



EUROPEAN COMMISSION
HEALTH AND CONSUMERS DIRECTORATE-GENERAL

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

Chlormequat
SANCO/175/08 final
7 May 2009

Review report for the active substance **chlormequat**

finalised in the Standing Committee on the Food Chain and Animal Health at its meeting on
23 January 2008
in view of the inclusion of chlormequat 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 chlormequat, 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 451/2000⁽¹⁾ laying down the detailed rules for the implementation of the second and third stages of the programme of work referred to in Article 8(2) of Council Directive 91/414/EEC, as last amended by Regulation (EC) No 1490/2002⁽²⁾, has laid down the detailed rules on the procedure according to which the re-evaluation has to be carried out. Chlormequat is one of the existing active substances covered by this Regulation.

In accordance with the provisions of Article 4 of Regulation (EC) No 451/2000, CCC Task Force notified to the Commission of their wish to secure the inclusion of the active substance chlormequat in Annex I to the Directive.

In accordance with the provisions of Article 5 of Regulation (EC) No 451/2000, the Commission, designated United Kingdom as rapporteur Member State to carry out the assessment of chlormequat on the basis of the dossiers submitted by the notifier. In Regulation (EC) No 1490/2002 the Commission specified furthermore that the deadline for the notifier with regard to the submission to the rapporteur Member States of the dossiers required under Article 7(2) of Regulation (EC) No 1490/2002, as well as for other parties with regard to further technical and scientific information was 30 November 2003.

The notifier 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 CCC Task Force was considered to be the sole data submitter.

¹ OJ No L 55, 29.02.2000, p.25.

² OJ No L 224, 21.8.2002, p.23. Regulation as last amended by Regulation (EC) No 1095/2007 (OJ L 246, 21.09.2007, p. 19).

In accordance with the provisions of Article 10(1) of Regulation (EC) No 1490/2002, United Kingdom submitted on 27 April 2007 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 chlormequat in Annex I to the Directive. Moreover, in accordance with the provisions of Article 10(2) of Regulation (EC) 1490/2002, the Commission and the Member States received also the summary dossier on chlormequat from the notifier.

In accordance with the provisions of Article 11 of Regulation (EC) No 1490/2002, the EFSA organised the consultation on the draft assessment report by all the Member States as well as by CCC Task Force being the sole data submitter, on 4 October 2007 by making it available.

The EFSA organised an intensive consultation of technical experts from a certain number of Member States, to review the draft assessment report and the comments received thereon (peer review).

In accordance with the provisions of Article 11 (4) of Regulation 1490/2002 the EFSA sent to the Commission its conclusion on the risk assessment [Conclusions regarding the peer review of the pesticide risk assessment of the active substance chlormequat (finalised 29 September 2008)³]. This conclusion refers to background document A (draft assessment report) and background document B (EFSA peer review report).

In accordance with the provisions of Article 12 of Regulation (EC) No 1490/2002, the Commission referred 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 23 January 2009.

The present review report contains the conclusions of the final examination by the Standing Committee. Given the importance of the conclusion of the EFSA, and the comments and clarifications submitted after the conclusion of the EFSA (background document C), these documents are also considered to be part of this review report.

2. Purposes of this review report

This review report, including the background documents and appendices thereto, has been developed and finalised in support of the Directive 2009/37/EC concerning the inclusion of chlormequat in Annex I to Directive 91/414/EEC, and to assist the Member States in decisions on individual plant protection products containing chlormequat they have to take 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.

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.

³ EFSA Scientific Report (2008) nr 179

In accordance with the provisions of Article 13 of Regulation (EC) No 1490/2002, 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 evaluation is that it may be expected that plant protection products containing chlormequat will fulfil the safety requirements laid down in Article 5(1)(a) and (b) of Directive 91/414/EEC. This conclusion is however subject to compliance with the particular requirements in sections 4, 5, 6 and 7 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 chlormequat containing plant protection product for which Member States will grant or review the authorisation.

Furthermore, these conclusions 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 following reference values have been finalised as part of this re-evaluation:

ADI:	0.04 mg/kg bw/d
ARfD:	0.09 mg/kg bw
AOEL:	0.04 mg/kg bw/d

With particular regard to residues, the review has established that the residues arising from the proposed uses, consequent on application consistent with good plant protection practice, have no harmful effects on human or animal health. The Theoretical Maximum Daily Intake (TMDI; excluding water and products of animal origin) for children is 25.4% and for toddlers 10.3% of the Acceptable Daily Intake (ADI), based respectively on the Danish and French diets.

Additional intake from water and products of animal origin are not expected to give rise to intake problems.

Estimates of acute dietary exposure of adults and toddlers revealed that the Acute Reference Dose (ARfD) would not be exceeded (highest NESTI, 14% of the ARfD - UK infant).

The review has identified several acceptable exposure scenarios for operators, workers and bystanders, which require however to be confirmed for each plant protection product in accordance with the relevant sections of the above mentioned uniform principles.

The review has also 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 identity of chlormequat is given in Appendix I.

The active substance shall comply with the FAO specification and there seem not to be reasons for deviating from that specification; the FAO specification is given in Appendix I of this report.

However, the review has established that for the active substance notified by the main data submitter the manufacturing impurities 1,2-dichloroethane and chloroethene (vinylchloride) are of toxicological concern and must not exceed respectively 0.1 g/kg and 0.0005 g/kg in the technical material (based on the dry chlormequat chloride content).

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 the conclusion of the EFSA, and at section 3 of this report.

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 chlormequat

On the basis of the proposed and supported uses (as listed in Appendix II), the following 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, as appropriate:

Member States should pay particular attention to:

- the operator safety. Conditions of use shall prescribe the application of adequate protective equipment;
- the protection of birds and mammals. Conditions of authorisation shall include risk mitigation measures, where appropriate.

7. List of studies to be generated

Further data were identified which were at this stage considered necessary in relation to the inclusion of chlormequat in Annex I under the current inclusion conditions. In particular,

- information to further address the adsorption in soil to be performed at 20°C;

- recalculation of the predicted concentration in groundwater on the basis of the corrected parameters;
- recalculation of the predicted concentration in surface water and sediment on the basis of the corrected parameters and the consequences thereof on the exposed aquatic species;
- information on the monitoring methods for determination of the substance in animal products and water;
- information to further address the risk to birds and mammals from the use of chlormequat.

Other endpoints may also require the generation or submission of additional data to be submitted to the Member States in order to ensure authorisations for use under certain conditions. The list of studies to be generated, still ongoing or available but not peer reviewed can be found in the relevant part of the EFSA Scientific report (page 33 - 35).

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 chlormequat in Annex I of the Directive.

APPENDIX I**Identity**

Chlormequat

Common name (ISO)	Chlormequat (<i>unless otherwise stated, the data refer to the variant chlormequat chloride</i>)
Chemical name (IUPAC)	2-chloroethyltrimethylammonium (<i>chlormequat</i>) 2-chloroethyltrimethylammonium chloride (<i>chlormequat chloride</i>)
Chemical name (CA)	2-chloro-N,N,N-trimethylethanaminium chloride
CIPAC No	143 (<i>chlormequat</i>) 143.302 (<i>chlormequat chloride</i>)
CAS No	7003-89-6 (<i>chlormequat</i>) 999-81-5 (<i>chlormequat chloride</i>)
EEC No	213-666-4 (<i>chlormequat chloride</i>)
FAO SPECIFICATION	143.302/TK (August 2005) Purity 725-775 g/l (636-680 g/kg) 1,2-dichloroethane content: <i>maximum 0.1 g/kg of the dry chlormequat chloride content</i>
Minimum purity	636 g/kg
Relevant impurities	1,2-dichloroethane, <i>max. 0.1 g/kg</i> Chloroethene (<i>vinyl chloride</i>): <i>max 0.0005 g/kg</i> (<i>both on the dry chlormequat chloride content</i>)
Molecular formula	C ₅ H ₁₃ Cl ₂ N
Molecular mass	158.1 g/mol
Structural formula	$\text{Cl-CH}_2\text{-CH}_2\text{-N}^+\begin{array}{l} \text{CH}_3 \\ \text{CH}_3 \\ \text{CH}_3 \end{array} \text{Cl}^-$

APPENDIX II

List of uses supported by available data

Chlormequat

Crop and/or situation (a)	Member State or Country	Product name	F G or I (b)	Pests or Group of pests controlled (c)	Preparation		Application				Application rate per treatment			PHI (days) (m)	Remarks
					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 (l)	water L/ha min – max	kg as/ha (l)		
Triticale (TTLXX)	see footnote 1)	Chlormequat chloride 750 g/L	F	plant growth regulator	SL	750 g/L	spraying	37	1	n.a.	0.33-1.0	150 – 450	1.5	see footnote 3	
Rye (SECCE)	see footnote 1)	Chlormequat chloride 750 g/L	F	plant growth regulator	SL	750 g/L	spraying	37 ²⁾	1	n.a.	0.33-1.0	150 – 450	1.5	see footnote 3	
Rye (SECCE)	France (North and South)	Chlormequat chloride 750 g/L	F	plant growth regulator	SL	750 g/L	spraying	37 ²⁾	1	n.a.	0.27 – 0.80	150 – 450	1.2	see footnote 3	

SL soluble concentrate

n.a. not applicable

1) Austria, Belgium, Denmark, Finland, Germany, Ireland, Luxembourg, The Netherlands, Sweden, United Kingdom, Poland, Czech Republic, Hungary, Slovenia, Slovakia, Estonia, Lithuania and Latvia

2) co-formulations of Chlormequat chloride with other a.i.'s, where Chlormequat chloride is applied at reduced rates, are to be applied up to GS 49

3) fixed by approved use

<p>(a) For crops, the EU and Codex classifications (both) should be taken into account; where relevant, the use situation should be described (e.g. fumigation of a structure)</p> <p>(b) Outdoor or field use (F), greenhouse application (G) or indoor application (I)</p> <p>(c) e.g. biting and suckling insects, soil born insects, foliar fungi, weeds</p> <p>(d) e.g. wettable powder (WP), emulsifiable concentrate (EC), granule (GR)</p> <p>(e) GCPF Codes - GIFAP Technical Monograph No 2, 1989</p> <p>(f) All abbreviations used must be explained</p> <p>(g) Method, e.g. high volume spraying, low volume spraying, spreading, dusting, drench</p> <p>(h) Kind, e.g. overall, broadcast, aerial spraying, row, individual plant, between the plant- type of equipment used must be indicated</p>	<p>(i) g/kg or g/L. Normally the rate should be given for the active substance (according to ISO) and not for the variant in order to compare the rate for same active substances used in different variants (e.g. fluoroxypr). In certain cases, where only one variant is synthesised, it is more appropriate to give the rate for the variant (e.g. benthialdicarb-isopropyl).</p> <p>(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</p> <p>(k) Indicate the minimum and maximum number of application possible under practical conditions of use</p> <p>(l) The values should be given in g or kg whatever gives the more manageable number (e.g. 200 kg/ha instead of 200 000 g/ha or 12.5 g/ha instead of 0.0125 kg/ha)</p> <p>(m) PHI - minimum pre-harvest interval</p>
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