A8207M

Fludioxonil 25 g/L FS

NOTIFICATION OF AN ACTIVE SUBSTANCE UNDER COMMISSION REGULATION (EU) 844/2012

DOCUMENT M-CP, Section 5

ANALYTICAL METHODS

Version history

Date	Data points containing amendments or additions[1]	Document identifier or version number

[1] Note how the amendments or additions are represented (italics/colour etc)

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CP 5 ANALYTICAL METHODS

Introduction

This document supports the application for renewal of the regulatory approval of fludioxonil under Commission Implementing Regulation (EU) 844/2012 of 18 September 2012. This document reviews the analytical methods for the product A8207M containing:

- 25 g/L fludioxonil

A8207M is a flowable concentrate for seed treatment (FS), containing 25 g/L fludioxonil, for the treatment of wheat and oat seeds to control a wide range of seed and soil-borne diseases. A8207I an older variant of A8207M was together with A9219B (containing 250 g/kg fludioxonil and 350 g/kg cyprodinil) the representative formulation in the EU review of fludioxonil.

Fludioxonil was included into Annex I of Council Directive 91/414/EEC (Commission Directive 2007/76/EC; 20 December 2007). This active substance is an approved active substance under Regulation (EC) 1107/2009 (repealing Commission Directive 91/414/EEC) as specified in Commission Implementing Regulation (EU) No. 540/2011 of 25 May 2011.

In accordance with Commission Implementing Regulation (EU) 844/2012, this document summarises new information which are relevant for the renewal of the approval of fludioxonil under Regulation (EC) 1107/2009. Where appropriate this document refers to the Commission Implementing Regulation (EU) No. 540/2011 for fludioxonil and to the EFSA report for fludioxonil (**EFSA Scientific Report (2007) 110, 1-85**), and in particular the endpoints provided in Appendix I.

This document covers data and risk assessments which were not part of the original dossier and which are necessary to reflect changes:

- In requirements under Commission Regulation (EU) No 284/2013, and the associated Annex, which repeals Commission Regulation (EU) No 545/2011 which, under Regulation (EC) 1107/2009, replaced the requirements of Annex III to Directive 91/414/EEC
- In scientific and technical knowledge since the approval or last renewal of the approval
- To representative uses

Each section of this document provides the agreed EU endpoints and if relevant proposals for amended endpoints.

Where new guidance documents have been introduced since the EU review of fludioxonil, an updated evaluation of fludioxonil and A8207M has been included. To adequately assess fludioxonil to the new guidance documents, it may have been necessary to provide new data, if so these are also included.

Information on the detailed composition of A8207M can be found in the confidential dossier of this submission (Document J).

Details of all relevant data from the scientific peer reviewed open literature on the active substance, metabolites and breakdown or reaction products and plant protection products containing the active substance have been provided in the **Document M-CA Section 9** and are discussed within the relevant data point of the associated dossier for the active substance, fludioxonil. If the published literature is also relevant to A8207M, it has been discussed within the relevant data point in this document.

CP 5.1 Methods for the Generation of Pre-Authorisation Data

CP 5.1.1 Analysis of the Plant Protection Product

(a) Methods for the determination of the active substance and/or variant in the plant protection product

Description of the analytical method and summary of the validation for the determination of the active substance in the plant protection product

A8207I was a representative formulation in the EU review of fludioxonil. Analytical methods for determination of fludioxonil in A8207I were evaluated as part of the EU review of fludioxonil. Due to the very similar compositions of A8207I and A8207M the method is also valid for the latter formulation variant. Therefore, the method provided in the EU review is considered appropriate to A8207M.

Method

The following analytical method for the determination of the active substance in the plant protection product was assessed in the EU review. The report is enclosed with this submission but since the study was deemed to be acceptable during the EU review a summary of the study is provided for convenience only.

Report:	K-CP 5.1.1/01 Stulz, J. 1997 Analytical Method - CGA 173506 in formulation (FS 025) - content by HPLC. Novartis Crop Protection Münchwilen AG, Münchwilen, Switzerland. Unpublished Report No. AF-1254 / 1, Issued 11 April 1997. Syngenta File No. CGA173506/1057

Guidelines None

GLP: No

Principle of the method

Determination of the active substance fludioxonil by HPLC:

The active substance fludioxonil is determined in A8207M using HPLC on a reversed phase C18 column and UV detection 270 nm. Quantification is achieved by comparison of peak areas to those of a standard solution (external standard method).

Conclusion of EU review: the method is acceptable.

(Stulz J., 1997)

Validation

Full validation of method SF-1254/1 has been conducted.

The following validation of the analytical method for the determination of the active substance in the plant protection product A8207M has not previously been reviewed and is provided in support of this assessment.

Report:	K-CP 5.1.1/02, Spuhler U. 2015 A8207M – Validation of Analytical Method SF-1254/1 Syngenta Crop Protection Münchwilen AG., Switzerland CH. Unpublished Report No. CHMU150967, Issue date 9.12.2015, Syngenta File No. A8207M_10602

Guidelines: SANCO 3030 rev.4

GLP: Yes

Specificity: No significant interference was observed. An examination of the chromatograms for A8207M formulation blank and fludioxonil technical material showed no significant co-elution between the active ingredients and formulation components.

Recovery: The recovery was tested using four duplicate samples of formulation blank spiked with 70 %, 90%, 110 % and 130 % of the nominal amounts of the active ingredients. The mean recovery was:

- Fludioxonil : 99.6 %.

Linearity: The linearity was tested using six samples of formulation blank spiked with 50 %, 70 %, 90 %, 110 %, 130 % and 150 % of the nominal amount of fludioxonil.

The determined concentrations of the active ingredient are in linear correlation to the actual concentrations. The coefficient of variation and regression line is given:

- Fludioxonil : 0.99911
- Regression line : $y' = 0.957*X+4.919$

Accuracy: The accuracy of the method is established based on the findings for specificity, recovery and linearity.

Repeatability: The repeatability, as relative standard deviation, was determined with at least 12 determinations (6 weighings, double injection of each) of formulation. The mean valut and precision obtained are shown below:

- Mean : 2.37 %
- S_{rel} : 0.34

Precision: The precision of the method is established based on the findings for repeatability.

Conclusion: The method is suitable for the specific, accurate and precise determination of fludioxonil in A8207M.

(Spuhler U., 2015)

Applicability of existing CIPAC methods

There is no CIPAC method available for the determination of fludioxonil in WG formulations.

(b) Methods for determination of relevant impurities identified in the technical material or which may be formed during manufacture of the plant protection product or from degradation of the plant protection product during storage

There are no relevant impurities in fludioxonil technical material therefore no methods are required.

(c) Methods for the determination of relevant co-formulants or components of co-formulants, where required by the national competent authorities

There are no relevant formulants in A8207M therefore no methods are required.

CP 5.1.2 Methods for the Determination of Residues

(a) Methods in soil, water, sediment, air and any additional matrices used in support of environmental fate studies

Refer to Document M-CA Section 4 Point 4.1.2 (a).

(b) Methods in soil, water and any additional matrices used in support of efficacy studies

Refer to Document M-CA Section 4 Point 4.1.2 (b).

(c) Methods in feed, body fluids and tissues, air and any additional matrices used in support of toxicological studies

Refer to Document M-CA Section 4 Point 4.1.2 (c).

(d) Methods in body fluids, air, and any additional matrices used in support of operator, worker, resident and bystander exposure studies

Refer to Document M-CA Section 4 Point 4.1.2 (d).

(e) Methods in or on plants, plant products, processed food commodities, food of plant and animal origin, feed and any additional matrices used in support of residues studies

Refer to Document M-CA Section 4 Point 4.1.2 (e).

(f) Methods in soil, water, sediment, feed and any additional matrices used in support of ecotoxicology studies

Refer to Document M-CA Section 4 Point 4.1.2 (f).

(g) Methods in water, buffer solutions, organic solvents and any additional matrices resulting from the physical and chemical properties tests

Refer to Document M-CA Section 4.1.2 (g) and CP 5.1.1 above Analysis of the Plant Protection Product
(a) Methods for the determination of the active substance and/or variant in the plant protection product.

CP 5.2 Methods for Post-Authorisation Control and Monitoring Purposes

Methods for the determination of residues in or on plants, plant products, processed food commodities, food and feed of plant and animal origin

Refer to Document M-CA Section 4 Point 4.2 (a)

Methods for the determination of residues in body fluids and tissues

Refer to Document M-CA Section 4 Point 4.2 (d)

Methods for the determination of residues in soil

Refer to Document M-CA Section 4 Point 4.2 (b)

Methods for the determination of residues in water

Refer to Document M-CA Section 4 Point 4.2 (b)

Methods for the determination of residues in air, unless the applicant shows that exposure of operators, workers, residents or bystanders is negligible

Refer to Document M-CA Section 4 Point 4.2 (c)