

TECHNICAL REPORT OF EFSA

DATA COLLECTION TEMPLATES FOR ETHYL CARBAMATE AND 3-MCPD ESTERS¹

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SUMMARY

Commission Recommendation 2010/133/EU (EC, 2010) recommends that the Member States should monitor the levels of ethyl carbamate in stone fruit spirits and stone fruit marc spirits during the years 2010, 2011, and 2012. Data should be reported to EFSA in the format set out by EFSA. Regarding the 3-MCPD (3-monochloropropane-1,2-diol) esters further data on their toxicity and occurrence in different foodstuffs is needed. Data collected will be used for risk assessment at a later stage.

In response to this request EFSA prepared the templates for data collection of ethyl carbamate and 3-MCPD esters. The reporting formats are provided in the form of MS Excel[®] tables and enable a harmonised reporting of data on the occurrence of these contaminants. Their structure and content follow EFSA requirements (EFSA, 2009) in describing food and feed samples. Guidance on the use of the reporting formats and the specific requirements for reporting data on 3-MCPD esters are provided as separate documents.

KEY WORDS

Data collection template, ethyl carbamate, 3-MCPD esters

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BACKGROUND AS PROVIDED BY THE EUROPEAN COMMISSION

The Commission started to prepare in 2009 a recommendation to the Member States to monitor levels of ethyl carbamate in stone fruit spirits and stone fruit marc spirits during the years 2010, 2011, and 2012. This recommendation should respond to the conclusions and recommendations of the EFSA scientific opinion on ethyl carbamate and hydrocyanic acid in food and beverages of 20 September 2007 (EFSA, 2007). The recommendation was adopted by the Commission on 2 March 2010 (EC, 2010).

Furthermore, discussions are currently ongoing on the significance of 3-MCPD esters (3-monochloropropane-1,2-diol) for human health. MCPD esters have been found in a variety of foods, especially in foods on basis of vegetable oils. Research is still needed in a number of areas for this substance, including sufficient information on its occurrence in different foodstuffs. In view of gathering such information, some Member States have already started to collect more data.

TERMS OF REFERENCE AS PROVIDED BY THE EUROPEAN COMMISSION

In order to harmonise the reporting of these data and to ensure that the reported data can be used for risk assessment purposes at later stage, EFSA was requested to set up harmonised reporting formats (templates) for ethyl carbamate and 3-MCPD esters that could be distributed to the Member States.

As regards 3-MCPD esters, informal discussions between the European Commission, EFSA, and analysts at the Commission's Joint Research Centre JRC-IRMM in Geel took place. According to these discussions it was proposed to report 3-MCPD esters on a product basis and to calculate it as 3-MCPD. The fat content should also be reported to be able to compare results of products with different fat contents. These specific requirements should be included and highlighted in the reporting format.

EVALUATION

1. Introduction

Commission Recommendation 2010/133/EU (EC, 2010) recommends that the Member States should monitor the levels of ethyl carbamate in stone fruit spirits and stone fruit marc spirits during the years 2010, 2011, and 2012. Data should be reported to EFSA in the format set out by EFSA.

In an effort to harmonise the data collections, EFSA issued in 2009 the Guidance Document on Standard Sample Description for Food and Feed (EFSA, 2009). This document specifies the data elements and the data structure of the samples, the analytical results for chemical contaminants and residues in food and feed, and provides controlled terminologies and validation rules to enforce data quality.

As an annex to the above document the file “StandardSampleDescription.xls” contains catalogues with controlled terminologies and will be used in all future EFSA data collections on chemical contaminants. The catalogues can be used as pick-up lists in the reporting format and thus ensure a highly standardised data input.

EFSA strongly encourage the data providers to transmit their data in electronic format using Extensible Markup Language (XML) or, if this is not possible, different file formats e.g. Microsoft Excel, Comma Separated Values (CSV), depending on their technological constrains. It is acknowledged that not all Member States have the capacity to transmit data in electronic format and therefore MS Excel[®] tables for manual input of data are provided.

2. Objectives

To provide MS Excel[®] tables for ethyl carbamate and 3-MCPD esters, respectively, that can be used for harmonised reporting of data and to accommodate the specific requirements expressed in the terms of references.

3. Materials and methods

To ensure full compatibility with the data transmitted in electronic format the requirements specified in the Guidance Document on Standard Sample Description (EFSA, 2009) were considered in producing the MS Excel[®] tables. The controlled terminologies provided in the Annex to this document (*StandardSampleDescription.xls*) were used as pick up lists in each of the reporting formats.

4. Reporting formats and guidance documents

In order to enable individual distribution of the reporting formats to the data providers, separate documents have been prepared for each contaminant (see Appendices A, B, C, and D).

The files “**Reporting Format Ethyl Carbamate.xls**” and “**Reporting Format 3MCPD.xls**” (see Appendices A and C) are working files and have been designed for filling in the data to be reported to EFSA. Each file contains the following worksheets:

- “Information” - worksheet reminding of the most important steps in using the files
- “Reported data” - for input of data to be transmitted

- “Example” – this worksheet has the same structure as the “Reported data” but fictive data have been introduced in order to give an example on how data should be filled in.
- “Concise” – is a list of the food groups used for food coding in the controlled terminology.

Several variables considered important for the data analysis of the occurrence of ethyl carbamate and 3-MCPD esters, respectively, have been introduced in the reporting formats. Name of variables followed the specification of the Guidance Document (EFSA, 2009). An “info box” which includes a short explanation of the variable has been added to the heading of each column.

The files are dedicated to manual data entry, and therefore for certain fields standard terms were introduced in place of the codes, or codes and terms are introduced simultaneously by picking one term from the pick-up list. These features are intended to simplify the reading of files by the users. Standard names can be easily converted to standard codes by EFSA.

The file *StandardSampleDescription.xls* which contains all the controlled terminologies is not provided but it can be downloaded from <http://www.efsa.europa.eu/en/scdocs/scdoc/1457.htm>

Along with the reporting formats, guidance documents on how to use them including the specific requirements for ethyl carbamate and 3-MCPD esters are provided as separate documents (see Appendices B and D).

In order to address the requirements of reporting the type of hydrolysis and derivatisation methods applied in the analysis of 3-MCPD esters, a list of the possible steps has been set up after informal discussions between the European Commission, EFSA, and JRC-IRMM in Geel. Reporting of this information is facilitated by introducing the codes of the analytical steps as specified in the Appendix D.

CONCLUSIONS AND RECOMMENDATIONS

The reporting formats for ethyl carbamate and 3-MCPD esters enable harmonised reporting of data on the occurrence of these contaminants in food according to EFSA’s requirements.

In order to correctly use the reporting formats and to take note of the specific requirements it is strongly recommended to consult the attached guidance documents.

REFERENCES

- EC (European Commission), 2010. Commission Recommendation 2010/133/EU of 2 March 2010 on the prevention and reduction of ethyl carbamate contamination in stone fruits and stone fruit marc spirits and on the monitoring of ethyl carbamate levels in these beverages. Official Journal of the European Union, L 52:53-57. Available online: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2010:052:0053:0057:EN:PDF>
- EFSA, (European Food Safety Authority), 2007. Opinion of the Scientific Panel on Contaminants in the Food chain on a request from the European Commission on ethyl carbamate and hydrocyanic acid in food and beverage. EFSA Journal 2007; 551: 1-44. Available online: <http://www.efsa.europa.eu/en/scdocs/doc/551.pdf>
- EFSA, (European Food Safety Authority), 2009. Standard sample description for food and feed. EFSA Journal 2010;8(1):1457. Available online: <http://www.efsa.europa.eu/en/scdocs/scdoc/1457.htm>

APPENDICES

The following appendices are available as separate files in Microsoft Excel workbooks and Adobe Portable Document Format. They can be downloaded from the links attached to this report.

A. REPORTING FORMAT FOR ETHYL CARBAMATE (AVAILABLE ON LINE AT [HTTP://WWW.EFSA.EUROPA.EU/EN/DATEXDATA/DOCS/REPORTINGFORMATETHYL CARBAMATE.XLS](http://www.efsa.europa.eu/en/datexdata/docs/reportingformatethylcarbamate.xls))

B. GUIDANCE ON USING THE REPORTING FORMAT FOR ETHYL CARBAMATE)(AVAILABLE ON LINE AT [HTTP://WWW.EFSA.EUROPA.EU/EN/DATEXDATA/DOCS/INSTRUCTIONETHYL CARBAMATE.PDF](http://www.efsa.europa.eu/en/datexdata/docs/instructionethylcarbamate.pdf))

C. REPORTING FORMAT FOR 3-MCPD ESTERS (AVAILABLE ONLINE AT [HTTP://WWW.EFSA.EUROPA.EU/EN/DATEXDATA/DOCS/REPORTINGFORMAT3MCPD.XLS](http://www.efsa.europa.eu/en/datexdata/docs/reportingformat3mcpd.xls))

D. GUIDANCE ON USING THE REPORTING FORMAT FOR 3-MCPD ESTERS (AVAILABLE ONLINE AT [HTTP://WWW.EFSA.EUROPA.EU/EN/DATEXDATA/DOCS/INSTRUCTION3MCPDESTERS.PDF](http://www.efsa.europa.eu/en/datexdata/docs/instruction3mcpdesters.pdf))