* (*http://www.epa.gov/oppt/exposure/pubs/episuite.htm*) software BCFwin v2.17 estimates a log BCF_{fish} of 2.8 and 3.19 due to different log Kow input values (6.5 and 7).

Results BCFwin v.2.17:

Log BCF (v2.17 estimate): 2.80

SMILES: CC=CCC=CCCCCCCCCOC(=O)C

CHEM : (Z,E)-Tetradeca-9,12-dienyl acetate

MOL FOR: C16 H28 O2

MOL WT: 252.40

Log Kow (estimated): 6.33

Log Kow (experimental): not available from database

Log Kow used by BCF estimates: **6.50** (user entered)

Equation Used to Make BCF estimate:

Log BCF = 0.77 log Kow - 0.70 + Correction

Correction(s):	Value
Alkyl chains (8+ -CH2- groups)	-1.500

Estimated Log BCF = 2.805 (BCF = 638.3)

Log BCF (v2.17 estimate): 3.19

SMILES: CC=CCC=CCCCCCCCCOC(=O)C

CHEM : z,e-9,12-Tetradecadien-1yl acetate

MOL FOR: C16 H28 O2

MOL WT: 252.40

Log Kow (estimated): 6.33

Log Kow (experimental): not available from database

Log Kow used by BCF estimates: **7.00** (user entered)

Equation Used to Make BCF estimate:

Log BCF = 0.77 log Kow - 0.70 + Correction

Correction(s):	Value
Alkyl chains (8+ -CH2- groups)	-1.500

Estimated Log BCF = 3.190 (BCF = 1549)

Conclusion

Agree with applicant´s version with the amendments above.

Remarks

-

Section A7.5.1.1 Annex Point IIA7.4	Inhibition to microbial activity (terrestrial)	
	JUSTIFICATION FOR NON-SUBMISSION OF DATA	Official use only
Other existing data [ ] **Limited exposure [x]**	**Technically not feasible [ ]** **Scientifically unjustified [ ]** **Other justification [ ]**	
Detailed justification:	The active substance Z,E-9,12-Tetradecadien-1-yl acetate is used in pheromone traps. These traps consist of a cardboard containing a small amount of the pheromone and are covered with a layer of adhesive glue. When the pheromone trap is activated the pheromone volatises slowly into the air and attracts the target organisms, which are following a concentration gradient to the trap. The total amount in a single trap is 2 mg which is released from the trap over a period of approximately 6 weeks. Then the trap becomes ineffective due to the lack of attraction. The pheromone traps are exclusively used indoors. Thus direct exposure of natural surface waters and land compartments can be excluded. The highest concentration of the pheromone can be expected near the traps. Concentrations will decrease exponentially with the distance. Thus concentrations in the air phase will be very low. The distribution of compounds in the contact area of a liquid and gas phase can be described by the Henry's law constant. The Henry's law constant of Z,E-9,12-Tetradecadien-1-yl acetate for the system water/air is calculated to be 381.76 Pa m³/mole (see May 2006, Doc. IV, A3.2.1), indicating that pheromones reaching the water surface will not be dissolved in water, but remain in the air phase. Thus, an exposure of terrestrial micro-organisms and an inhibition of activity from the release of the pheromone to air can be excluded.	x
Undertaking of intended data submission [ ]	No.	

Evaluation by Competent Authorities	
	EVALUATION BY RAPPORTEUR MEMBER STATE
Date	June 2007
Evaluation of applicant's justification	Please note that the intended use has changed (cf. Doc III-A 5). The trap is used over a period of 1 week. (Z,E)-Tetradeca-9,12-dienyl-acetate is used as a pheromone in order to attract specifically the male moths of *Plodia interpunctella* to the adhesive part of a pheromone trap, which is only used indoors. Since the pheromone is exclusively used indoors there is no need according to the TNsG on data requirements to perform tests on terrestrial organisms.
Conclusion	Agree with the applicant´s version.
Remarks	-

Section A7.5.5/7.5.5.1 **Annex Point IIA X**	**Bioconcentration, terrestrial**	
	JUSTIFICATION FOR NON-SUBMISSION OF DATA	Official use only
Other existing data [ ] **Limited exposure [x]**	**Technically not feasible [ ]** **Scientifically unjustified [ ]** **Other justification [ ]**	
Detailed justification:	The active substance Z,E-9,12-Tetradecadien-1-yl acetate is used in pheromone traps. These traps consist of a cardboard containing a small amount of the pheromone and are covered with a layer of adhesive glue. When the pheromone trap is activated the pheromone volatises slowly into the air and attracts the target organisms, which are following a concentration gradient to the trap. The total amount in a single trap is 2 mg which is released from the trap over a period of approximately 6 weeks. Then the trap becomes ineffective due to the lack of attraction.	x
	The pheromone traps are exclusively used indoors. Thus direct exposure of natural surface waters and land compartments can be excluded. The highest concentration of the pheromone can be expected near the traps. Concentrations will decrease exponentially with the distance. Thus concentrations in the air phase reaching outdoor areas will be very low. The distribution of compounds in the contact area of a liquid and gas phase can be described by the Henry's law constant. The Henry's law constant of Z,E-9,12-Tetradecadien-1-yl acetate for the system water/air is calculated to be 381.76 Pa m^3/mole (see May 2006, Doc. IV, A3.2.1), indicating that pheromones reaching the water surface will not be dissolved in water, but remain in the air phase.	x
	Thus, an exposure of terrestrial fish-eating organisms from the release of the pheromone to air can be excluded.	
	The log Pow of Z,E-9,12-Tetradecadien-1-yl acetate has been determined experimentally to be exceeding 6.5, indicating the potential to accumulate in aquatic organisms. However, since aquatic organisms can only be exposed via the surrounding water, exposure will be negligible and thus bioaccumulation in aquatic organisms can be excluded and the risk of secondary poisoning of predators in the terrestrial compartment is excluded.	x
Undertaking of intended data submission [ ]	No.	

Evaluation by Competent Authorities

EVALUATION BY RAPPORTEUR MEMBER STATE

Date

October 2008

Evaluation of applicant's justification

Please note that the intended use has changed (cf. Doc III-A 5). The trap is used over a period of 1 week.

The Henry´s law constant is of limited value for the description of bioaccumulation in terrestrial species. The model terrestrial food chain includes soil- earthworm and worm eating birds. Bioconcentration in worms can be described as a hydrophobic partitioning between the pore water and the phases inside the organism (TGD, 2003). According to the Guidance on information requirements and chemical safety assessment, Chapter R.7c, pp.25, the bioaccumulation potential of air-breathing organisms is a function of both the log Kow and the log Koa. Therefore the log Koa was calculated using the KOAWIN v1.10 model (EPI SUITE™, http://www.epa.gov/oppt/exposure/pubs/episuite.htm) Based on the result (high log Kow and high log Koa), a high bioaccumulation potential for air-breathing animals might be expected. However, according to the authors of this approach would apply for non-volatiles. In contrast, Z,E-9,12-Tetradecadien-1-yl acetate shows volatility and is also susceptible to (fast) degradation/metabolism, both in the environment, aquatic biota and humans (cf. Doc. II-A).

Result KAOWIN v1.10

Log Koa: 7.16

SMILES: CC=CCC=CCCCCCCCCOC(=O)C
CHEM : Z,E)-Tetradeca-9,12-dienyl acetate
MOL FOR: C16 H28 O2
MOL WT: 252.40
---------- KOAWIN v1.10 Results ----------
Log Koa (octanol/air) estimate: 7.156
Koa (octanol/air) estimate: 1.432e+007
Using:
Log Kow: **6.50 (user entered)**
HenryLC: 0.0054 atm-m3/mole (HenryWin est)
Log Kaw: -0.656 (air/water part.coef.)

LogKow: ---- (exp database)
LogKow: 6.33 (KowWin estimate)
Henry LC: --- atm-m3/mole(exp database)
Henry LC: 0.0054 atm-m3/mole (HenryWin bond estimate)
Log Koa (octanol/air) estimate: 6.986 (from KowWin/HenryWin)

Conclusion

Based on the intended use, which is exclusively indoors, terrestrial bioaccumulation studies are not necessary due to negligible exposure to terrestrial wildlife and it is unlikely that unacceptable effects with respect to secondary poisoning will occur according to the proposed condition of use.

Remarks

-

Section A8 Measures necessary to protect man, animals and the environment

Subsection (Annex Point)			Official use only
8.1		**Recommended methods and precautions concerning handling, use, storage, transport or fire (IIA8.1)**	
8.1.0	**Methods and precautions concerning placing on the market**	No particular precautions apart from the usual ones for chemical products are necessary to reduce emissions. Storage in closed containers is recommended, preferably in those adopted by the supplier, in order to prevent any dispersion or leakage of the product.	x
8.1.1	**Methods and precautions concerning production, handling and use of the active substance and its formulations**	No specific precautions apart from the usual ones for chemical products are necessary to reduce emissions.	
8.1.2	**Methods and precautions concerning storage of the active substance and its formulations**	Store tightly sealed under inert gas in a cool, well-ventilated area. Keep away from heat, sparks, and open flame.	
8.1.3	**Methods and precautions concerning transport of the active substance and its formulations**	No specific precautions apart from the usual ones for chemical products are necessary.	
8.1.4	**Methods and precautions concerning fire of the active substance and its formulations**	Suitable fire-extinguishing media: Foam, CO_2, chemical powders, water mist.	
8.2		**In case of fire, nature of reaction products, combustion gases, etc. (IIA8.2)** No specific precautions apart from the usual ones for un-substituted hydrocarbon products are necessary. Toxic combustion products are not expected.	
8.3		**Emergency measures in case of an accident (IIA8.3)**	
8.3.1	**Specific treatment in case of an accident, e.g. first-aid measures,**	Not required. Neither the active substance nor the formulated product is toxic or harmful to man.	

Section A8 Measures necessary to protect man, animals and the environment

			Official use only
	antidotes, medical treatment if available		
8.3.2	**Emergency measures to protect the environment**	Not required. Neither the active substance nor the formulated product are toxic or harmful to man.	x
8.4		**Possibility of destruction or decontamination following release in or on the following: (a) Air; (b) Water, including drinking water; (c) Soil (IIA8.4)**	
8.4.1	**Possibility of destruction or decontamination following release in the air**	The active substance is instable in air. Release into air is very limited due to small amount handled in Europe.	
8.4.2	**Possibility of destruction or decontamination following release in water, including drinking water**	The active substance is instable in water and will furthermore volatise from the water surface. Release into water is very limited due to small amount handled in Europe.	x
8.4.3	**Possibility of destruction or decontamination following release in or on soil**	The active substance is not persistent in soil. Release into soil is very limited due to small amount handled in Europe.	
8.5		**Procedures for waste management of the active substance for industry or professional users e.g. possibility of re-use or recycling, neutralisation, conditions for controlled discharge, and incineration (IIA8.5)**	
8.5.1	**Possibility of re-use or recycling**	Re-use or recycling of the active substance or the formulated product is not possible.	
8.5.2	**Possibility of neutralisation of effects**	Not required. The active substance and the formulated product are not corrosive.	
8.5.3	**Conditions for controlled discharge including leachate qualities on disposal**	Active substance: Discharge by controlled incineration is recommended. Product: Discharge used products via domestic disposal.	x
8.5.4	**Conditions for controlled incineration**	No particular conditions are recommended.	

Section A8 Measures necessary to protect man, animals and the environment

		Official use only
8.6	**Observations on undesirable or unintended side-effects, e.g. on beneficial and other non-target organisms (IIA8.6)**	
	Not relevant.	
	The active substance has a species specific but non-toxic action.	
	The use of the product precludes exposure to non-target organisms	x
8.7	**Identification of any substances falling within the scope of List I or List II of the Annex to Directive 80/68/EEC on the protection of groundwater against pollution caused by certain dangerous substances (IIA8.7*)***	
	Not relevant	x

	Evaluation by Competent Authorities
	EVALUATION BY RAPPORTEUR MEMBER STATE
Date	May 2007
Materials and methods	-
Conclusion	Agree with applicant
Reliability	-
Acceptability	Acceptable with the amendments below
Remarks	8.1.0: Suitable container material: metal containers 8.3.2: Environmental precaution: do not let this chemical enter the aquatic environment. 8.4.2: The active substance is instable in water at acidic and basic pH. 8.5: Incineration facilities must comply with the requirements according to the Waste Incineration Directive 2000/76/EC. Direct discharge of ZE-TDA liquids into environmental waters must be avoided. 8.6: The active substance has a species specific but non-toxic action. No unacceptable effects on parasitoide arthropods are expected (Reinecke, 2008, personal communication). 8.7: ZE-TDA falls under the scope of List II of the Annex to Directive 80/68/EEC.

Section A9	Classification and Labelling		Official use only
Hazard symbol:	Not required		x
Indication of danger:	Not required		
Labelling symbol:	Not required		
Risk phrases:	Not required		
Safety phrases:	Not required		

Justifications for the Proposal		
Not required	Z,E-9,12-Tetradecadien-1-yl acetate is not acutely toxic to mammals.	
	Z,E-9,12-Tetradecadien-1-yl acetate is a naturally occurring compound, that is not produced with the intention to kill or harm other organisms. It is released by female moths calling for mating. An intrinsic toxicity of this compound is thus not feasible.	

For the MSDS of Z,E-9,12-Tetradecadien-1-yl acetate refer to **Doc I, Appendix 6**.

Evaluation by Competent Authorities

EVALUATION BY RAPPORTEUR MEMBER STATE

Date

October 2008

Evaluation of applicant's proposal

According to the Guidance for Waiving of Data Requirements for Pheromones for Inclusion in Annex I/IA of Directive 98/8/EC, data required for classification and labeling cannot be generated solely to satisfy this purpose but focused on biocidal data requirements for risk assessment. Thus, data and information available for classification and labeling were limited and the interpretation not unequivocal.

The applicant submitted a SAR calculation on aquatic toxicity to fish, daphnia and algae (cf. Doc III-A 7.4.1.1, Doc III-A 7.4.1.2, Doc III-A 7.4.1.3). Due to the low solubility of the parent compound and high log Kow, the validity and prediction of the model are limited. However, the calculation showed effect values for acute and chronic toxicity <1mg/L. Data from literature (cf. Doc. II-A) on SCLPs reported acute toxicity values for fish above 100 mg/L and for *Daphnia magna* in the range of 1 to 10 mg/L. Whether these effects may arise from physical interactions/impairments on the tested organisms could not be fully evaluated due to a lack of information. Only if the effects were shown to result from physical interactions/impairments, no classification would be appropriate.

Based on the outcome of the evaluation of ZE-TDA as Plant Protection Product (EC, 2008, Draft Assessment Report) the R51 (in conjunction with R53) toxic to aquatic organisms was applied based on read-across of a SCLP acetate caused effects on algae (E_rC50 above, NOEC below the water solubility of the tested

compound).

According to the (measured) log Kow >3 there is a hazard for long-term adverse effects in the aquatic environment and a R53 would be reasonable for labeling as well. Predicted BCF values with two QSAR models resulted in values below 1000 and above 10000. However, since no experimental proof on bioaccumulation was submitted and probably due to the low solubility and high log Kow, very difficult or impossible to obtain, other reasons are given not to regard ZE-TDA as bioaccumulative in aquatic biota. Based on information concerning degradation in air, soil and water and metabolism in organisms, accumulation of ZE-TDA in environmental compartments and biota is unlikely. It is reasonable to assume that based on the chemical similarities between wax esters and ZE-TDA that its metabolism and conversion will follow the same pattern. As wax esters are an important energy (storage) source/substrate for aquatic marine organisms and an important component of the marine food chain it is unlikely that ZE-TDA will bioaccumulate and biomagnify in marine biota.

ZE-TDA is rapidly biodegradable.

Moreover, the Guidance for Waiving of Data Requirements for Pheromones for Inclusion in Annex I/IA of Directive 98/8/EC states that pheromones are NOT bioaccumulative. This is also stated in the OECD Monograph Nr. 12, 2001.

Therefore, no classification and labeling for ZE-TDA is proposed at the moment.

Conclusion See above

Remarks -

Reference List: Listed by Section point

Section point/ reference number	Author(s)	Year	Title Testing Facility Owner / Source (where different from owner) Report No GLP or GEP status (where relevant) Published or not	Data protection claimed yes/no	Owner
A 2.7/01	Anonymous	2006	Analytical conditions for P6050-99 Bedoukian Indian Meal Moth Technical Pheromone z,e-9,12-tetradecadienyl acetate Report No.: No GLP: n.a. Unpublished	yes	AER
A 2.8/01	Anonymous	2006	Assignment of z,z-9,12-tetradecadienyl acetate structure to impurity number 3 Report No.: not indicated GLP: n.a. Unpublished	yes	AER
A 2.8/02	Maher, M.	2006	Certificate of analysis; Bedoukian Research Inc.; Report No.: not indicated GLP: No Unpublished	yes	AER
A 2.10	Anonymous	2008	(Z,E)-9,12-Tetradecadien-1-yl acetate (Plodia) (PT 19) – Nachforderungen; Company statement dating from 13th November 2008; GLP: n.a. Unpublished	n.a.	AER
A 3.1.1/01	Smeykal, H.	2006	Z,E-9,12-tetradecadien-1-yl acetate - thermal stability (OECD 113), melting point a.1. (OECD 102), Boiling point a.2. (OECD 103), Vapour pressure a.4 (OECD 104)" Siemens AG, Prozess-Sicherheit, Frankfurt am Main, Germany Aeroxon Insect Control, Waiblingen, Germany Report-no.: 20051129.01 GLP: yes Published: no	yes	AER
A 3.1.3	Wilfinger, W.	2006	Relative Density of z,e-9,12-Tetradecadien-1-yl acetate GAB Biotechnologie GmbH & GAB Analytik GmbH; Niefern- Öschelbronn Aeroxon Insect Control, Waiblingen, Germany Study code:20051432/01-PCRD GLP: yes Published: no	yes	AER
A 3.2.1	May, N.	2006	z,e-9,12-Tetradecadien-1-yl acetate Doc IV –A, Point 3.2.1 Henry´s Law Constant GAB Consulting GmbH Aeroxon Insect Control, Waiblingen, Germany Report number:180332-IVA-030201-01 GLP: no	yes	AER

Section point/ reference number	Author(s)	Year	Title Testing Facility Owner / Source (where different from owner) Report No GLP or GEP status (where relevant) Published or not	Data protection claimed yes/no	Owner
A 3.4	Wilfinger, W.	2006	UV/VIS Absorption Spectrum, Infrared absorption Spectrum, 13 C- NMR Spectrum and Mass Spectrum of z,e-9,12-Tetradecadien-1-yl acetate GAB Biotechnologie GmbH & GAB Analytik GmbH; Niefern- Öschelbronn Aeroxon Insect Control, Waiblingen, Germany Study code:20051432/01- PCSD GLP: yes	yes	AER
A 3.5	Wilfinger, W.	2006	Water solubility of z,e-9,12-Tetradecadien-1-yl acetate GAB Biotechnologie GmbH & GAB Analytik GmbH; Niefern- Öschelbronn Aeroxon Insect Control, Waiblingen, Germany Study code:20051432/01- PCSB GLP: yes	yes	AER
A 3.9	Wilfinger, W.	2006	Partition coefficient of z,e-9,12-Tetradecadien-1-yl acetate (hplc method) GAB Biotechnologie GmbH & GAB Analytik GmbH; Niefern- Öschelbronn Aeroxon Insect Control, Waiblingen, Germany Study code:20051432/01- PCPC GLP: yes	yes	AER
A 4.1/01	Bockhorn, A.	2006	Three Batches Analysis of z,e-9,12-Tetradecadien-1-yl-acetate (TDA) SOFIA-GmbH, Berlin, Germany Aeroxon Insect Control, Waiblingen, Germany Report-no. 262-10-12/06 GLP: no Published: no	yes	AER
A 4.1/02	Bockhorn, A.	2006	Determination of two impurities in the three Batches Analysis of z,e-9,12-Tetradecadien-1-yl-acetate (TDA) SOFIA-GmbH, Berlin, Germany Aeroxon Insect Control, Waiblingen, Germany Report-no. 1201-40-41/06 GLP: no Published: no	yes	AER
A 4.2/01	Bockhorn, A.	2006	Validation of an Analytical Method for the Determination of z,e-9,12-Tetradecadien-1-yl-acetate (TDA) in Air SOFIA-GmbH, Berlin, Germany Aeroxon Insect Control, Waiblingen, Germany Report-no. 262-7-9/06 GLP: no Published: no	yes	AER

Section point/ reference number	Author(s)	Year	Title Testing Facility Owner / Source (where different from owner) Report No GLP or GEP status (where relevant) Published or not	Data protection claimed yes/no	Owner
A 5.3.1/01	Heller, G.	2005	Comparative Testing of two Commercial Pheromone Traps for Phycitid Moths with Plodia interpunctella (HÜBNER 1810 - 1813) Aeroxon Insect Control Aeroxon Insect Control, Waiblingen, Germany Report-no. not available GLP: no Published: no	yes	AER
A 5.3.1/02	Teal, P.E.A., Heath, R.R., Dueben, B.D., Coffelt, J.A., Vick, K.W.	1995	Production and release of (Z,E)-9,12-tetradecadienal by sex pheromone glands of females of Plodia interpunctella (Lepidoptera: Pyralidae) - J. chem. ecol., 1995, Vol. 21, No. 6, 787 - 799 Report-no. GLP: no Published: yes	no	-
A 5.3.2/01	Mankin, R.W., Vick, K.W., Mayer, M.S., Coffelt, J.A.	1980	Anemotactic response threshold of the indial meal moth, Plodia interpunctella (Hübner) (Lepidoptera: Pyralidae), to its sex pheromone - J. chem. ecol., 1980, Vol. 6, No. 5 Report-no. not available GLP: no Published: yes	no	-
A 5.4.1/01	Ryne, C., Svensson, G.P., Anderbrant, O., Löfstedt, C.	2007	Evaluation of long-term mating disruption of Ephestia kuehniella and Plodia interpunctella (Lepidoptera: Pyralidae) in Indoor Storage Facilities by Pheromone Traps and Monitoring of Relative Aerial Concentrations of Pheromone - J. econ. entom., 2007, Vol. 100, No. 3 Report-no. not available GLP: no Published: yes	no	-
A 5.7/01	Haynes, K.F., Gaston, L.K., Mistrot Pope, M., Baker, T.C.	1984	Potential for evolution of resistance to pheromones - - Report-no. GLP: no Published: no	no	-

Section point/ reference number	Author(s)	Year	Title Testing Facility Owner / Source (where different from owner) Report No GLP or GEP status (where relevant) Published or not	Data protection claimed yes/no	Owner
A 6.1.1/01	[redacted]	[redacted]	Acute Oral Toxicity Study of Z,E-9,12-Tetradecadien-1-Yl Acetate in Cd Rats [redacted] Aeroxon Insect Control, Waiblingen, Germany Report-no. 19780/06 GLP: yes Published: no	yes	AER
A 6.1.2/01	Opdyke, D.L., Letizia C.	1982	Monographs on Fragrance Raw Materials - Report-no. 1982 GLP: no Published: no	no	-
A 6.1.3/01	[redacted]	[redacted]	Acute Inhalation Toxicity Study of Z,E-9,12-Tetradecadien-1-Yl Acetate in Rats [redacted] Aeroxon Insect Control, Waiblingen, Germany Report-no. 19781/06 GLP: yes Published: no	yes	AER
A 6.1.4/01	[redacted]	[redacted]	Acute Dermal Irritation / Corrosion Test (Patch Test) of Z,E-9,12-Tetradecadien-1-Yl Acetate in Rabbits [redacted] Aeroxon Insect Control, Waiblingen, Germany Report-no. 19782/06 GLP: yes Published: no	yes	AER
A 6.1.4/02	[redacted]	[redacted]	Acute Eye Irritation / Corrosion Test of Z,E-9,12-Tetradecadien-1-Yl Acetate in Rabbits [redacted] Aeroxon Insect Control, Waiblingen, Germany Report-no. 19783/06 GLP: yes Published: no	yes	AER
A 6.1.5/01	[redacted]	2006	Examination of Z,E-9,12-Tetradecadien-1-Yl Acetate in Guinea Pigs According To Magnusson And Kligman (Maximisation Test) [redacted] Aeroxon Insect Control, Waiblingen, Germany Report-no. 19784/06 GLP: yes Published: no	yes	AER

Section point/ reference number	Author(s)	Year	Title Testing Facility Owner / Source (where different from owner) Report No GLP or GEP status (where relevant) Published or not	Data protection claimed yes/no	Owner
A 6.2/01	Coots R.H.	1964	A comparison of the metabolism of cis, cis-linoleic, trans, trans-linoleic, and a mixture of cis,trans- and trans,cis-linoleic acids in the rat. - Report-no. GLP: no Published: J Lipid Res, 5, 473-6	no	-
A 6.2/02	Bretillon L., Chardigny J.M., Sebedio J.L., Noel J.P., Scrimgeour C.M., Fernie C.E., Loreau O., Gachon P., Beaufrere B.	2001	Isomerization increases the postprandial oxidation of linoleic acid but not alpha-linolenic acid in men. - Report-no. GLP: no Published: J Lipid Res, 42, 995-7	no	-
A 6.3.1/01	Daughtrey, W.C., J.H. Smith, J.P. Hinz and R.W. Biles	1990	Subchronic toxicity evaluation of tridecyl acetate in rats - Report-no. 14 GLP: no Published: Fundamental and applied Toxicology 14, 104 - 112.	no	-
A 6.3.1/01	Spittler, T.D., Leichtweis, H.C. and Kirsch, P	1992	Exposure, fate and potential residues in food of applied lepidopteran pheromones. In: Insect pheromones and other behaviour-modifying chemicals: application and regulation, R.L. Ridgeway, M.Inscoe and H. Arn (eds.). - Report-no. 51 GLP: no Published: no	no	-
A 6.3.1/02	Spittler, T.D., Leichtweis H.C. and Dennehy T.J.	1988	Biorational control of crop pest by mating disruption; residue analyses of Z-9-dodecen-1-yl acetate and Z-11-tetradecenyl-1-yl acetate in grapes". In: Biotechnology for Crop Protection, P.Hedin, J.J. Menn and R.Hollingworth (eds.) - Report-no. 379 GLP: no Published: no	no	-

Section point/ reference number	Author(s)	Year	Title Testing Facility Owner / Source (where different from owner) Report No GLP or GEP status (where relevant) Published or not	Data protection claimed yes/no	Owner
A 6.3.3/01	Daughtrey, W.C., J.H. Smith, J.P. Hinz and R.W. Biles	1990	Subchronic toxicity evaluation of tridecyl acetate in rats - Report-no. 14 GLP: no Published: Fundamental and applied Toxicology 14, 104 - 112. **Submitted in: K IIA + IIIA 6.3.1/01**	no	-
A 6.3.3/02	Walters, G.	1990	Specific Paper on the Four Notified Pheromones On the Attractants and Repellents a.i. List Biocide Directive 98/8/EC, p. 10 - Report-no. GLP: no Published: no	no	-
A 6.3.3/01	Hirooka, Y., Suwanai, T.B.	1976	Role of insect sex pheromone in mating behaviour. I. Theoreticalconsideration on release and diffusion of sex pheromone in the air. - Report-no. 11 GLP: no Published: no	no	-
A 6.4.1/01	Daughtrey, W.C., J.H. Smith, J.P. Hinz and R.W. Biles	1990	Subchronic toxicity evaluation of tridecyl acetate in rats - Report-no. 14 GLP: no Published: Fundamental and applied Toxicology 14, 104 - 112. **Submitted in: K IIA + IIIA 6.3.1/01**	no	-
A 6.4.1/01	Spittler, T.D., Leichtweis, H.C. and Kirsch, P.	1992	Exposure, fate and potential residues in food of applied lepidopteran pheromones. In: Insect pheromones and other behaviour-modifying chemicals: application and regulation, R.L. Ridgeway, M.Inscoe and H. Arn (eds.). - Report-no. 51 GLP: no Published: no **Submitted in: K IIA + IIIA 6.3.1/01**	no	-

Section point/ reference number	Author(s)	Year	Title Testing Facility Owner / Source (where different from owner) Report No GLP or GEP status (where relevant) Published or not	Data protection claimed yes/no	Owner
A 6.4.1/02	Spittler, T.D., Leichtweis H.C. and Dennehy T.J.	1988	"Biorational control of crop pest by mating disruption; residue analyses of Z-9-dodecen-1-yl acetate and Z-11-tetradecenyl-1-yl acetate in grapes". in: Biotechnology for Crop Protection, P.Hedin, J.J. Menn and R.Hollingworth (eds.) - Report-no. 379 GLP: no Published: no **Submitted in: K IIA + IIIA 6.3.1/02**	no	-
A 6.4.3/01	Daughtrey, W.C., J.H. Smith, J.P. Hinz and R.W. Biles	1990	Subchronic toxicity evaluation of tridecyl acetate in rats - Report-no. 14 GLP: no Published: Fundamental and applied Toxicology 14, 104 - 112. **Submitted in: K IIA + IIIA 6.3.1/01**	no	-
A 6.4.3/01	Hirooka, Y., Suwanai, T.B.	1976	Role of insect sex pheromone in mating behaviour. I. Theoreticalconsideration on release and diffusion of sex pheromone in the air. - Report-no. 11 GLP: no Published: no **Submitted in: K IIA + IIIA 6.3.3/01**	no	-
A 6.4.3/02	Walters G.	1990	Specific Paper on the Four Notified Pheromones On the Attractants and Repellents a.i. List Biocide Directive 98/8/EC, p. 10 - Report-no. GLP: no Published: no **Submitted in: K IIA + IIIA 6.3.3/02**	no	-
A 6.5/01	Daughtrey, W.C., J.H. Smith, J.P. Hinz and R.W. Biles	1990	Subchronic toxicity evaluation of tridecyl acetate in rats - Report-no. 14 GLP: no Published: Fundamental and applied Toxicology 14, 104 - 112. **Submitted in: K IIA + IIIA 6.3.1/01**	no	-

Section point/ reference number	Author(s)	Year	Title Testing Facility Owner / Source (where different from owner) Report No GLP or GEP status (where relevant) Published or not	Data protection claimed yes/no	Owner
A 6.6.1/01	Leuschner, J.	2006e	Mutagenicity Study of Z,E-9,12-Tetradecadien-1-Yl Acetate in The Salmonella Typhimurium Reverse Mutation Assay (In Vitro) LPT Lab. of Pharmacology and Toxicology KG, Hamburg, Germany Aeroxon Insect Control, Waiblingen, Germany Report-no. 19785/06 GLP: no Published: no	yes	AER
A 6.6.2/01	Leuschner, J.	2006f	In Vitro Assessment of The Clastogenic Activity of Z,E-9,12-Tetradecadien-1-Yl Acetate in Cultured Human Peripheral Lymphocytes LPT Lab. of Pharmacology and Toxicology KG, Hamburg, Germany Aeroxon Insect Control, Waiblingen, Germany Report-no. 19786/06 GLP: no Published: no	yes	AER
A 6.6.3/01	Stien, J.	2006	Mutagenicity study of Z,e-9,12-tetradecadien-1-yl acetate in the mouse lymphoma Forward mutation assay LPT Lab. of Pharmacology and Toxicology KG, Hamburg, Germany Aeroxon Insect Control, Waiblingen, Germany Report-no. 19787/06 GLP: yes Published: no	yes	AER
A 6.7/01	Daughtrey, W.C., J.H. Smith, J.P. Hinz and R.W. Biles	1990	Subchronic toxicity evaluation of tridecyl acetate in rats - Report-no. 14 GLP: no Published: Fundamental and applied Toxicology 14, 104 - 112. **Submitted in: K IIA + IIIA 6.3.1/01**	no	-
A 6.8.1/01	Nelson, B.K., Brightwell W.S. and Krieg, Jr E.F.	1990	Developmental toxicology of industrial alcohols: a summary of 13 alcohols administered by inhalation to rats. - Report-no. 6 GLP: no Published: Toxicology and Industrial Health 6: 3/4 373-387.	no	-

Section point/ reference number	Author(s)	Year	Title Testing Facility Owner / Source (where different from owner) Report No GLP or GEP status (where relevant) Published or not	Data protection claimed yes/no	Owner
A 6.8.2/01	Daughtrey, W.C., J.H. Smith, J.P. Hinz and R.W. Biles	1990	Subchronic toxicity evaluation of tridecyl acetate in rats - Report-no. 14 GLP: no Published: Fundamental and applied Toxicology 14, 104 - 112. **Submitted in: K IIA + IIIA 6.3.1/01**	no	-
A 6.8.2/02	Nelson, B.K., Brightwell W.S. and Krieg, Jr E.F.	1990	Developmental toxicology of industrial alcohols: a summary of 13 alcohols administered by inhalation to rats. - Report-no. 6 GLP: no Published: Toxicology and Industrial Health 6: 3/4 373-387. **Submitted in: K IIA + IIIA 6.8.1/01**	no	-
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