

EUROPEAN COMMISSION
HEALTH AND CONSUMERS DIRECTORATE-GENERAL

Directorate E – Safety of the food chain
Unit E.3 - Chemicals, contaminants, pesticides

Straight Chain Lepidopteran Pheromones (SCLPs)

SANCO/2633/08 – rev. 2

28 October 2008

FINAL

Review report for the active substance Straight Chain Lepidopteran Pheromones (SCLPs)
Finalised in the Standing Committee on the Food Chain and Animal Health at its meeting on
28 October 2008
in view of the inclusion of Straight Chain Lepidopteran Pheromones (SCLPs) in Annex I of
Directive 91/414/EEC

1. Procedure followed for the re-evaluation process

This review report has been established as a result of the re-evaluation of the group of pheromones defined as Straight Chain Lepidopteran Pheromones (SCLPs), made in the context of the work programme for review of existing active substances provided for in Article 8(2) of Directive 91/414/EEC concerning the placing of plant protection products on the market, with a view to the possible inclusion of this substance in Annex I to the Directive.

Commission Regulation (EC) No 1112/2002⁽¹⁾ laying down the detailed rules for the implementation of the fourth stage of the programme of work referred to in Article 8(2) of Council Directive 91/414/EEC, as last amended by Regulation (EC) No 2229/2004⁽²⁾, has laid down the detailed rules on the procedure according to which the re-evaluation has to be carried out. Straight Chain Lepidopteran Pheromones is the common definition for a group of existing active substances covered by this Regulation and listed under Appendix I of this report.

In accordance with the provisions of Article 4 of Regulation (EC) No 2229/2004, Agrisense-BCS, Agrochem, BASF, Isagro Biofarming, Suterra, Russell Fine Chemicals, Sociedad Espanolas de Desarrollos Quimicos, Shin-Etsu International, DKSH Switzerland, Exosect formed a task force with International Bio-rationale Manufacturing Association (IBMA) as Task Force representative and notified to the Commission of their wish to secure the inclusion of various active substances falling under the definition of Straight Chain Lepidopteran Pheromones in Annex I to the Directive.

In Annex I to Regulation (EC) No 2229/2004, the Commission designated Austria as rapporteur Member State to carry out the assessment of Straight Chain Lepidopteran Pheromones on the basis of the dossier submitted by the notifier. In Article 12 of Regulation (EC) No 2229/2004 the Commission specified furthermore that the deadline for the notifier with regard to the submission

¹ OJ No L 168, 27.06.2002, p.14.

² OJ No L 379, 24.12.2004, p. 13.

to the rapporteur Member States of the dossiers required, as well as for other parties with regard to further technical and scientific information was 30 November 2005.

Agrisense-BCS, Agrochem, BASF, Isagro Biofarming, Suterra, Russell Fine Chemicals, Sociedad Espanolas de Desarrollos Quimicos, Shin-Etsu International, DKSH Switzerland and Exosect as task force submitted by the deadline a dossier to the rapporteur Member State which did not contain substantial data gaps, taking into account the supported uses. Therefore the task force was considered to be the sole main data submitter.

In accordance with the provisions of Article 22(1) of Regulation (EC) No 2229/2004, Austria submitted in April 2008 to the EFSA the report of their examination, hereafter referred to as the draft assessment report, including, as required, a recommendation concerning the possible inclusion of Straight Chain Lepidopteran Pheromones in Annex I to the Directive.

Moreover, in accordance with the provisions of Article 20(2) of Regulation (EC) 2229/2004, the Commission and the Member States received also the summary dossier on May 2008 from the Task force.

In accordance with the provisions of Article 24 of Regulation (EC) No 2229/2004 as last amended by Regulation (EC) 1095/2007, the EFSA organised the consultation on the draft assessment report by all the Member States as well as by the Task force represented by IBMA being the sole data submitter, on 22 July 2008 by making it available.

On the basis of the provisions of Article 24a of Regulation 2229/2004 as last amended by Regulation (EC) 1095/2007 the Commission examined the draft assessment report, the recommendations by the rapporteur Member State and the comments received from other Member States in consultation with experts from Member States.

In accordance with the provisions of Article 24b and Article 25 (1) a of Regulation (EC) No 2229/2004 as last amended by Regulation (EC) 1095/2007, the Commission referred on 28 October 2008 a draft review report to the Standing Committee on the Food Chain and Animal Health, for final examination. The draft review report was finalised in the meeting of the Standing Committee on 28 October 2008.

The present review report contains the conclusions of the final examination by the Standing Committee.

2. Purposes of this review report

This review report, including the background document appendices thereto, has been developed in support of the Directive **2008/127/EC**³ concerning the inclusion of Straight Chain Lepidopteran Pheromones in Annex I to Directive 91/414/EEC. The Commission shall request the EFSA to deliver its view on the draft review reports by 31 December 2010 at the latest. When the Member States decide on individual plant protection products containing Straight Chain Lepidopteran Pheromones they shall take into account this review report in accordance with the provisions of that Directive, and in particular the provisions of article 4(1) and the uniform principles laid down in Annex VI. However, when the EFSA has delivered its view on the draft review report, the Commission shall revise it.

³ Commission Directive 2008/127/EC (OJ L 344, 20.12.2008, p. 89)

This review report provides also for the evaluation required under Section A.2.(b) of the above mentioned uniform principles, as well as under several specific sections of part B of these principles. In these sections it is provided that Member States, in evaluating applications and granting authorisations, shall take into account the information concerning the active substance in Annex II of the directive, submitted for the purpose of inclusion of the active substance in Annex I, as well as the result of the evaluation of those data.

In accordance with the provisions of Article 26 of Regulation (EC) No 2229/2004, Member States will keep available or make available this review report for consultation by any interested parties or will make it available to them on their specific request.

The information in this review report is, at least partly, based on information which is confidential and/or protected under the provisions of Directive 91/414/EEC. It is therefore recommended that this review report would not be accepted to support any registration outside the context of Directive 91/414/EEC, e.g. in third countries, for which the applicant has not demonstrated to have regulatory access to the information on which this review report is based.

3. Overall conclusion in the context of Directive 91/414/EEC

The overall conclusion from the draft assessment report, the recommendations by the rapporteur Member State and the result of the examination in accordance with the provisions of Article 24a of Regulation 2229/2004 is that there are clear indications that it may be expected that Straight Chain Lepidopteran Pheromones, when they are applied via retrievable sized dispensers, do not have any harmful effects on human or animal health or on groundwater or any unacceptable influence on the environment, as set out in Annex VI of regulation (EC) 2229/2004 as last amended by Regulation (EC) 1095/2007. For other types of application it could not be evaluated if there are harmful effects on human or animal health or on groundwater or any unacceptable influence on the environment, due to a lack of data.

These indications are however subject to compliance with the particular requirements in sections 4 and 5 of this report, as well as to the implementation of the provisions of Article 4(1) and the uniform principles laid down in Annex VI of Directive 91/414/EEC, for each Straight Chain Lepidopteran Pheromones containing plant protection product for which Member States will grant or review the authorisation.

Furthermore, these indications were reached within the framework of the uses which were proposed and supported by the main data submitter and mentioned in the list of uses supported by available data (attached as Appendix II to this review report).

Extension of the use pattern beyond those described above will require an evaluation at Member State level in order to establish whether the proposed extensions of use can satisfy the requirements of Article 4(1) and of the uniform principles laid down in Annex VI of Directive 91/414/EEC.

The review has concluded that there are acceptable exposure scenarios for consumers, operators, workers and bystanders which require however to be confirmed for each plant protection products in accordance with the relevant sections of the above-mentioned uniform principles.

It has also been concluded that under the proposed and supported conditions of use there are no unacceptable effects on the environment, as provided for in Article 4 (1) (b) (iv) and (v) of

Directive 91/414/EEC, provided that certain conditions are taken into account as detailed in section 6 of this report.

4. Identity

The main identity of pheromones evaluated and falling under the definition of the common group Straight Chain Lepidopteran Pheromones are given in Appendix I.

The review has established that for the active substance notified by the main data submitter none of the manufacturing impurities considered are, on the basis of information currently available, of toxicological or environmental concern.

5. Endpoints and related information

In order to facilitate Member States, in granting or reviewing authorisations, to apply adequately the provisions of Article 4(1) of Directive 91/414/EEC and the uniform principles laid down in Annex VI of that Directive, the most important endpoints were identified during the re-evaluation process. These endpoints are listed in volume 1 of the DAR. The EFSA will deliver its view on this review report by 31 December 2010 at the latest.

6. Particular conditions to be taken into account on short term basis by Member States in relation to the granting of authorisations of plant protection products containing Straight Chain Lepidopteran Pheromones

On the basis of the proposed and supported uses (as listed in Appendix II), no particular issues have been identified as requiring particular and short term attention from all Member States, in the framework of any authorisations to be granted, varied or withdrawn.

- Member States should pay particular attention as for plant protection products containing SCLPs only when applied via retrievable sized dispensers a safe use was identified. For spray applications of SCLPs no sufficient data package was available.

7. List of studies to be generated

Further studies which were at this stage considered necessary were identified in the level 4 of the Draft Assessment Report.

8. Information on studies with claimed data protection

For information of any interested parties, the rapporteur Member State will keep available a document which gives information about the studies for which the main data submitter has claimed data protection and which during the re-evaluation process were considered as essential with a view to annex I inclusion. This information is only given to facilitate the operation of the provisions of Article 13 of Directive 91/414/EEC in the Member States. It is based on the best information available but it does not prejudice any rights or obligations of Member States or operators with regard to its uses in the implementation of the provisions of Article 13 of the Directive 91/414/EEC and neither does it commit the Commission.

9. Updating of this review report

The information in this report may require to be updated from time to time in order to take account of technical and scientific developments as well as of the results of the examination of any information referred to the Commission in the framework of Articles 7, 10 or 11 of Directive 91/414/EEC. Any such adaptation will be finalised in the Standing Committee on the Food Chain and Animal Health, in connection with any amendment of the inclusion conditions for Straight Chain Lepidopteran Pheromones in Annex I of the Directive.

APPENDIX I

Identity

STRAIGHT CHAIN LEPIDOPTERAN PHEROMONES

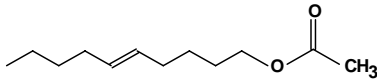
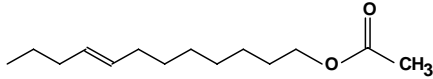
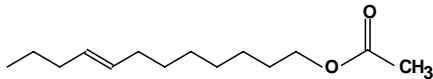
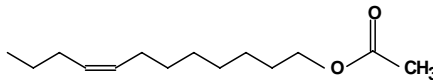
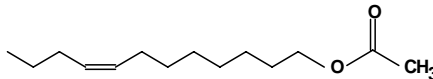
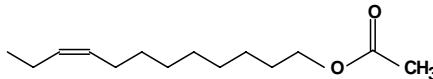
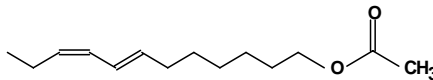
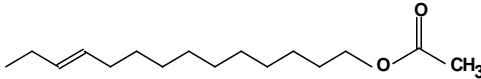
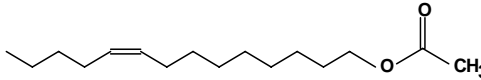
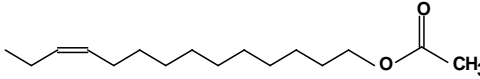
SCLP Acetate	IUPAC Name	CA Name	CIPAC No	CAS No	EEC No	Content %
E-5-decen-1-yl acetate	(E)-5-decen-1-yl acetate	(E)-5-decen-1-ol acetate	Not available	38421-90-8	253-923-8	56% (E isomer)
E-8-dodecenyl acetate	(E)-8-dodecen-1-yl acetate	(E)-8-dodecen-1-ol acetate	Not available	38363-29-0	253-904-4	57% (E isomer)
E/Z-8-dodecenyl acetate	(E/Z)-8-dodecen-1-yl acetate as individual isomers (E)-8-dodecen-1-yl acetate (Z)-8-dodecen-1-yl acetate	(E/Z)-8-dodecen-1-ol acetate as individual isomers (E)-8-dodecen-1-ol acetate (Z)-8-dodecen-1-ol acetate	Not available	- as individual isomers 38363-29-0 28079-04-1	- as individual isomers 253-904-4 248-823-6	80% (isomeric mixture)
Z-8-dodecenyl acetate	(Z)-8-dodecen-1-yl acetate	(Z)-8-dodecen-1-ol acetate	Not available	28079-04-1	248-823-6	80%
Z-9-dodecenyl acetate	(Z)-9-dodecen-1-yl acetate	(Z)-9-dodecen-1-ol acetate	422	16974-11-1	241-054-7	80% Min. 87% (BASF)
E,Z-7,9-dodecadien-1-yl acetate	(E,Z)-7,9-dodecadien-1-yl acetate	(E,Z)-7,9-dodecadien-1-ol acetate	Not available	54364-62-4	259-127-7	67%
E-11-tetradecenyl acetate	(E)-11-tetradecen-1-yl acetate	(E)-11-tetradecen-1-ol acetate	Not available	33189-72-9	251-401-4	80%
Z-9-tetradecenyl acetate	(Z)-9-tetradecen-1-yl acetate	(Z)-9-tetradecen-1-ol acetate	Not available	16725-53-4	240-780-1	80%
Z-11-tetradecenyl acetate	(Z)-11-tetradecen-1-yl acetate	(Z)-11-tetradecen-1-ol acetate	Not available	20711-10-8	243-982-8	80%
Z,E-9,12-tetradecadien-1-yl acetate	(Z, E)-9, 12-tetradecadien-1-yl acetate	(Z, E)-9, 12-tetradecadien-1-ol acetate	Not available	31654-77-0	250-753-6	90%
Z-11-hexadecen-1-yl acetate	Z-11-hexadecen-1-yl acetate	Z-11-hexadecen-1-ol acetate	Not available	34010-21-4	251-791-6-	80%
Z,E-7,11-hexadecadien-1-yl acetate	(Z, E)-7, 11-hexadecadien-1-yl acetate	(Z, E)-7, 11-hexadecadien-1-ol acetate	Not available	51606-94-4	-	77%
E,Z-2, 13-octadecadien-1-yl acetate	(E, Z)-2, 13-octadecadien-1-yl acetate	(E, Z)-2, 13-octadecadien-1-ol acetate	Not available	86252-65-5	-	74%
SCLP Alcohol	IUPAC Name	CA Name	CIPAC No	CAS No	EEC No	Content %
E-5-decen-1-ol	(E)-5-decen-1-ol	(E)-5-decenol	Not available	56578-18-8	260-267-6	56% (E isomer)
Z-8-dodecenol	(Z)-8-dodecen-1-ol	(Z)-8-dodecenol	Not available	40642-40-8	255-019-9	79%
E,E-8,10-dodecadien-1-ol	(E,E)-8,10-dodecadien-1-ol	(E,E)-8,10-dodecadienol	Not available	33956-49-9	251-761-2	75%

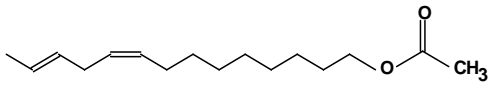
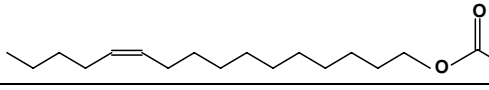
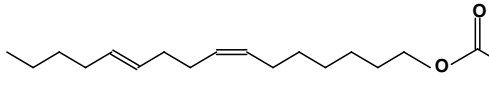
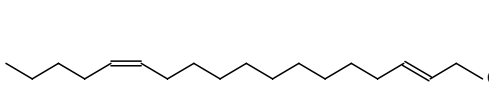
SCLP Acetate	IUPAC Name	CA Name	CIPAC No	CAS No	EEC No	Content %
1-tetradecanol	tetradecan-1-ol	1-tetradecanol	Not available	112-72-1	204-000-3	79%
Z-11-hexadecen-1-ol	(Z)-11-hexadecen-1-ol	Z-11-hexadecen-1-ol	Not available	56683-54-6	260-337-6	78%
SCLP Aldehyde	IUPAC Name	CA Name	CIPAC No	CAS No	EEC No	Content %
Z-7-tetradecenal	(Z)-7-tetradecenal	Z-7-tetradecenal	Not available	65128-96-3	265-494-9	76%
Z-9-hexadecenal	(Z)-9-hexadecenal	(Z)-9-hexadecenal	8172	56219-04-6	260-064-2	75%
Z-11-hexadecenal	(Z)-11-hexadecenal	(Z)-11-hexadecenal	8173	53939-28-9	258-876-7	77%
Z-13-octadecenal	(Z)-13-octadecenal	(Z)-13-octadecenal	8235	58594-45-9	261-349-4	77%

SCLP Blends acetates	IUPAC Name	CA Name	CIPAC No	CAS No	EEC No	Content %
i) Z-8-dodecenyl acetate, ii) Dodecan-1-yl acetate	i) (Z)-8-dodecen-1-yl acetate ii) Dodecyl acetate	i) (Z)-8-dodecen-1-ol acetate ii) Dodecyl acetate	Not available	28079-04-1 112-66-3	248-823-6 203-995-1	95% (mixture of i & ii)
i) Z-9-dodecenyl acetate, ii) Dodecan-1-yl acetate	i) (Z)-9-dodecen-1-yl acetate ii) Dodecyl acetate	i) (Z)-9-dodecen-1-ol acetate ii) Dodecyl acetate	422	16974-11-1 112-66-3	241-054-7 203-995-1	95% (mixture of i & ii)
i) E,Z-7,9-dodecadienyl acetate, ii) E,E-7,9-dodecadienyl acetate	i) (E,Z)-7,9-dodecadien-1-yl acetate, ii) (E,E)-7,9-dodecadien-1-yl acetate	i) (E,Z)-7,9-dodecadien-1-ol acetate, ii) (E,E)-7,9-dodecadien-1-ol acetate	Not available	55774-32-8 54364-63-5	259-812-0 -	90% (isomeric mixture)
i) Z,Z-7,11-hexadecadien-1-yl acetate ii) Z,E-7,11-hexadecadien-1-yl acetate	i) (Z,Z)-7,11-hexadecadien-1-yl acetate ii) (Z,E)-7,11-hexadecadien-1-yl acetate	i) (Z,Z)-7,11-hexadecadien-1-ol acetate ii) (Z,E)-7,11-hexadecadien-1-ol acetate	Not available	i) & ii) 53042-79-8 i) 52207-99-5 ii) 51606-94-4	257-737-8	90%: (isomeric mixture) single isomers within the two part blend: i) 47% ii) 42%
SCLP Blend Aldehydes	IUPAC Name	CA Name	CIPAC No	CAS No	EEC No	Content %
i) Z-9-hexadecenal ii) Z-11-hexadecenal iii) Z-13-octadecenal	i) (Z)-9-hexadecenal ii) (Z)-11-hexadecenal iii) (Z)-13-octadecenal	i) (Z)-9-hexadecenal ii) (Z)-11-hexadecenal iii) (Z)-13-octadecenal	8172 8173 8235	56219-04-6 53939-28-9 58594-45-9	260-064-2 258-876-7 261-349-4	94% (mixture) i) 7% ii) 77% iii) 7%
SCLP Blend Mixtures	IUPAC Name	CA Name	CIPAC No	CAS No	EEC No	Content %
i) E-5-decen-1-yl acetate ii) E-5-decen-1-ol	i) (E)-5-decen-1-yl acetate ii) (E)-5-decen-1-ol	i) (E)-5-decen-1-ol acetate ii) (E)-5-decen-1-ol	Not available	38421-90-8 56578-18-8	253-923-8 260-267-6 -	90% (mixture)
i) E/Z-8-dodecenyl acetate ii) Z-8-dodecen-1-ol	i) (E/Z)-8-dodecen-1-yl acetate i) (E)-8-dodecen-1-yl acetate i) (Z)-8-dodecen-1-yl acetate ii) (Z)-8-dodecen-1-ol	i) (E/Z)-8-dodecen-1-ol acetate i) (E)-8-dodecen-1-ol acetate i) (Z)-8-dodecen-1-ol acetate ii) (Z)-8-dodecen-1-ol	i) 8131 (Z) 8132 ii) 8129	as individual isomers (E) 38363-29-0	as individual isomers (E) 253-904-4	94% (mixture) i) 84% Z isomer i) 7% E isomer ii) 2%

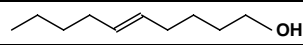
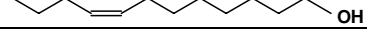
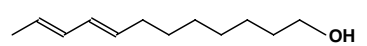
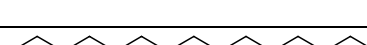
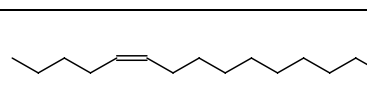
SCLP Blends acetates	IUPAC Name	CA Name	CIPAC No	CAS No	EEC No	Content %
				(Z) 28079-04-1 ii) 40642-40-8	(Z) 248-823-6 ii) 255-019-9	
i) Z-11-hexadecenal ii) Z-11-hexadecen-1-yl acetate	i) (Z)-11-hexadecenal ii) (Z)-11-hexadecen-1-yl acetate	i) (Z)-11-hexadecenal ii) (Z)-11-hexadecen-1-ol acetate	Not available	53939-28-9 34010-21-4	258-876-7 251-791-6	86% (mixture) i) 43% ii) 43%

SCLP Acetate Formulae and Molecular Mass

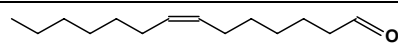
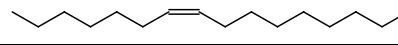
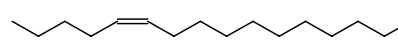
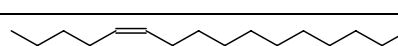
SCLP Acetate	Molecular Formula	Structural Formula	Molecular Mass [g/mol]
E-5-decen-1-yl acetate	$C_{12}H_{22}O_2$		198.305
E-8-dodecenyl acetate	$C_{14}H_{26}O_2$		226.359
E/Z-8-dodecenyl acetate	-	- as individual isomers	
E-8-dodecenyl acetate	$C_{14}H_{26}O_2$		226.359
Z-8-dodecenyl acetate	$C_{14}H_{26}O_2$		
Z-8-dodecenyl acetate	$C_{14}H_{26}O_2$		226.359
Z-9-dodecenyl acetate	$C_{14}H_{26}O_2$		226.359
E,Z-7,9-dodecadien-1-yl acetate	$C_{14}H_{24}O_2$		224.344
E-11-tetradecenyl acetate	$C_{16}H_{30}O_2$		254.413
Z-9-tetradecenyl acetate	$C_{16}H_{30}O_2$		254.413
Z-11-tetradecenyl acetate	$C_{16}H_{30}O_2$		254.413

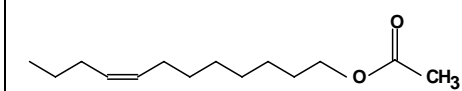
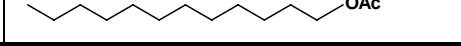
SCLP Acetate	Molecular Formula	Structural Formula	Molecular Mass [g/mol]
Z,E-9,12-tetradecadien-1-yl acetate	C ₁₆ H ₂₈ O ₂		252.397
Z-11-hexadecen-1-yl acetate	C ₁₈ H ₃₄ O ₂		282.467
Z,E-7,11-hexadecadien-1-yl acetate	C ₁₈ H ₃₂ O ₂		280.451
E,Z-2,13-octadecadien-1-yl acetate	C ₂₀ H ₃₆ O ₂		308.505

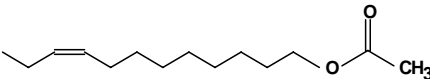
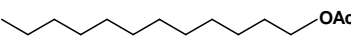
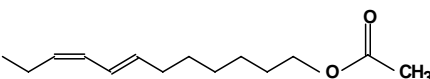
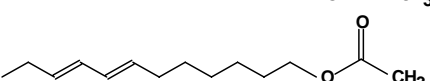
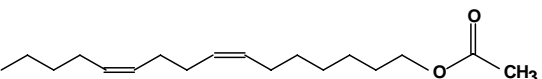
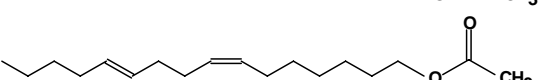
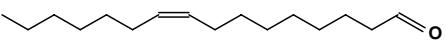
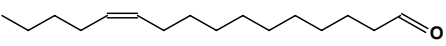
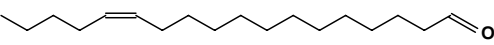
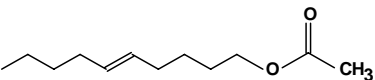
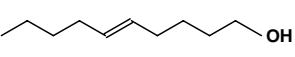
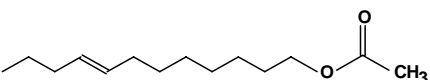
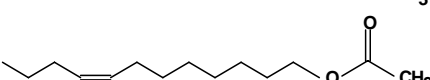
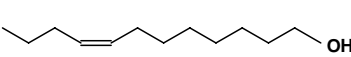
SCLP Alcohol Formulae and Molecular Mass

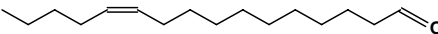
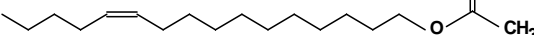
SCLP Alcohol	Molecular Formula	Structural Formula	Molecular Mass [g/mol]
E-5-decen-1-ol	C ₁₀ H ₂₀ O		156.269
Z-8-dodecenol	C ₁₂ H ₂₂ O		184.32
E,E-8,10-dodecadien-1-ol	C ₁₂ H ₂₂ O		182.306
1-tetradecanol	C ₁₄ H ₃₀ O		214.392
Z-11-hexadecen-1-ol	C ₁₆ H ₃₂ O		240.430

SCLP Aldehyde Formulae and Molecular Mass

SCLP Aldehyde	Molecular Formula	Structural Formula	Molecular Mass [g/mol]
Z-7-tetradecenal	C ₁₄ H ₂₆ O		210.360
Z-9-hexadecenal	C ₁₆ H ₃₀ O		210.360
Z-11-hexadecenal	C ₁₆ H ₃₀ O		238.414
Z-13-octadecenal	C ₁₈ H ₃₄ O		266.468

SCLP Blend	Molecular Formula	Structural Formula	Molecular Mass [g/mol]
Acetate Blends			
Z-8-dodeceny acetate	C ₁₄ H ₂₆ O ₂		226.359
	C ₁₄ H ₂₈ O ₂		228.375

SCLP Blend	Molecular Formula	Structural Formula	Molecular Mass [g/mol]
Dodecan-1-yl acetate			
Z-9-dodecenyl acetate	$C_{14}H_{26}O_2$		226.359
Dodecan-1-yl acetate	$C_{14}H_{28}O_2$		228.375
E,Z-7,9-dodecadienyl acetate	$C_{12}H_{22}O$		224.344
E,E-7,9-dodecadienyl acetate	$C_{12}H_{22}O$		224.344
Z,Z-7,11-hexadecadien-1-yl acetate	$C_{18}H_{32}O_2$		280.451
Z,E-7,11-hexadecadien-1-yl acetate	$C_{18}H_{32}O_2$		280.451
Aldehyde Blends			
Z-9-hexadecenal	$C_{16}H_{30}O$		238.41
Z-11-hexadecenal	$C_{16}H_{30}O$		238.41
Z-13-octadecenal	$C_{18}H_{34}O$		266.468
Blend Mixtures			
E-5-decen-1-yl acetate	$C_{12}H_{22}O_2$		198.305
E-5-decen-1-ol	$C_{10}H_{20}O$		156.269
E/Z-8-dodecenyl acetate	$C_{14}H_{26}O_2$	- E/Z as individual isomers	226.359
			
			
	$C_{12}H_{22}O$		184.32

SCLP Blend	Molecular Formula	Structural Formula	Molecular Mass [g/mol]
Z-8-dodecen-1-ol			
Z-11-hexadecenal	$C_{16}H_{30}O$		238.414
Z-11-hexadecen-1-yl acetate	$C_{18}H_{34}O_2$		282.467

List of uses supported by available data

STRAIGHT CHAIN LEPIDOPTERAN PHEROMONES

Crop and/or situation (a)	Member State or Country	Product name	F G or I (b)	Pests or Group of pests controlled (c)	Formulation		Application				Application rate per treatment			PHI (days) (l)	Remarks: (m)
					Type (d-f)	Conc. of as (i)	method kind (f-h)	growth stage & season (j)	number min max (k)	interval between applications (min)	kg as/hl min max	water l/ha min max	kg as/ha min max		
Pome Fruit (Apple, pear, quince); Stone Fruit (Peach,nectarine, apricot, plum); Tree nuts (Walnut)	Southern Europe (Italy)	Shin-Etsu (CBC Europe)	ISOMATECLR	F	Biting insects <i>Cydia pomonella</i> , <i>Adoxa phyes orana</i> , <i>Pandemis heparana</i>	VP	240 mg (total of 5 as) / dispenser **	Manual distribution of 1000 dispensers per ha; uniform distribution throughout orchards	Prior to moth emergence of 1st pest generation or prior to first moth emergence of any other generation	1	n. a.	n. a.	n. a.	240 g/ha (1000 dispenser x 240 mg)	n. a.

Crop and/or situation (a)	Member State or Country	Product name	F G or I (b)	Pests or Group of pests controlled (c)	Formulation		Application				Application rate per treatment			PHI (days) (l)	Remarks: (m)
					Type (d-f)	Conc. of as (i)	method kind (f-h)	growth stage & season (j)	number min max (k)	interval between applications (min)	kg as/hl min max	water l/ha min max	kg as/ha min max		

- Remarks:**
- (a) For crops, the EU and Codex classifications (both) should be used; where relevant, the use situation should be described (*e.g.* fumigation of a structure)
 - (b) Outdoor or field use (F), glasshouse application (G) or indoor application (I)
 - (c) *e.g.* biting and suckling insects, soil born insects, foliar fungi, weeds
 - (d) *e.g.* wettable powder (WP), emulsifiable concentrate (EC), granule (GR)
 - (e) GCPF Codes - GIFAP Technical Monograph No 2, 1989
 - (f) All abbreviations used must be explained
 - (g) Method, *e.g.* high volume spraying, low volume spraying, spreading, dusting, drench
 - (h) Kind, *e.g.* overall, broadcast, aerial spraying, row, individual plant, between the plants - type of equipment used must be indicated
 - (i) g/kg or g/l
 - (j) Growth stage at last treatment (BBCH Monograph, Growth Stages of Plants, 1997, Blackwell, ISBN 3-8263-3152-4), including where relevant, information on season at time of application
 - (k) The minimum and maximum number of application possible under practical conditions of use must be provided
 - (l) PHI - minimum pre-harvest interval
 - (m) Remarks may include: Extent of use/economic importance/restrictions