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Chemical monitoring reporting guidance: 2025 data collection

European Food Safety Authority (EFSA)

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Abstract

This document should be used for reporting to EFSA samples analysed for chemicals. It provides guidance on how to use the Standard Sample Description (SSD2) data model for submission to the EU of analytical results of food and feed samples taken during control activities carried out to monitor residues of pesticides and veterinary medicinal products, contaminants, food additives, and food flavourings. This document does not replace – but complements and updates some aspects of – the general EFSA Guidance on Standard Sample Description (SSD2) and Guidance on Data Exchange (GDE2). It is meant to provide guidance on the specific technical and legislative requirements as well as clarity on data quality validation for chemical monitoring (ChemMon) data at national and EU levels.

Key words: SSD2, food samples, pesticide residues, food additives, food flavourings, veterinary medicinal product residues, contaminants, animal feed

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Amendment: Addition of row "Amendment of existing BR (CHEMON19)" within Table 1, page 11. An editorial correction was carried out that does not materially affect the contents or outcome of this scientific output. To avoid confusion, the original version of the output has been removed from the EFSA Journal, but is available on request.

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1 Introduction

1.1 Background

This guidance is intended for the use of data providers reporting datasets (files) to EFSA in SSD2 format that contain results for chemical parameters in relation to the occurrence of contaminants in food and feed, to food additives, to food flavourings, and to the monitoring of pesticide residues and veterinary medicinal product residue (VMPR) levels in food and feed.

Except for the statutory EU Annual Report domain (pesticide residues and VMPR) samples taken in any year can be transmitted to the EFSA Scientific Data Warehouse (sDWH) when the data provider has the data ready. Only samples taken in the specific calendar year will be included in each year's national and Annual Report[1].

EFSA receives the results of testing for substances by laboratories in food and feed under:

- Regulation (EC) No 396/2005[2] on maximum residue levels of pesticides in or on food and feed of plant and animal origin; Regulation (EU) 2021/1355[3] on multiannual national control programmes for pesticide residues to be established by Member States and Regulation (EU) 2023/731[4] on the coordinated multiannual control programme of the Union for the year 2024;
- Regulation (EC) No 178/2002[5] (as amended) on general food law;
- Regulation (EC) No 2017/625[6] on official controls and associated delegated acts;
- Regulation (EU) 2023/915 [7] on maximum levels for certain contaminants in food;
- Regulation (EC) No 1333/2008[8] for food additives;
- Regulation (EC) No 1334/2008[9] for food flavourings;

[1] National and Annual Reports are required under some legislations. The formats and content are defined and agreed upon through the collaboration of the Commission, Member States and EFSA. Terminology varies across legislation and includes the 'EU Summary Report' and 'EU Annual Report'. See Section 10 for further details.
[2] Regulation (EC) No 396/2005 of the European Parliament and of the Council of 23 February 2005 on maximum residue levels of pesticides in or on food and feed of plant and animal origin and amending Council Directive 91/414/EEC. OJ L 70, 16.3.2005, p. 1–16.
[3] Commission Implementing Regulation (EU) 2021/1355 of 12 August 2021 on multiannual national control programmes for pesticide residues, to be established by Member States. OJ L 291, 13.8.2021, p. 120–121.
[4] Commission Implementing Regulation (EU) 2023/731 of 4 April 2023 concerning a coordinated multiannual control programme of the Union for 2024, 2025 and 2026 to ensure compliance with maximum residue levels of pesticides and to assess the consumer exposure to pesticide residues in and on food of plant and animal origin and repealing Implementing Regulation (EU) 2022/741. OJ L 95, 4.4.2023, p. 28–40.
[5] Regulation (EC) No 178/2002 of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety. OJ L 31, 1.2.2002, p. 1–24.
[6] Regulation (EU) 2017/625 of the European Parliament and of the Council of 15 March 2017 on official controls and other official activities performed to ensure the application of food and feed law, rules on animal health and welfare, plant health and plant protection products, amending Regulations (EC) No 999/2001, (EC) No 396/2005, (EC) No 1069/2009, (EC) No 1107/2009, (EU) No 1151/2012, (EU) No 652/2014, (EU) 2016/429 and (EU) 2016/2031 of the European Parliament and of the Council, Council Regulations (EC) No 1/2005 and (EC) No 1099/2009 and Council Directives 98/58/EC, 1999/74/EC, 2007/43/EC, 2008/119/EC and 2008/120/EC, and repealing Regulations (EC) No 854/2004 and (EC) No 882/2004 of the European Parliament and of the Council, Council Directives 89/608/EEC, 89/662/EEC, 90/425/EEC, 91/496/EEC, 96/23/EC, 96/93/EC and 97/78/EC and Council Decision 92/438/EEC (Official Controls Regulation). OJ L 95, 7.4.2017, p. 1–142.
[7] Commission Regulation EU 2023/915 of 25 April 2023 setting maximum levels for certain contaminants in food and repealing Regulation (EC) No 1881/2006. OJ L 119, 5.5.2023, p. 103–157.
[8] Regulation (EC) No 1333/2008 of the European Parliament and of the Council of 16 December 2008 on food additives. OJ L 354, 31.12.2008, p. 16–33.
[9] Regulation (EC) No 1334/2008 of the European Parliament and of the Council of 16 December 2008 on flavourings and certain food ingredients with flavouring properties for use in and on foods and amending Council

- Regulation (EU) 2022/1644[10] and Regulation (EU) 2022/1646[11] on the official controls of VMPR in live animals and animal products;
- Council Directive 2002/32/EC[12] on undesirable substances in animal feed;
- Regulation (EU) 2016/127[13], Regulation (EU) 2016/128[14] and Directive 2006/125/EC[15] regarding baby food;
- Regulation (EU) 2019/1793[16] on official controls of certain goods from third countries and its reviewed annexes;
- Regulation (EU) 2022/931[17] and Regulation (EU) 2022/932[18] on the performance of official controls on the presence of contaminants in food.

Additionally, results on the presence of chemicals in food not covered by the above legislation can also be reported to EFSA.

In the frame of the ChemMon data collection programme, occurrence data on plasticisers such as phthalates, structurally similar substances and replacement substances were collected by EFSA[19]. An ad hoc collection of results generated in the context of experimental studies on Food Contact Materials (FCM) before their actual use, e.g. tests on migration of plasticisers from FCM using food/food simulants, or tests on concentration of plasticisers

Regulation (EEC) No 1601/91, Regulations (EC) No 2232/96 and (EC) No 110/2008 and Directive 2000/13/EC. OJ L 354, 31.12.2008, p. 34–50.

[10] Commission Delegated Regulation No (EU) 2022/1644 of 7 July 2022 supplementing Regulation (EU) 2017/625 of the European Parliament and of the Council with specific requirements for the performance of official controls on the use of pharmacologically active substances authorised as veterinary medicinal products or as feed additives and of prohibited or unauthorised pharmacologically active substances and residues thereof. OJ L 248, 26.9.2022, p. 3–17.

[11] Commission Implementing Regulation (EU) No 2022/1646 of 23 September 2022 on uniform practical arrangements for the performance of official controls as regards the use of pharmacologically active substances authorised as veterinary medicinal products or as feed additives and of prohibited or unauthorised pharmacologically active substances and residues thereof, on the specific content of multi-annual national control plans and specific arrangements for their preparation. OJ L 248, 26.9.2022, p. 32–45

[12] Directive 2002/32/EC of the European Parliament and of the Council of 7 May 2002 on undesirable substances in animal feed – Council statement. OJ L 140, 30.5.2002, p. 10–22.

[13] Commission Delegated Regulation (EU) 2016/127 of 25 September 2015 supplementing Regulation (EU) No 609/2013 of the European Parliament and of the Council as regards the specific compositional and information requirements for infant formula and follow-on formula and as regards requirements on information relating to infant and young child feeding. OJ L 25, 2.2.2016, p. 1–29.

[14] Commission Delegated Regulation (EU) 2016/128 of 25 September 2015 supplementing Regulation (EU) No 609/2013 of the European Parliament and of the Council as regards the specific compositional and information requirements for food for special medical purposes. OJ L 25, 2.2.2016, p. 30.

[15] Commission Directive 2006/125/EC of 5 December 2006 on processed cereal-based foods and baby foods for infants and young children. OJ L 339, 6.12.2006, p. 16.

[16] Commission Implementing Regulation (EU) 2019/1793 of 22 October 2019 on the temporary increase of official controls and emergency measures governing the entry into the Union of certain goods from certain third countries implementing Regulations (EU) 2017/625 and (EC) No 178/2002 of the European Parliament and of the Council and repealing Commission Regulations (EC) No 669/2009, (EU) No 884/2014, (EU) 2015/175, (EU) 2017/186 and (EU) 2018/1660. OJ L 277, 29.10.2019, p. 89–129.

[17] Commission Delegated Regulation (EU) 2022/931 of 23 March 2022 supplementing Regulation (EU) 2017/625 of the European Parliament and of the Council by laying down rules for the performance of official controls as regards contaminants in food. OJ L 162, 17.6.2022, p. 7–12.

[18] Commission Implementing Regulation (EU) 2022/932 of 9 June 2022 on uniform practical arrangements for the performance of official controls as regards contaminants in food, on specific additional content of multi-annual national control plans and specific additional arrangements for their preparation. OJ L 162, 17.6.2022, p. 13–22.

[19] On 24/07/2020 EFSA received from the EU Commission (DG SANTE) the first part of a 2-part mandate on the re-evaluation of the risks to public health related to the presence of phthalates, structurally similar substances and replacement substances from food contact materials (FCM). As one of the tasks of part 1 of the mandate (Mandate Number M-2020-0183), a list of substances with potential use as a plasticiser has been identified. Out of those, the ones with an authorisation for use in FCM at the EU or national level have been prioritised (high, medium or low priority; EFSA CEP Panel, 2022.). Only the prioritised substances were subject to this data collection under the ChemMon data collection programme (EFSA CEP Panel, 2022. Identification and prioritisation for risk assessment of phthalates, structurally similar substances and replacement substances potentially used as plasticisers in materials and articles intended to come into contact with food. EFSA Journal 2022;20(5):7231, 26 pp. https://doi.org/10.2903/j.efsa.2022.7231

in FCM was issued separately in 2022 and was relaunched in 2023[20]. The data collection of such data under the ChemMon and Plasticisers_FCM data collections is considered complete and is not expected to be repeated in the future.

On 14 December 2019, Regulation (EC) No 2017/625 entered into force, laying down rules for the performance of official controls and other official national activities performed to ensure the application of food and feed EU Law and rules. Implementing and delegated legal acts associated with the new Regulation are in progress or have already been adopted, such as Regulation (EU) No 2021/1355 on multiannual national control programmes for pesticide residues. Already adopted Commission Delegated Regulation (EC) No 2022/1644 and Commission Implementing Regulation (EC) No 2022/1646 (and entering into force on 15 December 2022) apply important changes within the VMPR domain for sampling from 1 January 2023.

On 23 March 2022 and 9 June 2022, Commission Delegated Regulation (EC) No 2022/931[21] and Commission Implementing Regulation (EC) No 2022/932[22] entered into force respectively, laying down rules for the performance of official controls as regards contaminants in food. These two Regulations aim to ensure continuity of the rules of Directive 96/23/EC on the content of the multiannual national control plans (MANCP) and its preparation, as well as the minimum frequency of official controls, as regards contaminants in food, within the framework of Regulation (EU) 2017/625. These Regulations apply as of 1 January 2023.

In addition, Commission Recommendation (EC) No 2023/965[23] enters into force with a pilot data collection on the monitoring of data on the occurrence (use levels and analytical results) of food additives, in accordance with Regulation (EC) No 1333/2008, and food flavourings, as laid out in Regulation (EC) No 1334/2008.

However, for newly adopted and amended regulations not applicable to data collected by EFSA in the reference year, the provisions of the older regulations remain in force.

Further, Implementing Regulation (EU) 2019/723[24] establishes the standard model form for the information and data to be included in the EC Annual Report on Official Controls (AROC) submitted by each Member State to the European Commission (EC). Table 1.4 of this form will be filled by the EC with the number of samples **in status accepted in EFSA sDWH** at the time agreed with the MANCP Network members[25].

[20] An ad-hoc 'data collection on plasticisers in and migrating from FCM' (Plasticisers_FCM_2022) for migration tests using food simulants and concentration into the materials was issued separately in 2022 and was relaunched in 2023. The concentration of plasticising agents in or migration from FCM collected in the ad hoc Plasticisers_FCM_2022 call, are intended to be established through testing under controlled laboratory conditions of contact with food simulants (or exceptionally with the food itself) before the actual use of the FCM.
[21] Commission Delegated Regulation (EU) 2022/931 of 23 March 2022 supplementing Regulation (EU) 2017/625 of the European Parliament and of the Council by laying down rules for the performance of official controls as regards contaminants in food. OJ L 162, 17.6.2022, p. 7–12
[22] Commission Implementing Regulation (EU) 2022/932 of 9 June 2022 on uniform practical arrangements for the performance of official controls as regards contaminants in food, on specific additional content of multi-annual national control plans and specific additional arrangements for their preparation. OJ L 162, 17.6.2022, p. 13–22
[23] Commission Recommendation (EU) 2023/965 of 12 May 2023 on the methodology for the monitoring of food additive and food flavouring intake. OJ L 129, 16.5.2023, p. 17–24.
[24] Commission Implementing Regulation (EU) 2019/723 of 2 May 2019 laying down rules for the application of Regulation (EU) 2017/625 of the European Parliament and of the Council as regards the standard model form to be used in the Annual Reports submitted by Member States. OJ L 124, 13.5.2019, p. 1–31.
[25] For further information related to this Network, please contact SANTE-F-AROC@ec.europa.eu

Results from Border Control Posts (BCPs) are to be reported to TRACES (Article 133 of Regulation (EU) No 2017/625). However, SANTE Unit E.2 and Unit E.4 require Member States (MS) to report information on these border control analyses also to EFSA via the SSD2 format due to different levels of detail compared with TRACES. More specifically, Member States are required for VMPR (Article 9 of Regulation (EU) No 2022/1646), contaminants (Article 8 of Regulation (EU) No 2022/932) and pesticides domains (Article 31 of Regulation (EC) No 396/2005 and in SCoPAFF - Pesticide Residue meeting[26]), to report information on these border control analysis to EFSA via the SSD2 format. Future assessment of SSD2 and TRACES and compatibility format will be undertaken with the aim to assist Member States in avoiding double reporting.

In 2013, EFSA published a revision of the Standard Sample Description (EFSA, 2013) (SSD2), which provides the data specification for submitting laboratory results in samples from the food chain. This version incorporates FoodEx2 (EFSA, 2015), a food description system which allows detailed classification of complex food items and is compatible with the EU menu food consumption surveys (EFSA, 2014b). Data providers are requested to transmit all chemical monitoring data in the SSD2 format. This offers the opportunity to collect all chemical monitoring data through a single mechanism, reducing duplicate reporting and conflicting requirements. Some modifications have been made that may reduce the reporting burden for data providers and ensure that the data received are fit for purpose for compliance and exposure assessments and potentially re-usable for other scientific purposes. Input from the Chemical Monitoring Data Collection Network members has also been considered when preparing this document.

The following documents should be consulted in conjunction with this document:

- Standard Sample Description ver. 2.0. (EFSA, 2013).
- Guidance on Data Exchange version 2.0 (EFSA, 2014a).
- The food classification and description system FoodEx2 (revision 2) (EFSA, 2015).
- Webinar: The FoodEx2 classification system and guidance on its harmonised use.[27]
- Catalogue Browser user guide (EFSA & Ioannidou, 2019b).
- EFSA FoodEx2 Interpreting and Checking Tool user guide (EFSA & Ioannidou, 2019c).
- Data Collection Framework (DCF) User Manual28 (EFSA, DCF publication).

This document is designed to provide harmonised guidance on the implementation of the SSD2 and the GDE2 and to solve the issues listed below. It replaces all previous EFSA guidance on the reporting of chemical monitoring results from the contaminants, food additives, pesticide residues and VMPR domains. This guidance must be used in conjunction with SSD2 and GDE2 which provide details of the workflow, data validation and the EFSA Data Collection Framework principles. It also provides details where experience gained has resulted in modifications to the SSD2 and GDE2 Guidance. Where divergence exists between the SSD2 and GDE2 original guidance publications and this document (e.g. in field size or mandatory status), the details in this guidance must be followed:

1) *Multiple domain data collections*. The inclusion of data under Regulation (EU) 2022/1644 and Regulation (EU) 2022/1646 (repealing Council Directive 96/23/EC), which addresses residues of substances in samples of animal origin that are,

[26] Agenda point A.17 of the 18-19 September 2023 SCoPAFF meeting: https://food.ec.europa.eu/system/files/2023-10/sc_phyto_20230918_ppr_sum.pdf
[27] https://www.efsa.europa.eu/it/events/event/180926
[28] This document is available within the DCF for users to download.

pesticides and veterinary residues, has highlighted the issue of duplicate reporting and uncertainty regarding which data collection a sample should be submitted to. It was agreed to create a single SSD2 data collection for the results of laboratory analysis for chemical substances found in food, feed, animals, and plants. The results to be included in National and Annual Reports generated by EFSA will be selected using specific analysis hierarchies for each chemical monitoring domain (e.g. by specific Regulation or hazard group). The analysis hierarchies will be applied to the PARAM and MTX catalogues plus other catalogues where necessary. A programme legal reference is also required to select data for inclusion in the Annual Reports for European monitoring programmes. This approach simplify reporting from Member States and allow a more holistic assessment of specific hazards of concern for EFSA. This document no longer addresses the specific reporting requirements and analysis hierarchies for the area of FCM substances, which belonged to the chemical contaminant's domain in ChemMon2022 and ChemMon2023.

2) *Conflicts in mandatory SSD2 elements and Business Rules (BR) for the same substance in different data collections*. Some of these requirements come specifically from legislation, e.g. the requirement to report CCalpha and CCbeta for VMPR results. However, in other cases they are a result of differing priorities or approaches to data quality when previous reporting guidance was specified. This document seeks to resolve conflicts wherever possible and provide a harmonised data model and data quality criteria in the form of business rules for all ChemMon results. Whenever substances are reported that fall into more than one domain, BR of all applicable domains will be applied. The SSD2 BR for all chemicals are included and applied to the ChemMon data collection. This reporting guidance applies to all the data domains; where a data element is defined as optional for ChemMon transmissions in general, this does not preclude it from being a mandatory element for the collection of data related to a specific domain or substance and this would continue to be defined in the specific BR as also detailed in Table 8.

3) *Compound elements*. Some data providers have indicated that the creation of the strings required to report compound elements has resulted in additional technical overheads. The SSD2 XSD schema definition now allows:

- the reporting of each data element listed in the SSD2 specification separately; or
- as compound elements.

4) *Conversion of national values to EFSA catalogue terminology*. SSD2 requires the mapping to EFSA-coded terminologies and the FoodEx2 system requires a complex mapping to both base terms and facets to fully classify and describe the samples taken. Where there are differences in granularity or philosophy of terminologies used in data provider systems there is a risk of mismapping with subsequent data quality issues. EFSA now provides a catalogue browser application (EFSA, online-b) which links to the latest version of the catalogue and web services to enable better conversion.

5) *Public access to document requests and Open Data*. In recent years there have been many requests for access to datasets, largely under the Regulation on Public

Access to Documents[29]. EFSA, in collaboration with Member States, has moved to an Open by Default approach for data in the Scientific Data Warehouse (EFSA, 2019a). However, this[30] requires that sensitive information, e.g. personal data and commercially sensitive data, is protected. Therefore, the `use of free text fields in ChemMon data submissions have been reduced and only those where the content is clearly specified remain. Geographical identifiers below country level and unique identifiers which can be linked to public registers of food business operators are required only when necessary to support risk assessment. The Transparency Regulation (TR, Regulation (EU) 2019/1381[31]), which became applicable on 27/03/2021, has introduced new legal provisions on the publication of data and information supporting requests from the Commission for a scientific output which may also apply to data collected under the ChemMon data collections. According to Article 38(1)(c) of Regulation (EC) No 178/2002[32], the proactive transparency requirements will be applicable to documents, studies and data submitted to EFSA to support application dossiers or mandates for scientific output received by EFSA on/after 27/03/2021. Similarly, pursuant to Article 38(1) (d) of the aforementioned Regulation, information on which EFSA's outputs are based shall be made proactively available together at the time of publication of the output. As indicated at the 4th meeting of the Network on chemical monitoring data collection[33], Member States who submit data on behalf of natural or legal persons – such as industry – in relation to a post-TR mandate, have the right to submit confidentiality requests for certain data in accordance with the provisions of Articles 39–39e of Regulation (EC) No 178/2002, applicable sectoral legal acts and EFSA's Practical Arrangements on transparency and confidentiality[34].

6) All resources linked to this document (structural metadata, catalogues, business rules, schema definitions) will be published in the EFSA Knowledge Junction[35] in a machine-readable format and human-readable where appropriate.

For the sake of clarity, throughout the document the general concept of 'residue' will be used to indicate residues coming from added substances (e.g. pesticides) and residues of substances present in the food unintentionally (e.g. environmental contaminants).

It is acknowledged that for national annual monitoring, any subsequent changes proposed (to elements, catalogues or BR) in October–November of year *X* can only be applied to results reported in year *X*+2 since the changes must be known before the sampling officers collect the samples in year *X*+1. However, this would not apply for changes aimed at implementing new or amended legal requirements that cannot be anticipated by EFSA.

[29] Regulation (EC) No. 1049/2001 of the European Parliament and of the Council of 30 May 2001 regarding public access to European Parliament, Council and Commission documents http://data.europa.eu/eli/reg/2001/1049/oj.
[30] Paragraph 3.2.2 of 'Publication of scientific data from EU-coordinated monitoring programmes and surveys' (EFSA et al., 2019).
[31] Regulation (EU) 2019/1381 of the European Parliament and of the Council of 20 June 2019 on the transparency and sustainability of the EU risk assessment in the food chain and amending Regulations (EC) No 178/2002, (EC) No 1829/2003, (EC) No 1831/2003, (EC) No 2065/2003, (EC) No 1935/2004, (EC) No 1331/2008, (EC) No 1107/2009, (EU) 2015/2283 and Directive 2001/18/EC, OJ L 231, 6.9.2019, p. 1–28.
[32] Regulation (EC) No 178/2002 of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety, OJ L31, 1.2.2002, p.1-48.
[33] Minutes of the meeting available here: https://www.efsa.europa.eu/sites/default/files/2021-12/4th-efsa-scientific-network-chemical-monitoring-data-collection-minutes.pdf
[34] https://www.efsa.europa.eu/sites/default/files/corporate_publications/files/210111-PAs-transparency-and-confidentiality.pdf
[35] https://zenodo.org/communities/efsa-kj/about

Network members must contribute to and participate in the process of revision on an ongoing basis with emphasis on suggestions being submitted during the last quarter of each year (September-November).

The major changes introduced for the 2025 Chemical Monitoring compared with the previous year's data collection are listed in Table 1.

Table 1: Main changes introduced with the 2025 Chemical Monitoring data collection

Change	Type of change	Reason for change	Details
New hierarchy under facet (F33) for VMPR	New addition	Quality requirement	If the result is reported for VMPR (is_vet=1), the facet F33 can be used for VMPR processed products. Only one code belonging to the hierarchy 'Veterinary Medicinal Product Residues' (A1ANN) can be reported to allow the mapping to one of the main VMPR legislative commodity groups.
New data domain	New addition	Legal Requirement - Commission Recommen-dation (EC) No 2023/965	Commission Recommendation (EC) No 2023/965 enters into force with a pilot data collection on the monitoring of data on the occurrence (use levels and analytical results) of food additives, in accordance with Regulation (EC) No 1333/2008, and food flavourings, as laid out in Regulation (EC) No 1334/2008. Therefore, a new hierarchy named flavAnalysis has been created in the PARAM catalogue to allow the submission of flavourings substances.
Amendment of existing BR (CHEMON19)	Warning	Quality requirement	If the value in the data element 'Parameter code' (paramCode.base) is equal to 'Chlorates' (RF-00000015-CHE), or 'Perchlorate' (RF-00001336-PAR) or 'RF-1078-001-PPP' Quaternary Ammonium Compounds (QACs) or any children thereof, then the value in the data element 'Process' (sampMatCode.process) should be reported
Amendment of existing BR (CHEMON39) as CHEMON39_a	From Warning to Error	Quality requirement	If the result is reported for additives (is_add=1), then the value in the data element 'Legislative classes' (sampMatCode.legis) must be used to report the additional product classification (food category code) based on Regulation (EC) No 1333/2008 on food additives, as last amended. From warning to error message in 2025. CHEMON39_a and CHEMON39_b will be merged in 2026.

Change	Type of change	Reason for change	Details
Amendment of existing BR (CHEMON39) as CHEMON39_b	Warning	Quality requirement	If the result is reported for flavourings (is_flav=1), then the value in the data element 'Legislative classes' (sampMatCode.legis) should be used to report the additional product classification (food category code) based on Regulation (EC) No 1334/2008 on food flavourings, as last amended. From warning to error message in 2026. CHEMON39_a and CHEMON39_b will be merged in 2026.
Amendment of existing BR (CHEMON49)	From Warning to Error	Quality requirement	If the value in the data element 'Programme type' (progType) is equal to 'Official (EU) programme' (K009A), and the value in 'Programme legal reference' (progLegalRef) is 'Regulation (EC) No 396/2005 (amended)' (N027A), then the value in 'Sampling strategy' (sampStrategy) should be equal to 'Objective sampling' (ST10A) From warning to error message for Pesticides in 2025.
Amendment of existing BR (CHEMON50)	Error	Quality requirement	If the value in the data element 'Programme type' (progType) is equal to 'Official (National and EU) programme' (K018A) and the value in 'Programme legal reference' (progLegalRef) contains 'Regulation (EC) No 396/2005 (amended)' (N027A), then the value in 'Sampling strategy' (sampStrategy) can only be equal to 'Objective sampling' (ST10A) or 'Selective sampling' (ST20A)
Amendment of existing BR (CHEMON52)	Error	Quality requirement	If the value in 'Programme legal reference' (progLegalRef) contains 'Regulation (EC) No 396/2005 (amended)' (N027A), the value in 'Programme type' (progType) can only be equal to 'Official (National) programme' (K005A), or 'Official (EU) programme' (K009A), or 'Official (National) programme for Third Country Import' (K038A) or 'Official (National and EU) programme' (K018A)
Inactivation of existing BR (CHEMON53)	Inactivation	Quality requirement	Inactivation of business rule due to the update of table 2 in 2025

Change	Type of change	Reason for change	Details
Amendment of existing BR (CHEMON54)	From Warning to Error	Quality requirement	If the value in 'Programme legal reference' (progLegalRef) is 'Commission Implementing Regulation (EU) No 2019/1793' '(N317A)' and the value in 'Programme type' (progType) is equal to 'EU increased control programme on imported food' (K019A), then the value in 'Sampling strategy' (sampStrategy) can only be equal to 'Suspect sampling' (ST30A) From warning to error message in 2025.
Amendment of existing BR (CHEMON55)	Error	Quality requirement	If the value in the data element 'Programme legal reference' (progLegalRef) is 'Samples of food products falling under Directive 2006/125/EC (N028A) or is 'Samples of food products falling under Regulation (EU) 2016/127' (N318A), then the value in the data element 'Coded description of the matrix of the sample taken' (sampMatCode.base) should have as parent term 'Food products for young population' (A03PV)
Amendment of existing BR (CHEMON58)	Error	CHEMON58_a and CHEMON58_b are merged	If the result is reported for PPP (is_pest=1), or VMPR (is_vet=1), the 'country of sampling' (sampCountry) has to be equal to the country of the reporting organisation.
Amendment of existing BR (CHEMON59)	From Warning to Error	Quality requirement	If the result is reported for pesticides, then the value in 'Type of limit for the result evaluation' (evalLimitType) can only be 'Maximum Residue Level (MRL)' (W002A), or 'National or local limit' (W990A), or missing. From warning to error message for Pesticides in 2025.
Amendment of existing BR (CHEMON64)	Error	Quality requirement	If the sample reported is taken under Regulation (EU) No 2019/1793 (N317A), then the values in 'Country of origin' (origCountry) and in 'Coded description of the matrix of the sample taken' (sampMatCode) can only be those listed in the Regulation
Amendment of existing BR (CHEMON77)	From Warning to Error	Quality requirement	If the analytical results refer to pooled samples, with 'sampling method' (sampMethod) code N002A (Pooled/batch) or N031A (Pooled), the data element 'sampUnitSizeUnit' must be reported with code G005A ('Unit') and the element 'sampUnitSize' must be returned with the actual number of the single samples pooled. From Warning to Error message in 2025.

Change	Type of change	Reason for change	Details
Amendment of existing BR (CHEMON79) as CHEMON79_a	From Warning to Error	Quality requirement	If the result is reported for contaminants (is_occ=1) or food additives (is_add=1), then the value in 'Analytical Method' (anMethCode) should be different from 'Classification not possible' (F001A). From warning to error message in 2025. CHEMON79_a, CHEMON79_b, and CHEMON79_c will be merged in 2026.
Amendment of existing BR (CHEMON79) as CHEMON79_b	Warning	Quality requirement	If the result is reported for flavourings (is_flav=1), then the value in 'Analytical Method' (anMethCode) should be different from 'Classification not possible' (F001A). From warning to error message in 2026. CHEMON79_a, CHEMON79_b, and CHEMON79_c will be merged in 2026.
Amendment of existing BR (CHEMON79) as CHEMON79_c	Warning	Quality requirement	If the result is reported for contaminants (is_occ=1), additives (is_add=1) or flavourings (is_flav=1), then the value in 'Analytical Method' (anMethCode) should be different from 'Unknown' (F500A) or 'Unspecified' (F598A) From warning to error message in 2026. CHEMON79_a, CHEMON79_b, and CHEMON79_c will be merged in 2026.
Amendment of existing BR (CHEMON84) as CHEMON84_a	From Warning to Error	Quality requirement	If the result is reported for contaminants (is_occ=1), or food additives (is_add=1), then the 'Expression of result type' (exprResType) must be reported. From warning to error message in 2025. CHEMON84_a and CHEMON84_b will be merged in 2026.
Amendment of existing BR (CHEMON84) as CHEMON84_b	Warning	Quality requirement	If the result is reported for food flavourings (is_flav=1), then the 'Expression of result type' (exprResType) should be reported. From warning to error message in 2026. CHEMON84_a and CHEMON84_b will be merged in 2026.

Change	Type of change	Reason for change	Details
Amendment of existing BR (CHEMON86)	Warning	Quality requirement	If the result is reported for additives (is_add=1) or flavourings (is_flav=1), then the physical-state facet of the sample (F03) if not implicitly present in the 'description of the matrix of the sample' (sampMatCode) is highly recommended to be reported. Updated business rule, which returns a warning message.
New BR (CHEMON87)	Warning	Quality requirement	If the result is reported for additives (is_add=1) or flavourings (is flav=1), then 'conclusion of follow-up investigation' (evalInfo.conclusion) is highly recommended to be reported. New business rule introduced in 2025, which returns a warning message
New BR (CHEMON88)	Warning	Quality requirement	If the result is reported for additives (is_add=1) or flavourings (is flav=1), then 'restriction or exception' (evalInfo.restrictionException) is highly recommended to be reported. From warning to error message in 2026.
New BR (CHEMON89)	Warning	Quality requirement	If the result is reported for additives (is_add=1) or flavourings (is_flav=1), then the target consumer facet (F23) is highly recommended to be reported when the sample refers to food category 13 (Foods intended for particular nutritional uses as defined by Directive 2009/39/EC). New business rule introduced in 2025, which returns a warning message.
New BR (CHEMON90_a)	Warning	Quality requirement	When reporting 'RF-0102-001-PPP' 'Copper' the use of facet F20 and F28 is recommended. From warning to error message in 2026.
New BR (CHEMON90_b)	Warning	Quality requirement	When reporting 'RF-0102-001-PPP' 'Copper', is recommended that Measurement Uncertainty is reported. New business rule introduced in 2025, which returns a warning message
New BR (CHEMON91)	Warning	Quality requirement	If the result is reported for VMPR (is_vet=1), then only one F33 facet under parent term 'Veterinary Medicinal Product Residues Classes' (A1ANN) should be reported for sampMatCode and anMatCode.
New BR (CHEMON92)	Error	Quality requirement	If the result is reported for VMPR (is_vet=1), then the base term used for the description of the matrix of the sample (sampMatCode) and

Change	Type of change	Reason for change	Details
			description of the matrix analysed (anMatCode) must belong to the VetDrugRes hierarchy. Error message already in 2025.
New BR (CHEMON93)	Warning	Quality requirement	For non-compliant results of VMPR Plan 1 and Plan 2, the area where the sample was collected should be reported. This only applies if the country of origin is the same of the country of the reporting organisation. The full description of the business rule is available in Table 10 of this guidance.
New BR (CHEMON94)	Warning	Quality requirement	If the 'programme type' (progType) is 'Official (National) programme for Third Country Import' (K038A) or 'EU increased control programme on imported food' (K019A), then sampling point (sampPoint) can only be equal to 'Border Control Posts' (E010A). From warning to error message in 2026.
New BR (CHEMON95)	Warning	Quality requirement	If the result is reported for PPP (is_pest=1) and 'Evaluation of the result' (evalCode) is equal to 'Non-compliant' (J038A), then a value in the data element 'country of origin', different from 'XX', 'AA', 'EU', 'XC', 'XD', 'XE' must be reported. From warning to error message in 2026.
New BR (CHEMON96)	Warning	Quality requirement	If the result is VMPR (is_vet=1) and 'programme type' (progType) is 'Official (National) programme' (K005A), then 'sampling strategy' (sampStrategy) can only be equal to 'Objective sampling' (ST10A), 'Selective sampling' (ST20A), 'Suspect sampling' (ST30A) or 'Other' (ST90A). From warning to error message in 2026.
New BR (CHEMON97)	Warning	Quality requirement	If the result is reported for pesticides (is_pest=1), contaminants (is_occ=1), additives (is_add=1) or flavourings (is flav=1) and programme type (progType) is 'Official (National) programme' (K005A)', then sampling strategy (sampStrategy) can only be equal to 'Objective sampling' (ST10A), 'Selective sampling' (ST20A) or 'Suspect sampling' (ST30A). From warning to error message in 2026.
New BR (CHEMON98)	Warning	Quality requirement	If the result is reported for contaminants (is_occ=1) and related to control plans, therefore, linked to Commission Delegated Regulation (EU) 2022/931 and Implementing Regulation (EU) 2022/932 (progLegRef N375A),

Change	Type of change	Reason for change	Details
			then programme type (progType) can be only 'Official (National) programme' (K005A) or 'Official (National and EU) programme' (K018A) or 'Official (National) programme for Third Country Import' (K038A). From warning to error message in 2026.
Updated list of reportable Programme type (progType) codes linked to all data domains		Quality requirement	Programme type (progType) 'Other Combination of several programmes' (K014A) and 'Control plan for food of animal origin entering the Union according to Regulation (EU) 2022/932' (K039A) are excluded from Table 2.

2 SSD2 data model elements

The focus of this document is on all the mandatory and optional elements required for the preparation of charts and tables used in National Reports, EU Annual Reports, online reports of monitoring data and the elements needed to perform exposure assessments. SSD2 elements other than those described in this document can be reported at the discretion of the data provider. For food safety incidents or specific studies to investigate factors which may affect the levels of a hazard in tested food items, there may be a requirement to complete additional elements (e.g. production dates, hazard-specific product descriptions, information on production site hygiene classification/biosecurity level). These study-specific mandatory elements would be specified in the ad hoc study guidance or reporting instructions issued during the specification and planning phase and before the collection of any samples for these targeted data collections.

Specific elements of the SSD2 data model, including their references, are detailed below where implementation for chemical monitoring requires clarification. The references are taken from the original SSD2 guidance:

- Element code (e.g. B.01)
- Element label (e.g. sampling programme identification code)
- Element name (e.g. ProgID)

At the end of the present Guidance, Table 7 provides the full list of the SSD2 data elements along with e.g. their applicability and the concerned controlled terminology (catalogues).

B.01 Sampling programme identification code (progId) (mandatory)

Reporting countries should use this field to specify their own codes for national sampling programmes or projects under which the sample was taken. All samples analysed under a programme for a specific purpose or objective should be grouped under this code. One or more of these codes can be used to group samples where there is a requirement to compare actual samples taken against national sampling plans or in cases where ad hoc studies have been performed to address a food safety issue.

This element is not used in national or EU Annual Reports issued by EFSA. It is requested and considered useful mainly for the data providers and/or national organisations. For example, it allows EFSA and data providers to collaboratively identify samples taken for the same purpose; past experience has shown that during the data validation step if a specific progId was reported for a subset of samples, this made it easier for EFSA and national data providers to retrieve and check whether those results were correctly coded. Further, where specific risk-based monitoring schemas are defined under the implementing acts as per the requirements of Regulation (EU) No 625/2017, the progId would make it possible to, for example, identify the samples under these schemas. EFSA has provided this element in the MicroStrategy validation dashboard so that the details of all samples reported with a given progId can be filtered and visualised.

A country that does not use progId can simply provide a default value for all records, considering that there are no restrictions on the values used as long as they are within the size limit that is set to 100 characters.

Example	XML
A default Lithuanian national programme identifier to group all samples taken according to the national plans intended to fulfil the VMPR monitoring	<progId>LT_2019_VMPR</progId>
Total Diet Study conducted in Slovakia in 2016	<progId>SK_2016_TDS</progId>
National pesticide monitoring programme in France in 2018	<progId>FR_2018_NPMP</progId>
Ad hoc Italian national programme on fipronil residues in poultry products	<progId>IT_2018_FIPRONIL_POULTRY</progId>
Portuguese sampling programme to identify all samples taken in 2020 to detect the presence of mineral oils	<progId>PT_Mineral_oils_2020</progId>
Finnish results on the occurrence of sweeteners in food	<progId>FI 2021_sweeteners</progId>
Results to identify the VMPR Romanian National risk-based control plan for third country imports	<progId>RO_2023_VMPR_Plan3</progId>

B.02 Programme legal reference (progLegalRef) (mandatory)

This mandatory data element is used to specify the legal framework under which the sample analysis was undertaken.

It is also required in a harmonised data collection to support the separation of analytical results into the relevant National and Annual Reports prepared by EFSA.

This data element is repeatable; this allows multiple values reporting in order to enable the identification of samples analysed for substances falling under more than one legal framework. In particular, results that should be included in more than one annual/national report or addressed in EFSA data analysis related to results from different residue domains, should be reported with multiple progLegalRef.

It is also possible to report the legal framework at the result level rather than at the sample level whenever the sample contains analysis performed for different purposes.

Codes to report the progLegalRef can be selected from the LEGREF catalogue using the *ChemMonLegRef* hierarchy. Values in this catalogue are marked as being applicable to the different domains by attribute in the catalogue. This attribute is used to select results to be included in National and Annual Reports, or to be used for exposure assessment and data analysis. It is visible through the catalogue browser and has been summarised, for convenience, in Table 12 of this document.

For the results reflecting the VMPR National Control Plans of substances in group A3b, which according to Regulation (EU) 2022/1644 are not authorised as veterinary medicinal products but that have a Maximum Residue Level (MRL) or default MRL of 0.01 mg/kg under the pesticide residue legislation, the following applies:

- If the validation is to be done according to the pesticide residue domain, the progLegalRef to be used is the combination of 'N371A$N027A' for VMPR and pesticides, respectively. The combination of sampling strategy and programme type

should be the one that reflects the VMPR National Control Plan as reflected in Table 2.

- If the validation is done according to the VMPR domain only, the progLegalRef to be used is 'N371A', and therefore only reported to VMPR as reflected in the Table 2 sampling strategy and programme type combinations.

Example	XML
For pesticide residues: code to be used for samples of food products defined in Annex I of Regulation (EC) No 396/2005 (processed and unprocessed products) taken as part of the EU-coordinated programme (EU MACP) defined in Article 29 and in Regulation (EU) 2021/1355[3]. Both pieces of legislation are covered by the existing progLegalRef code=N027A.	<progLegalRef>N027A</progLegalRef>
Baby food samples were collected under Directive 2006/125/EC, or Regulation (EC) 2016/127. Each paramCode reported will fall under its corresponding domain. If a given paramCode belongs to pesticide and contaminant domains, that result will be taken for the pesticide Annual Report output, as well as for contaminant covering baby food outputs.	<progLegalRef>N028A</progLegalRef> or <progLegalRef>N318A</progLegalRef>
Samples taken under Regulation (EU) 2022/1646, the legislative framework for the control of VMPR and other residues in samples of animal origin. This is the only code to be selected (alone or in combination with other codes, e.g. in combination with code N027A for the pesticide residue monitoring activities) in order to flag that the sample was taken according to the three different plans intended to fulfil the legal requirements of the Regulation.	<progLegalRef>N371A</progLegalRef>
Samples taken under Regulation (EC) 1333/2008 on food additives.	<progLegalRef>N112A</progLegalRef>
Samples where results were taken to assess compliance against the maximum levels for certain contaminants in foodstuffs in Regulation (EU) 2023/915.	<progLegalRef>N379A</progLegalRef>
Samples where results were taken to assess compliance against Member States' control plans as regards contaminants in food, according to Regulations (EU) 2022/932 and 2022/931.	<progLegalRef>N375A</progLegalRef>
Chemical elements tested for in animal organs that would be included in the VMPR Annual Reports and are relevant for reporting chemical contaminants.	<progLegalRef>N371A$N379A</progLegalRef>
Food samples taken to simultaneously fulfil the legal requirements laid down in both Regulation 2022/1646 and Regulation 396/2005 (i.e. milk, eggs, honey), which should be considered in both the VMPR and in pesticide national/EU Annual Reports.	<progLegalRef>N371A$N027A</progLegalRef>
Suspect or targeted samples taken at border inspection under Regulation (EU) 2019/1793.	<progLegalRef>N317A</progLegalRef>
Samples taken under Regulation (EC) 1334/2008 on food flavourings.	<progLegalRef>N113A</progLegalRef>

B.03 Sampling strategy (sampStrategy) (mandatory)

This element allows the classification of samples according to the sampling methodology applied. It is important that samples taken in a targeted or suspect way are analysed separately from those taken on a random basis.

For VMPR National and Annual Reports, all results should be reported with sampling strategies 'Objective', 'Target sampling' or 'Suspect sampling'. The sampling strategy 'Other' should be used to transmit results that are not considered in the VMPR National Control Plan as set up by Regulation (EU) 2022/1646.

For PPP domain, samples falling under the EU MACP should be reported with sampling strategy 'objective sampling' (ST10A).

Codes can be selected from the SAMPSTR catalogue.

Example	XML
For samples that were taken as surveillance samples (random sampling), e.g. for the EU-coordinated pesticides monitoring programme or samples that were selected without specific targeting towards products or producers likely to be non-compliant or occurrence of chemical contaminants in food and feed (e.g. dioxins) or surveillance samples taken to fulfil the requirements of the VMPR national randomised surveillance plan for production in the Member States (Plan 2) (Objective sampling)	<sampStrategy>ST10A</sampStrategy>
Risk-based sampling designed to assess compliance with legislation (e.g. samples under national programmes with the aim of detecting unlawful use or controlling compliance against legal limits laid down in legislation). Either domestic or non-domestic products (Selective sampling/targeted sampling). This is the code to be used when reporting samples taken under national programmes under Regulation (EU) 2021/1355 for pesticide residues. This is also the code that is typically used to report samples taken to fulfil requirements of the VMPR national risk-based control plan for production in the Member States and for third-country imports as per Regulation (EC) No 2022/1646 (Plan 1 and Plan 3). The same code shall be used also for the official controls as regards contaminants in foods.	<sampStrategy>ST20A</sampStrategy>
Risk-based sampling targeting specific producers repeatedly reporting non-compliance, e.g. to enforce the provision of samples taken after Rapid Alert System for Food and Feed (RASFF) notifications or follow-up enforcement samples (Suspect sampling). Samples taken for reasons of suspicion or due to enhanced surveillance, e.g. under emergency measures at import. These samples are not considered in the EFSA exposure assessments. Must be used when reporting samples taken under Regulation (EU) 2019/1793.	<sampStrategy>ST30A</sampStrategy>

Example	XML
Samples analysed for VMPR that were collected in the framework of monitoring programmes developed under national legislation, which go beyond the programme as per Regulation (EU) 2022/1646.	<sampStrategy>ST90A</sampStrategy>

B.04 Programme type (progType) (mandatory)

This element is used to distinguish samples taken as part of EU control programmes and other sampling programmes.

For PPP domain, samples falling under the EU MACP should be reported using PRGTYP 'K009A'. When reporting samples falling under the MANCP and taken in the EU market, please code the sample with PRGTYP 'K005A'. If there is a need to use the same sample for other domain programmes, PRGTYP 'K018A' can be used, as long as the sample strategy is used in accordance with Table 2. When samples are taken at border, if the sample falls under the EU increased control programme on imported food of non-animal origin (Regulation (EU) 2019/1793) use K019A. Otherwise, K038A for all other import controls.

Codes can be selected from the PRGTYP catalogue.

Example	XML
Samples taken that are part of a programme which is designed and coordinated at a European level, e.g. as part of an EU MACP as defined in Article 29 of Regulation (EC) No 396/2005.	<progType>K009A</progType>
Samples taken that are part of a programme which is designed and coordinated at a national level (e.g. Regulation (EU) 2021/1355, 2022/932).	<progType>K005A</progType>
Samples taken that are part of both an EU MACP and national programme. For pesticides, this code should also be used for samples where the analytical scope is wider than the pesticide/crop combination listed in the EU MACP (i.e. more pesticides analysed in an EU MACP commodity). This is the code to be used when reporting VMPR results under the national risk-based and randomised surveillance plans for production in the Member States (Plan 1 and Plan 2). For contaminants, this code should also be used when reporting results related to the control plan for food placed on the Union market.	<progType>K018A</progType>
This code is used to describe samples that were taken in the context of increased control programmes on imported food, e.g. taken under Regulation (EU) No 2019/1793.	<progType>K019A</progType>
Samples taken under the national risk-based control plan for third-country imports for VMPR (Plan 3) , but also pesticides if different from K019A. Samples taken under the national risk-based control plan for third-country imports for contaminants according to 2022/932 regulation.	<progType>K038A</progType>
Occurrence data produced in total diet study (TDS).	<progType>K010A</progType>

- The table below (Table 2) summarises the constraints for coding sampling strategy, programme type and programme legal reference when reporting data for the pesticides, VMPR and contaminants domains. The constraints are implemented as BR. All other combinations are acceptable in the other domains.

Table 2: Combinations of codes to be used to describe the type of sampling programmes/programme legal reference/sampling strategy for pesticide residues, VMPR, contaminants, food additives, and food flavourings data domains.

progLegalRef	**N027A**			**N028A/ N318A**	**N371A**				**N129A, N379A, N323A, e.t.c**	**N375A**		**N112A**	**N113A**	**N317A**
Programme Legal Reference	(Regulation 396/2005) (Regulation (EU) 2023/731)	(Regulation 396/2005) (Regulation 2021/1355)		(Regulation 2016/12) Regulation 2016/128 & Directive 2006/125/EC)	(Regulation 2022/1646 and Regulation 2022/1644)				(Regulation 178/2002), (Regulation 2023/915), (Regulation EU 625/2017)	(Regulation 2022/932 and 2022/931)		(Regulation 2008/1333)	(Regulation 2008/1334)	(Regulation 2019/1793)[36]
Type of sampling programme (progType)	Pesticide residues: EU-coordinated programme	Pesticide residues: National programmes		Pesticide residues: baby food	VMPR - Plan1	VMPR - Plan2	VMPR - Plan3	VMPR - Other Control activities	Contaminants	Contaminants		Food additives	Food flavourings	Increased control on imported food of non-animal origin
			Control at borders (animal &non-animal origin)							Control plan: food placed on the Union market	Control plan: food of animal origin entering the Union			
K005A		ST10A		ST10A		ST10A			ST10A	ST10A		ST10A	ST10A	
Official (National) programme		ST20A		ST20A	ST20A				ST20A	ST20A		ST20A	ST20A	
		ST30A		ST30A				ST30A	ST30A	ST30A		ST30A	ST30A	
								ST90A						
K009A Official (EU) programme	ST10A			ST10A					ST10A			ST10A	ST10A	
K018A	ST10A	ST10A		ST10A		ST10A			ST10A	ST10A		ST10A	ST10A	
Official (National and EU) programme		ST20A		ST20A	ST20A				ST20A	ST20A		ST20A	ST20A	
								ST30A						
								ST90A						

[36] Please be aware that Regulation 2019/1793 (N317A) impacts pesticides residues, contaminants, and food additives/food flavourings domains.

progLegalRef	N027A			N028A/ N318A	N371A				N129A, N379A, N323A, e.t.c	N375A		N112A	N113A	N317A
Programme Legal Reference	(Regulation 396/2005) (Regulation (EU) 2023/731)	(Regulation 396/2005) (Regulation 2021/1355)		(Regulation 2016/12) Regulation 2016/128 & Directive 2006/125/EC)	(Regulation 2022/1646 and Regulation 2022/1644)				(Regulation 178/2002), (Regulation 2023/915), (Regulation EU 625/2017)	(Regulation 2022/932 and 2022/931)		(Regulation 2008/1333)	(Regulation 2008/1334)	(Regulation 2019/1793)[36]
Type of sampling programme (progType)	Pesticide residues: EU-coordinated programme	Pesticide residues: National programmes	Control at borders (animal &non-animal origin)	Pesticide residues: baby food	VMPR - Plan1	VMPR - Plan2	VMPR - Plan3	VMPR - Other Control activities	Contaminants	Contaminants: Control plan: food placed on the Union market	Contaminants: Control plan: food of animal origin entering the Union	Food additives	Food flavourings	Increased control on imported food of non-animal origin
K019A EU increased control programme on imported food														ST30A
K038A Official (National) programme for Third Country Import			ST10A	ST10A					ST10A			ST10A	ST10A	
			ST20A	ST20A			ST20A		ST20A		ST20A	ST20A	ST20A	
			ST30A	ST30A				ST30A	ST30A		ST30A	ST30A	ST30A	
								ST90A						

Please, consider the following for VMPR for Table 2 including the descriptions of the flags assigned to each plan:

- Plan 1 refers to the national risk-based control plan for production in the Member States. A sample is flagged as Plan 1 if programme type (progType) is equal to "Official (National) programme" (K005A) or "Official (National and EU) programme" (K018A) and sampling strategy (sampStrategy) is equal to "Selective sampling" (ST20A) and the sample is considered as unprocessed;
- Plan 2 refers to the national randomised surveillance plan for production in the Member States. A sample is flagged as Plan 2 if programme type (progType) is equal to "Official (National) programme" (K005A) or "Official (National and EU) programme" (K018A) and sampling strategy (sampStrategy) is equal to "Objective sampling" (ST10A) and the sample is considered as unprocessed;
- Plan 3 refers to the national risk-based control plan for third-country imports. A sample is flagged as Plan 3 if programme type (progType) is equal to "Official (National) programme for Third Country Import" (K038A), sampling strategy (sampStrategy) is equal to "Selective sampling" (ST20A) and sampling point (sampPoint) is equal to "Border Control Posts" (E010A);
- Other refers to any additional sample taken not to be considered towards the minimum sampling frequencies set up in Regulation 2022/1646, mainly suspect samples and any other sample taken beyond the mentioned regulation (with the use of ST90A). Any sample with a combination not covered by the three plans, including processed products with combination of Plan 1 or Plan 2, will not have a flag assigned and will automatically be categorised as Other.

In relation to contaminants' control plan results, and in line with Table 2, please take into consideration the descriptions of the flags assigned to results for:

- the control plan for food placed on the Union market, programme type (progType) is equal to "Official (National and EU) programme" (K018A) or "Official (National) programme" (K005A) and sampling strategy (sampStrategy) is equal to "Selective sampling" (ST20A);
- Samples taken under the national risk-based control plan for third-country imports for contaminants, programme type (progType) is equal to "Official (National) programme for Third Country Import" (K038A), sampling strategy (sampStrategy) is equal to "Selective sampling" (ST20A) and sampling point (sampPoint) is equal to "Border Control Posts" (E010A).

In relation to pesticide control plan results, and in line with Table 2, please take into consideration the descriptions of the flags assigned to results for:

- EU MACP refers to the randomised surveillance EU multi-coordinated annual control programme plan by EU Member States. A sample is flagged as EU MACP if programme type (progType) is equal to "Official (EU) programme" (K009A) or "Official (National and EU) programme" (K018A) and sampling strategy (sampStrategy) is equal to "Objective sampling" (ST10A) and the sample is one of the 12 listed in Annex I – Part A or baby food listed in Annex II, recital 2 of the EU MACP Regulation (EU) 2023/731.
- MANCP refers to the national risk-based control plan under Regulation (EU) 2021/1355 in the EU Member States. A sample is flagged as MANCP if programme type (progType) is equal to:

- "Official (National) programme" (K005A) and sampling strategy (sampStrategy) is equal to "Objective sampling" (ST10A), to "Selective sampling" (ST20A) or to 'Suspect sampling' (ST30A) or
- "Official (National and EU) programme" (K018A) and sampling strategy (sampStrategy) is equal to "Objective sampling" (ST10A) and is not one of the 12 commodities listed in the EU MACP Regulation (EU) 2023/731 or "Selective sampling" (ST20A) or
- 'Official (National) programme for Third Country Import' (K038A) and sampling strategy (sampStrategy) is equal to "Objective sampling" (ST10A), to "Selective sampling" (ST20A) or to 'Suspect sampling' (ST30A).

- EU increased control programme on imported food refers to risk-based control plan for third-country imports. A sample is flagged under this plan if programme type (progType) is equal to "EU increased control programme on imported food" (K019A), sampling strategy (sampStrategy) is equal to "Suspect sampling" (ST30A), sampling point (sampPoint) is equal to "Border Control Posts" (E010A) and the origCountry and sampMatCode are those listed in revised annexes of Regulation (EU) 2019/1793.

Based on Table 2, a number of examples is presented below displaying the proposed combinations of codes based on each scenario:

Example	**Combination of codes**
Randomised control plan result for food placed on the Union market; for a sample related to EU MACP for PPP	<progLegalRef>N027A</progLegalRef> & <progType>K009A</progType> & <sampStrategy>ST10A</sampStrategy>
Control plan result for food placed on the Union market; for a sample related to VMPR control Plan 1	<progLegalRef>N371A</progLegalRef> & <progType>K018A</progType> & <sampStrategy>ST20A</sampStrategy>
Control plan result for food placed on the Union market regarding Plan 2 of VMPR and MANCP for PPP; for a unique sample related to both domains	<progLegalRef>N027A$N371A</progLegalRef> & <progType>K018A</progType> & <sampStrategy>ST10A</sampStrategy>
Control plan result for food placed on the Union market related to contaminants' control plan	<progLegalRef>N375A</progLegalRef> & <progType>K018A</progType> & <sampStrategy>ST20A</sampStrategy>
Control plan result for food of animal origin entering the Union; for a sample related to Contaminants' control plan	<progLegalRef>N375A</progLegalRef> & <progType>K038A</progType> & <sampStrategy>ST20A</sampStrategy> & <sampPoint>E010A</sampPoint>

Example	Combination of codes
Control plan result for food of animal origin entering the Union; for a sample related to VMPR control Plan 3, national plan of Pesticides and Contaminants' control plan (food of animal origin entering the Union).	<progLegalRef>N371A$N027A$N375A</prog LegalRef> & <progType>K038A</progType> & <sampStrategy>ST20A</sampStrategy> & <sampPoint>E010A</sampPoint>

B.05 Sampling method (sampMethod) (optional)

This element is used to provide a reference to the legislation, protocol or other documentation describing the method of selecting samples from the food chain.

If reported, the sampling method codes can be selected from the SAMPMD catalogue.

Example	XML
Samples taken for the control of dioxins, dioxin-like PCBs and non-dioxin-like PCBs in certain foodstuffs according to Commission Regulation (EU) 2017/644	<sampMethod>N040A</sampMethod>
For samples taken in the context of Regulation (EC) No 396/2005 and according to Directive 2002/63/EC	<sampMethod>N009A</sampMethod>
For samples analysed for VMPR according to Regulation (EU) 2022/1644 and Regulation (EU) 2021/808	<sampMethod>N042A</sampMethod>
Samples where no standardised sampling methodology has been defined	<sampMethod>N020A</sampMethod>
Samples analysed for the presence of mercury in different samples of fish collected in different places (different batches) and put together before the analysis	<sampMethod>N031A</sampMethod>
Samples analysed for the presence of furan, 2-methylfuran and 3-methylfuran in food according to part B of the Annex to Commission Regulation (EC) No 333/2007[37]	<sampMethod>N011A</sampMethod>
Analytical results referring to pooled samples, can be reported either as 'pooled/batch' or 'pooled'	<sampMethod>N002A</sampMethod> or <sampMethod>N031A</sampMethod>

If the analytical result refers to 'pooled' samples, the code N002A or N031A ('pooled/batch' or 'pooled') has to be selected; in addition, in these latter cases, it is mandatory to report the two data elements 'sampUnitSize' and 'sampUnitSizeUnit' (see also paragraph on C03 and C04). A BR (CHEMON77) has been implemented to verify if these directions are

[37] Commission Regulation (EC) No 333/2007 of 28 March 2007 laying down the methods of sampling and analysis for the official control of the levels of lead, cadmium, mercury, inorganic tin, 3-MCPD and benzo(a)pyrene in foodstuffs. OJ L 88, 29.3.2007, p. 29–38.

respected. Reporting these two data elements becomes mandatory from 2025 in case of pooled samples.

B.06 Sampler (sampler) (mandatory)

This element identifies the person or persons responsible for taking the sample.

Codes can be selected from the SAMPLR catalogue.

Example	XML
Samples taken in the context of an official control; this is the case for the samples taken in the context of Regulation 396/2005 and Regulation (EU) 2022/1646 for pesticides and VMPR residues or feed additives, respectively	<sampler>CX02A</sampler>
Samples taken by food business operators	<sampler>CX01A</sampler>

B.07 Sampling point (sampPoint) (mandatory)

This element describes the point in the food chain where the sample was taken.

Codes can be selected from the SAMPNT catalogue.

The catalogue used in this data element is based on a list of terminology developed by Eurostat. The list details the activities of establishments at different points in the food chain. The list of activities of the sampling points proposed is subdivided into three hierarchy levels, the first of which is intended to identify the main stages in the production/consumption of food.

	Example	XML
Primary production	Milk samples taken at a farm	<sampPoint>E100A</sampPoint>
Manufacturing	Milk samples taken at the level of the dairy industry before the bulk tanker has discharged	<sampPoint>E301A</sampPoint>
Distribution	Samples taken at wholesale and retail sale	<sampPoint>E520A</sampPoint>
Packaging	Eggs taken in the collection/packing centres (if it is possible to identify the source farm)	<sampPoint>E600A</sampPoint>
Border Control Posts	Samples classed as import samples; this code shall be selected for reporting import sampling for VMPR Plan 3 and contaminants monitoring	<sampPoint>E010A</sampPoint>

When EFSA generates the VMPR reports the specific 'SAMPNT.vmprClasses' hierarchy may be applied, which classifies the sampPoint codes into three main classes: 'Slaughter', 'Farm' and 'Other'.

C.01 Sampling event identification code (sampEventId) (optional)

The sampEventId is the unique identifier that represents the sampling unit extracted at a certain time from the sampled population. This identifier can be reported when multiple samples are taken from a single sampling unit at a point in time. The sampling unit could

be a batch, an animal, a flock, a herd or a holding. The sampling unit type can optionally be reported in C.02 sampUnitType and C.05 sampUnitIds.

If a value is not reported in sampEventId, this data element will automatically be substituted by EFSA with the sampId during the data submission process.

For pesticide residues, this element is not used when counting the number of samples for the creation of reports and can be left empty.

In the context of Regulation (EU) 2022/1646 control activities (VMPR residues), if two samples are e.g. taken from a single pig at slaughter (one sample of kidney and one of muscle) the two samples should be reported with the same sampEventId and in the VMPR national sampling plan will correspond to one pig (sampEventId=CY2017X001 in the example below). In the below table an example is provided in which two samples (please note the two different sampId) from the same animal (a pig) are correctly reported with regard to the same sampEventId and will be both classified in the VMPR Product Category 'Pigs'.

sampEventId	sampId	sampMatCode	sampMatText	sampUnitType	sampUnitId	paramCode	resId	evalCode	evalInfo.com
CY2017X001	CY2021X1/K	A01YM	Pig kidney	G199A (animal)	IT123	RF-000005 81-VET	CY2021R01	J002A	Confirmatory test in kidney
CY2017X001	CY2021X1/M	A01RG	Pig fresh meat	G199A (animal)	IT123	RF-000005 81-VET	CY2021R02	J002A	Confirmatory test in muscle was below the MRL of 100 µg/kg

A BR checks if two or more samples reported with different sampId but belonging to the same sample event (same sampEventId) are referring to the same animal species.

C.02 Sampling unit type (sampUnitType) (optional)

This element describes the sampling unit defined in the sampling method. It can be used to indicate whether the sample contains material from multiple individuals or lots. This is used in the example in Section C.01 to indicate that the two samples were taken from one pig.

Codes can be selected from the SAMPUNTYP catalogue.

Example	XML
Milk samples taken at the level of the dairy industry before the bulk tanker has discharged	<sampUnitType>G202A</sampUnitType>
Single samples (e.g. one animal or one fruit) which are not representative of a lot/batch	<sampUnitType>G203A</sampUnitType>

C.03 Sampling unit size (sampUnitSize) and C.04 Sampling unit size unit (sampUnitSizeUnit) (optional)

The size of the sampling unit and its unit of measurement can be reported using the optional fields sampUnitSize and sampUnitSizeUnit, respectively.

The optional data elements sampUnitSizeUnit and sampUnitSize are used to report how a sample is created before the analysis, providing information on the unit of measurement (e.g. 'Unit', 'Litre', etc.) and the amount (a number) linked to the unit provided, respectively.

Example	XML
An individual rice sample made up of 300 grams that have been collected and analysed for mycotoxins should be reported with the sampUnitSizeUnit G148A='Gram'	<sampUnitSizeUnit>G148A</sampUnitSizeUnit> <sampUnitSize>300</sampUnitSize>

However, in the specific case of pooled samples (please also refer to Section B.05 on 'Sampling method'), the element sampUnitSizeUnit must be reported with the code G005A ('Unit'), while the element sampUnitSize must report the number of single samples pooled. The system returns an error message if this BR is not followed.

Example	XML
A pooled sample made up of five units of fish collected in different points and combined before the sample is analysed for mercury levels must be reported with the sampUnitSizeUnit G005A='Unit'	<sampUnitSizeUnit>G005A</ sampUnitSizeUnit> <sampUnitSize>5</sampUnitSize>

D.01 Sample taken identification code (sampId) (mandatory)

Each sample must be identified by a unique sample identification reference not longer than 100 characters.

Where multiple analytical results are reported for a sample (e.g. results for different residues analysed in the same sample using multiresidue methods and/or several single residue methods), the same sampId must be used for all the results. Business rule, GBR2, applies to ensure that.

The sample identification code is used to determine the overall status of the sample (e.g. compliant/non-compliant against the MRL) based on all the results reported for the substances/marker residues measured in the sample. The sample identification code is used to enforce the total number of samples taken by MS in accordance with the requirements set in different Regulations.

Example	XML
Unique identifier for sample from 2021 in Italy	<sampId>IT_2021_AS000023456</sampId>

D.03 Country of sampling (sampCountry) (mandatory)

This element is reported using the ISO 3166-1-alpha-2 country codes for the country where the sample was taken. Codes can be selected from the COUNTRY catalogue.

Where samples are analysed in a different country than the country of sampling (e.g. where a lab is located outside of the sampling country) this element is needed to correctly connect the results to the sampling country.

For pesticide residues, the sampCountry and the reporting organisation country must be the same (CHEMON58). The pesticides Annual Report will include records with sampCountry being one of the EU countries, Norway or Iceland. Samples taken in the overseas territories of EU countries must be reported as sampCountry of the corresponding EU country, e.g. samples taken in Guadeloupe must be reported as sampCountry=France.

Country of origin cannot be unknown due to EU legislation where traceability of goods placed on the market is a must. Therefore, EFSA stresses the importance of collecting this information and submitting it to EFSA. However, if some data providers are not capable to have this information, the following table (Table 3) will be used to recode unspecific country codes. In the case of non-compliant results, codes listed in Table 3 cannot be used.

Table 3: Reportable unspecific country codes for sampCountry and origCountry

Code description	Code	Use for pesticide residues reporting (Annual Reports)	
		sampCountry	origCountry
EEA (European Economic Area)	AA	Excluded	Unknown (XX)
Non-EEA	XC	Excluded	Unknown (XX)
Non-domestic, import	XD	Excluded	Unknown (XX)
Non-European Union	XE	Excluded	Unknown (XX)
Unknown	XX	Excluded	Unknown (XX)

Example	XML
Sample taken in Greece	<sampCountry>GR</sampCountry>
Sample taken in Northern Ireland[38]	<sampCountry>XI</sampCountry>

D.06 Year of sampling (sampY), D.07 Month of sampling (sampM), D.08 Day of sampling (sampD) (mandatory)

The complete date on when the sample was taken is mandatory. The information on the date of sampling is required to check the sample compliance against legal limits applicable at the time of sampling and to select results for inclusion in the Annual Reports.

Samples taken in any year can be transmitted to the EFSA sDWH when the data provider has the data ready. However, in line with the European Commission (EC) interpretation, each EU VMPR and pesticides reports should only include samples taken in the specific calendar year, which runs from January to December, and submitted within agreed deadlines. In relation to samples for contaminants, food additives, and food flavourings,

[38] In accordance with the Agreement on the withdrawal of the United Kingdom of Great Britain and Northern Ireland from the European Union and the European Atomic Energy Community, and in particular Article 5(4) of the Windsor Framework (see Joint Declaration No 1/2023 of the Union and the United Kingdom in the Joint Committee established by the Agreement on the withdrawal of the United Kingdom of Great Britain and Northern Ireland from the European Union and the European Atomic Energy Community of 24 March 2023, OJ L 102, 17.4.2023, p.87) in conjunction with section 24 of Annex 2 to that Framework, for the purposes of this Regulation, references to Member States include the United Kingdom in respect of Northern Ireland

reporting of historical data is possible. Therefore, data providers can include samples taken from previous years.

Example	XML
Friday 16 February 2019	<sampY>2019</sampY> <sampM>02</sampM> <sampD>16</sampD>

D.11 Original sample identifier (sampInfo.origSampId) (optional)

This element can be used to indicate that subsequent sampling and testing is linked to an original non-compliant or contaminated sample and offers the possibility to separate samples taken to support a specific investigation from routine monitoring samples.

In order to make explicit a connection between two samples where one is feed known to have been given to an animal and where the same animal is the source of a food sample, data providers must use sampInfo.origSampId to connect the two samples. This applies to insects as food and the substrates they are fed when both are analysed for chemicals. Similarly, an explicit connection is relevant for follow-up samples, which originate from a positive control sample.

E.02 Coded description of the matrix of the sample taken (sampMatCode) (mandatory)

Samples in FoodEx2 must be encoded according to the guidance for the harmonised use of the FoodEx2 system and the quality control of the codes (EFSA, 2015). To describe the food or feed product or matrix sampled, the code reflecting the lowest level of detail is normally used (e.g. select the code for tomatoes instead of the code for Solanaceae).

FoodEx2 codes can be selected from the MTX catalogue using the reporting hierarchy, which includes base terms for food, feed and non-food animal matrices. If the sample is not yet declared/intended for use as either food or feed, the sample must be reported as food. To generate the national/Annual Reports and classify samples according to legal limits or legislative groups, specific analysis hierarchies (see Table 11) are defined using the information provided in sampMatCode (Base terms and facets – both implicit and explicit).

FoodEx2 requires that a base term is always supplied. If the implicit facets are enough to characterise the matrix sampled (see example below), only a base term needs to be reported. Where the base term chosen has implicit facets, reporting of explicit facets should only be additional ones not already covered by the implicit facets.

VMPR samples coding

Note that for VMPR monitoring, two facets must always be present: the source (F01 facet) and the part nature (F02 facet) (except for the special case of feed and water samples coding and processed-composite food as detailed in the paragraphs below). In most cases, these are already pre-assigned in the codes present in the reporting hierarchy as implicit facets when the FoodEx2 browser is used for coding the matrix samples (an exception to this is, for example, the case of non-food base terms). If reported, the explicit facets supersede the implicit facet already pre-assigned in the FoodEx2 selected code when the EFSA categorisation of the matrices according to the VMPR legislation is applied to

categorise the matrix in the EFSA national and annual EU reports. The F01 source facet code is not implicitly pre-assigned in the codes present in the reporting hierarchy referring to raw primary commodities (RPC) derivatives or 'Processed' products; in this case the F01 should be added by the data provider. For example, if the code A031X='Hen egg mixed whole, dried' or A02PJ='Milk powder' is selected, then an F01 code shall be reported (e.g. F01.A057Z='*Gallus* (chicken) (as animal)' for the hen dried egg samples or F01.A057E='Cattle (as animal)' for the dried milk).

Wild animal VMPR samples coding

To encode samples related to wild animals, the code A07RY='Wild, gathered or hunted' from facet F21 on the production method list must always be added to the base term by the data provider (explicit facet); this is particularly important to code wild game samples under the VMPR domain.

Regulation (EU) 2022/1644 and Regulation (EU) 2022/1646 no longer consider Wild Game as one of the VMPR Product Category except in the case of results of the national risk-based control plan for third countries. The samples will still be classified as Wild Game and will be included in the VMPR National Report. However, these samples will not be considered for the VMPR EU Annual Report except for results of the mentioned plan.

Feed and water VMPR samples coding

Samples of feed and water given to animals should be coded as described in this paragraph. When a feed sample is analysed, the sampMatCode must be selected from the feed section of the reporting hierarchy of the MTX catalogue; the textual description of each base term under the feed section contains the wording '(feed)' (e.g. for the code A05CR='Barley grain (feed)').

To report feed samples, the sampMatCode must always contain an implicit or explicit facet F23 *target-consumer* code to characterise the species for which the feed was intended. Thus, if the specific explicit facet F23 is not reported and the implicit facet F23 is the generic 'Animal feed' ('A07TV') the sample will be classified in the VMPR Product Category 'Other'. Instead, if an explicit facet F23 specific to an animal species is reported, then the sample will be classified in a specific VMPR Product Category other than the Category 'Other'.

If the peculiar cases for which the intended target-consumer species for the feed is not known or if the feed is intended and given to animals of different animal species, then the facet code F23 does not need to be selected and explicitly reported. In the latter cases, please only select a code among the first 12 feed categories that already implicitly contains the F23 code 'A07TV'='Feed sample'; the sample will always be classified in the VMPR Product Category 'Other'.

In addition, please be aware that if more facet F23 codes are explicitly reported (and refer to different animal species i.e. they are in conflict) in the final sampMatCode for the very same sample, then the analytical result reported for this sample will not be included in the VMPR reports created by EFSA because the sample will be classified in the VMPR Product Category 'Other'.

Example of sampMatCode reported for feed	Implicit and explicit facets code in the reported sampMatCode	Note
A0BBB#F23.A07VC Base term selected: A0BBB=‘Barley, roasted (feed)’	Implicit facets: F02: Part-nature= ‘Feed-related (as part nature)’ F23: Target-consumer=’Animal feed’ Explicit facet code added to the base term: F23: Target-consumer=A07VC=’Pig feed’	Correct coding; based on the explicit F23 facet code added to the base term ABBB this sample will be classified in the VMPR Product Category ‘Pigs’
A0BBB#F23.A07VC$F23.A18EH Base term selected: A0BBB= ‘Barley, roasted (feed)’	Implicit facets: F02: Part-nature= ‘Feed-related (as part nature)’ F23: Target-consumer=’Animal feed’ Explicit facet codes added to the base term: F23: Target-consumer=A07VC=’Pig feed’ F23: Target-consumer=A18EH=’Chicken feed’	This coding refers to a sample of feed that is fed to two different species (pigs and chicken), therefore it will be classified in the VMPR Product Category ‘Other’
A0BTL#F23.A07VC Base term selected: A0BTL=‘Turkeys/Complete feed (feed)’	Implicit facets: F02: Part-nature= ‘Feed-related (as part nature)’ F23: Target-consumer=’Turkey feed’=A18EM Explicit facet code added to the base term: F23: Target-consumer=A07VC=’Pig feed’	This sampMatCode is incorrect, i.e. presumably due to a coding mistake; the F23 codes are contradictory as they refer at the same time to feed given to two different animal species (turkey and pigs). If the coding is not to be amended, this sample will be classified in the VMPR Product Category ‘Other’, not in the group ‘Poultry’ nor in ‘Pigs’
A0BBB Base term selected: A0BBB= ‘Barley, roasted (feed)’	Implicit facets: F02: Part-nature= ‘Feed-related (as part nature)’ F23: Target-consumer=’Animal feed’	Acceptable coding; however, this sample will be classified in the VMPR Product Category ‘Other’ because the only facet F23 is the implicit A07TV=’Animal Feed’ and it does not refer to a specific animal species

The codes under the feed section are grouped into 14 categories (e.g. ‘Cereal grains and products derived thereof (feed)’). If a feed base term is selected from one of the first 13 categories, which implicitly contain the facet F23 target consumer code A07TV=‘Animal feed’ which does not refer specifically to the target consumer species, then an explicit facet code for F23 target consumer must be selected by the data provider. The facet code to be selected must be one of the codes listed under the facet target consumer code A07TX= ‘Feed for animals’ (e.g. code A07VE= ‘Rabbit feed’). The implicit and/or explicit facet F23 target consumer will be used by EFSA to classify the sample results in one of the VMPR

legislative matrix categories used in the VMPR reports (bovines, pigs, sheep & goats, horses, poultry, rabbit, farmed game, wild game, aquaculture, milk, eggs and honey).

If the last category of feed codes in the reporting hierarchy is selected (i.e. 'Compound feed (feed)'= A0BT0), then the code already implicitly contains a facet code F23 designating the target-consumer species and the data provider doesn't need to report an explicit facet F23 term since the analytical result will automatically be included in the VMPR Annual Report in the appropriate VMPR legislative matrix category. In some cases (e.g. A0BV0= 'Unspecified Complete Feed'), it is not possible to specify a species in the implicit facets so an explicit facet describing the target-consumer is needed if the record is intended for inclusion in an Annual Report (e.g. VMPR).

Category in feed hierarchy	Feed example	Implicit facets	XML
#1	'Barley, roasted (feed)' used for breeding pigs	F02: Part-nature= 'Feed-related (as part nature)' F23: Target-consumer='Animal feed'	<sampMatCode>A0BBB#F23.A07VC</sampMatCode> F23.A07VC is needed to allocate the record to species 'pigs'
#14	'Complementary feed (incomplete diet) (feed)' used for breeding pigs	F02: Part-nature= 'Feed-related (as part nature)' F23: Target-consumer='Animal feed' and 'Pig feed'	<sampMatCode>A0BV8</sampMatCode> Explicit F23 facet term is not needed to allocate the record to species 'pigs'

It should be noted that for the very particular cases where the feed base term implicitly contains an F23 facet 'Sheep and goat feed' (A07VF), it is always necessary to add one of the four codes grouped under the A07VF code. In particular, for goat feed samples, either 'Kids reared for reproduction or meat production feed' (code A18EX) or 'Dairy/reproductive goat feed' (code A18EX) should be specified; for sheep feed samples, either 'Lambs reared for reproduction or meat production feed' (code A18ET) or 'Dairy/reproductive sheep feed' (code A18EV) should be specified.

When samples of water given to the farmed animals are to be coded, please select from the list of terms in 'Non-food matrices' from the reporting hierarchy one of the codes in the 'Environment' group. Since these terms do not contain an implicit facet for the target consumer species, a code for the F23 facet must be added.

Water example	XML
Water from a 'Watering place for animals' for cattle	<sampMatCode>A0F7N#F23.A07TY</sampMatCode>

Non-food matrices VMPR samples coding

When non-food matrices have been analysed (e.g. urine or retina or hair samples from pig), the default base term A0C60='Non-food animal-related matrices' should be used. In

such cases, it is important to include an explicit F01 'Source' facet code to characterise the source animal species as well as an F02 'Part nature' to characterise the sample.

Example	MTX (foodEx2) code
Cow hair sample	<sampMatCode>A0C60#F02.A0ESP$F01.A057E</sampMatCode> Base term: Non-food animal-related matrices (A0C60) Part-nature facet: Hair as part-nature (A0ESP) Source facet: Cattle (as animal) (A057E)
Cow retina sample	<sampMatCode>A0C60#F02.A0ESJ$F01.A057E</sampMatCode> Base term: Non-food animal-related matrices (A0C60) Part-nature facet: Retina (as part-nature) (A0ESJ) Source facet: Cattle (as animal) (A057E)

New VMPR product categories: insects, reptiles and edible casings

Regulation (EU) 2022/1646 introduces three new VMPR product categories: insects, reptiles and casings.

The only four insects authorised as novel food in the EU for food production are *Tenebrio molitor*, *Locusta migratoria*, *Acheta domesticus* and *Alphitobius diaperinus*. Therefore, only those insects can be reported to EFSA. The aforementioned insects can be sampled and reported to EFSA as frozen/whole animal, dried and/or powdered.

For edible casings, the base term to be used is A0F1J. When including the source, the source commodity (F27 facet) must be manually inserted.

Example	MTX (foodEx2) code
Migratory locust powdered	<sampMatCode>A16XE#F01.A16VP$F28.A07LA</sampMatCode> Base term: Edible insect adults (A16XE) Source facet: Migratory locust (as animal) (A16VP) Process facet: Grinding/milling/crushing (A07LA)
Snakes' meat	<sampMatCode>A02LC</sampMatCode> This code includes the following implicit facets: Part-nature facet: Reptile meat (as part-nature) F02.A0EMJ Source facet: Snakes (as animal) F01.A04SS
Casings from adult sheep	<sampMatCode> A0F1J#F01.A0CDD$F27.A01ZQ</sampMatCode> Base term: Edible casings (A0F1J) Source facet: Sheep over 1 year (as animal) (A0CDD) Source Commodities facet: Sheep edible offal, non-muscle, other than liver and kidney (A01ZQ)

Processed product samples for VMPR

Annex III of Regulation (EU) 2022/1646 introduces the possibility of reporting processed products from the main raw product categories for samples gathered under the national risk-based control plan for third-country import (Plan 3).

The reporting of these samples might differ depending on the type of term (derivative, composite food simple, etc). In order to allow an easy mapping of the samples to the main VMPR legislative commodity groups, the facet F33 on legislative classes has been introduced. The codes to be used can be find under the parent term "Veterinary Medicinal Product Residues classes (Annex III – 2022/1646)", but only one code should be reported.

In order to code these samples, the rules of the catalogue must be followed. The addition of the facet F33 will automatically assign the sample towards one of the VMPR legislative commodity group. In case of a mixed sample (e.g. mix pork and beef), the data provider should decide towards which VMPR legislative commodity the sample should be counted by adding only one code for the facet F33.

Example	MTX (foodEx2) code
Canned meat mixed poultry	<sampMatCode>A024C#F04.A04DT$F04.A04ED$F33.A1ANV</sampMatCode> Base term: Canned meat (A024C) Ingredients facet = Chicken msm (A04DT) and Turkey msm (A04ED) Legislative classes facet = VR – Poultry (A1ANV)
Whey protein	<sampMatCode>A02PS#F33.A1ANY</sampMatCode> Base term: Whey protein (A02PS) Legislative classes facet = VR – Milk (A1ANY)
Mix cow/sheep hard cheese	<sampMatCode>A02ZH#F27.A02LV$F27.A02MC$F33.A1ANY</sampMatCode> Base term: Extra hard cheese (parmesan, grana type) (A02ZH) Source-commodities facet = Cow milk (A02LV) and Sheep milk (A02MC) Legislative classes facet = VR – Milk (A1ANY)
Pork spreadable cooked sausage	<sampMatCode>A025K#F04.A01RG$F04.A01VA$F04.A01XJ$F33.A1ANS</sampMatCode> Base term: Spreadable cooked sausages (A025K) Ingredients facet = Pig fresh meat (A01RG), Pig fat tissue (A01VA) and Pig liver (A01XJ) Legislative classes facet = VR – Pigs (A1ANS)
Smoked salmon	<sampMatCode>A02KF#F33.A1ANX</sampMatCode> Base term: Smoked salmon (A02KF) Legislative classes facet = VR – Aquaculture (A1ANX)
Egg powder	<sampMatCode>A031X#F33.A1ANZ</sampMatCode> Base term: Hen egg mixed whole, dried (A031X) Legislative classes facet = VR – Eggs (A1ANZ)
Chicken sausage	<sampMatCode>A024G#F33.A1ANV</sampMatCode> Base term: Fresh raw sausage (A024G) Legislative classes facet = VR – Poultry (A1ANV)
Beef sausage	<sampMatCode>A024G#F33.A1ANP</sampMatCode> Base term: Fresh raw sausage (A024G) Legislative classes facet = VR – Bovines (A1ANP)

Food additives and food flavourings samples coding

For additives and flavourings, two facets should always be present: the legislative category (F33 facet) and the physical-state (F03 facet) of the sample. In some cases, the two facets F33 'legislative category' and/or F03 'physical-state' are already pre-assigned in the

reporting hierarchy of the FoodEx2 browser. If the F33 and/or F03 facets are not implicitly assigned, it is highly recommended to be added. Note that the F33 is mandatory for the additive's domain.

Moreover, if the sample is formulated for infants (<12 months), the target-consumer facet (F23) should be added to the code if it is not implicitly assigned, specifying this information.

Example of sampMatCode reported for food additives and flavourings domains	Implicit and explicit facets code in the reported sampMatCode	Note
A03MX#F03.A06JL Base term selected: A03MX = 'Wine, red'	Implicit facets: F02: Part-nature = 'Wine (as part-nature)' F27: Source-Commodities = 'Wine grapes' F28: Process = 'Winemaking' F10: Qualitative-Info = 'Red' F33: Legislative classes = 'FA-14.2.2 Wine and other products defined by Regulation (EEC) No 1234/2007, and alcohol-free counterparts' Explicit facets: F03: Physical-state = 'Liquid'	Correct coding: based on the explicit F03 facet code added to the base term A03MX this product will be identified as liquid
A02RH#F03.A06JA$F33.A0C5F Base term selected: A02RH = 'Soft-ripened cheese'	Implicit facets: F02: Part-nature = 'Ripened cheese (as part-nature)' F27: Source-Commodities = 'Milk' F28: Process = 'Cheesemaking' F28: Process = 'Ripening' F10: Qualitative-Info = 'Soft' Explicit facets: F03: Physical-state = 'Slices, steaks or other flat cuts' F33: Legislative classes = 'FA-01.7.2 Ripened cheese'	Correct coding: based on the explicit F03 and F33 facet codes added to the base term A02RH this product will be identified as sliced and classified in the food additive legislative category 01.7.2
A03YN#F03.A0CEA$F33.A0C33 Base term selected: A03YN = 'Omelette, plain'	Implicit facets: F02: Part-nature = 'Egg based dishes (as part-nature)' F04: Ingredient = 'Whole eggs' Explicit facets: F03: Physical-state = 'Solid (soft or hard)' F33: Legislative classes = 'FA- 10.2 Processed eggs and egg products'	Correct coding: based on the explicit F03 and F33 facet codes added to the base term A03YN this product will be identified as solid and classified in the food additive legislative category 10.2
A03QH Base term selected: A03QH = 'Infant formula, milk and soya-based, liquid'	Implicit facets: F02: Part-nature = 'Infant formulae (as part-nature)' F04: Ingredient = 'Milk' F04: Ingredient = 'Soya proteins' F03: Physical-state = 'Liquid' F23: Target-consumer = 'Infant or toddler food' F33: Legislative-classes = 'FA-13.1.1 Infant formulae as defined by Commission Directive 2006/141/EC (1)'	

FoodEx2 mapping

For pesticide monitoring, where samples must be reported according to the legislative classes specified in pesticide legislation (corresponding to the EFSA MATRIX catalogue), a mapping from FoodEx2 to MATRIX is recorded in the FoodEx2 and can be seen in the catalogue browser. This mapping is automatically applied in the EFSA data processing and data providers only need to report a correct FoodEx2 code for each sample transmitted to ensure the legislative MATRIX grouping will be correct. Further in the validation dashboards, the mapping can be checked. EFSA provides a separate document to support data providers in choosing the base terms and facets that are used by EFSA to flag the EUCP samples. EFSA highly recommends checking that samples have been flagged as EUCP in accordance with their expectations before accepting the dataset(s) in the confirmation dashboards.

For VMPR monitoring, where samples must be analysed according to the legislative classes specified in VMPR legislation, mapping from FoodEx2 to legislative categories is automatically applied in the EFSA data processing and data providers only need to report a correct FoodEx2 code for each sample transmitted to ensure the legislative grouping will be correct[39].

For acrylamide reporting under contaminants (see Table 6) explicit facet F33 Legislative classes must be reported. Table 6 should be consulted for other specific, mandatory and recommended reporting requirements applicable to contaminants; the same as when a sample is included in other domains but analysed for such substances.

For food additives and flavourings, it is recommended to report the legislative class facet code (F33). Mapping from FoodEx2 base terms to legislative categories is automatically applied in the EFSA catalogue as implicit facets in most of the cases; if the F33 facet is not implicitly assigned, it is highly recommended to add it.

[39] The VMPR mapping has been updated to accommodate the changes introduced from the entry in force of Regulation (EU) 2022/1644 and Regulation (EU) 2022/1646.

Table 4: FoodEx2 main facet descriptions and their relevance for each data domain

Facet	VMPR	Pesticides	Contaminants	Additives	Flavourings
F01 source	Indicate the type of animal species sampled (e.g. pig samples). This can include the purpose of rearing; for example, whether the chickens are laying hens or broilers Classification of samples as bovines, pigs, sheep, goats, horses, poultry, aquaculture, rabbit or game are based on this facet. It is important to select a facet at species level or lower		Define the 'origin' of the raw commodity; usually, it is already assigned as 'implicit facet'	Plant, animal, organism or source of the raw agricultural commodity. For fish and seafood samples the species must be specified. For algae-based products the species of algae must be specified Plant, animal, organism or source of the raw agricultural commodity	Plant, animal, organism or source of the raw agricultural commodity. For fish and seafood samples the species must be specified. For algae-based products the species of algae must be specified Plant, animal, organism or source of the raw agricultural commodity
F02 part-nature	Indicate the 'part' or 'tissue' of the animal tested (e.g. the liver). Must be reported since the MRL legal limit applied is dependent on the target tissue The first step in the EFSA	Part sampled. For example, indicating fat samples from animals	Part sampled	Part sampled	Part sampled

Facet	VMPR	Pesticides	Contaminants	Additives	Flavourings
	procedure for the VMPR matrix classification for samples such as eggs, milk or honey is based on this facet				
F03 physical state			For reporting the physical state (e.g. solid, jelly, liquid) of the tested food	For reporting the physical state (e.g. solid, jelly, liquid) of the tested food	For reporting the physical state (e.g. solid, jelly, liquid) of the tested food
F04 ingredient		For reporting the ingredients of composite food samples	Recommended for the following products: 'Potato crisps', 'Pre-cooked French fries, potato products for home cooking', 'Breakfast cereals (excluding muesli and porridge)', 'Substitute coffee (dry)' and 'Baby foods, other than processed cereal-based foods' rice-based products algae-based foods for special nutritional uses compound products for infants and small children, including ready-made meals, diet supplements, herb mixes and spice mixes	Repeatable facet to be used to characterise composite foods	Repeatable facet to be used to characterise composite foods
F06 surrounding medium			For reporting the surrounding medium (e.g. oil, fat) of the food		

Facet	VMPR	Pesticides	Contaminants	Additives	Flavourings
F07 fat content			For reporting the fat content of the food. To be reported when the expression of results is fat weight (B003A)		
F10 qualitative-info		Where whole grain cereal (i.e. wheat, barley, oat and rye) is to be reported under the EUCP, flour integral/not refined (A06HR) can be reported along with the cereal-based term	This facet is recommended for some substances (PARAM codes) belonging to the group of plasticising agents (e.g. phthalates) for expressing when a product is not packed; see also Table 8 for specific requirements		
F11 alcohol content			For reporting the alcohol content of the food		
F17 extend-of-cooking			Heat treatment applied to food required for furans and acrylamide		
F18 packaging format			Allows sampling officers to describe the shape of the container or wrapper that holds the marketed product. This facet is recommended for some substances (PARAM codes) belonging to the group of plasticising agents (e.g. phthalates); see also Table 8 for specific requirements		
F19 packaging material			Allows sampling officers to describe the material of the container or wrapper		

Facet	VMPR	Pesticides	Contaminants	Additives	Flavourings
			that holds the marketed product. This facet is crucial for some substances (PARAM codes), e.g. bisphenol, group of plasticising agents (e.g. phthalates); see also Table 8 for specific requirements		
F20 part-consumed-analysed		Where meat (as part nature) or its sub-codes are reported, then part-consumed-analysed is recommended to be used, to indicate the presence of fat: A0F4V='Excluding visible fat' or A0F4T='Including visible fat'. According to Regulation (EC) No 396/2005 the MRLs for 'Muscle' apply to "Meat after removal of trimmable fat". Therefore, to report muscle samples the code A0F4V – 'Excluding visible fat' should be used. When reporting copper results, the part to which the sample preparation applies needs to be reported			

Facet	VMPR	Pesticides	Contaminants	Additives	Flavourings
F21 production method	A07RY should be used to identify wild game. Classification of samples as wild game is based on this facet	Required to perform the data analysis regarding the residue situation for organic food compared with conventionally produced food. Organic production methods can be reported here using the term A07SE. If the production method is known to be non-organic, the term A0C6Y (conventional non-organic production) should be reported. This term has always been mapped to the former SSD1 value 'non-organic' and has been renamed for better clarity. Where the production method is unknown, this facet must not be reported. For the purposes of reporting, 'non-organic' and no facet F21 value reported, will be grouped as 'non-organic' production, since legislation only requires that organic production must be clearly declared.	Recommended. Required to perform the data analysis regarding the mycotoxin situation in organic food compared with non-organic food		

Facet	VMPR	Pesticides	Contaminants	Additives	Flavourings
		Intensity of production, when known, can also be reported in this facet using A0C6Q (intensive production) or A18FG (extensive (non-intensive)) production. A07RY (wild or gathered or hunted) A07RY should be used to identify wild game (e.g. to distinguish wild boar (farmed) from wild)			
F23 target consumer	This facet must be used for feed samples to indicate the species for whom the feed is intended if not already implicitly included in the base term selected	This facet must be used for feed samples to indicate the species for whom the feed is intended if not already implicitly included in the base term selected	This facet must be used for feed samples to indicate the species for whom the feed is intended if not already implicitly included in the base term selected. Also, it can be used to indicate the age of the human consumer/population (e.g. infants, toddlers, children, and adults)	This facet must be used for feed samples to indicate the species for whom the feed is intended if not already implicitly included in the base term selected. Also, it can be used to indicate the age of the human consumer/population (e.g. infants, toddlers, children, and adults)	This facet must be used for feed samples to indicate the species for whom the feed is intended if not already implicitly included in the base term selected. Also, it can be used to indicate the age of the human consumer/population (e.g. infants, toddlers, children, and adults)
F27 source-commodities		Report the representative lead crop. It defines the origin of the derivatives for 'processed' food samples made up of one single	This facet describes the raw primary commodity (RPC) from which an ingredient or derivative has been obtained. However, in some food groups, like cheese or fruit juice, products of the same nature as those		

Facet	VMPR	Pesticides	Contaminants	Additives	Flavourings
		food/ingredient (e.g. orange juice or wine). This facet describes the raw primary commodity (RPC) from which an ingredient or derivative has been obtained. However, in some food groups, like cheese or fruit juice, products of the same nature as those from one raw source, but from mixed raw sources are encountered.	from one raw source, but from mixed raw sources are encountered		
F28 process	Required to distinguish processed food samples	Required to distinguish processed food samples. This distinction is important for the pesticide residue data as MRL compliance is checked/verified considering the results expressed for 'unprocessed' food samples. For processed products derived from raw agricultural products (as specified in Annex I of Regulation (EC) No 396/2005), the most specific code for processing must be selected	Required to distinguish processed food samples. However, a more detailed classification should be used where possible	Required to distinguish processed food samples	Required to distinguish processed food samples

Facet	VMPR	Pesticides	Contaminants	Additives	Flavourings
		When reporting copper results, the part to which the sample preparation applies needs to be reported (e.g. F28.A07GY 'roasted')			
F31 animal-age-class	Although not mandatory, this information is very useful for the interpretation of the results, especially in cases of non-compliance due to residues belonging to the substance groups of anti-thyroid agents (A1b) and steroids (A1c)				
F32 gender	Although not mandatory, this information is very useful for the interpretation of the results, especially in cases of non-compliance due to residues belonging to the substance groups of anti- thyroid agents (A1b) and steroids (A1c)				

Facet	VMPR	Pesticides	Contaminants	Additives	Flavourings
F33 legislative class	Required for processed products.		Required for samples analysed for acrylamide to describe the acrylamide legislative classes in Commission Recommendation 2019/1888/EU[40] and Commission Regulation (EC) 2017/2158[41]	Required to describe the sample legislative food category, according to Regulation (EC) 1333/2008[42]	Recommended to describe the sample legislative food category according to Regulation (EC) 1334/2008[43]

[40] Commission Recommendation (EU) 2019/1888 of 7 November 2019 on the monitoring of the presence of acrylamide in certain foods. OJ L 290, 11.11.2019.
[41] Commission Regulation (EU) 2017/2158 of 20 November 2017 establishing mitigation measures and benchmark levels for the reduction of the presence of acrylamide in food Text with EEA relevance. OJ L 304, 21.11.2017.
[42] Regulation (EC) No 1333/2008 of the European Parliament and of the Council of 16 December 2008 on food additives. OJ L 354, 31.12.2008, p. 16–33.
[43] Regulation (EC) No 1334/2008 of the European Parliament and of the Council of 16 December 2008 on flavourings and certain food ingredients with flavouring properties for use in and on foods and amending Council Regulation (EEC) No 1601/91, Regulations (EC) No 2232/96 and (EC) No 110/2008 and Directive 2000/13/EC. OJ L 354 31.12.2008, p. 34

Example	XML
Pig kidney A01YM=Pig kidneys are composed of the following implicit facets where F01.A057=Pigs and F02.A069N=Kidney	<sampMatCode>A01YM</sampMatCode>
Sheep for meat production – Blood serum A0C60=Non-food animal-related matrices F01.A0CDE=Sheep for meat production and F02.A0CEY=Blood serum (as part nature)	<sampMatCode>A0C60#F01.A0CDE$F02.A0CEY</sampMatCode> <sampMatCode.building>A0C60</sampMatCode.building> <sampMatCode.source>A0CDE</sampMatCode.source> <sampMatCode.part>A0CEY</sampMatCode.part>
Urine sample from a dairy cow A0C60=Non-food animal-related matrices F01.A0C9L=Dairy cow and F02.A0CET=Urine (as part nature) F31.A0C8V=Young non-adult mammal (above 1 year)	<sampMatCode>A0C60#F01.A0C9L$F02.A0CET$F31.A0C8V</sampMatCode> <sampMatCode.building> A0C60</sampMatCode.building> <sampMatCode.source>A057F</sampMatCode.source> <sampMatCode.part>A0F0Y</sampMatCode.part> <sampMatCode.animal-age-class>A0F0Y</sampMatCode.animal-age-class>
Royal jelly	<sampMatCode>A0CVG</sampMatCode>
Processed cereal-based foods for infants and young children	<sampMatCode>A03QX</sampMatCode>
Infant formula	<sampMatCode>A0EQM</sampMatCode>
Follow-on formula	<sampMatCode>A0EQL</sampMatCode>
Herbal infusions specific for infants and young children, dry	<sampMatCode>A16GS</sampMatCode>
Pasteurised eggs from organic farming A031G=Hen eggs matrices F21 A07SE=Organic and F28. A07HV=Pasteurisation	<sampMatCode>A031G#F21.A07SE$F28.A07HV</sampMatCode> <sampMatCode.building>A031G</sampMatCode.building> <sampMatCode.prod>A07SE</sampMatCode.prod> <sampMatCode.techno>A07HV</sampMatCode.techno>
Potato crisp (category 2) indicate whether batch fried or continuously fried A011L=Potato crisps or sticks	<sampMatCode>A011L#F17.A07MY</sampMatCode> <sampMatCode.building>A011L</sampMatCode.building> <sampMatCode.cookext>A07MY</sampMatCode.cookext>

Example	XML
F17.A07MY=Outside light brown[44]	
Crispbread (category 6) indicate whether the product is baked A0CHT=Crispbread F28.A07GX=Baking	<sampMatCode>A0CHT#F28.A07GX</sampMatCode> <sampMatCode.building>A0CHT</sampMatCode.building> <sampMatCode.techno>A07GX</sampMatCode.techno>
Roasted coffee (category 7) indicates the extent of cooking (light brown, brown, outside dark brown/slightly burned) A03GL=Coffee beans, roasted F17.A07MY=Outside light brown F17.A07MZ=Outside brown F17.A07NA=Outside dark brown/slightly burned	<sampMatCode>A03GL#F17.A07MY</sampMatCode> <sampMatCode>A03GL#F17.A07MZ</sampMatCode> <sampMatCode>A03GL#F17.A07NA</sampMatCode> <sampMatCode.building>A03GL</sampMatCode.building> <sampMatCode.cookext>A07MY</sampMatCode.cookext> <sampMatCode.building>A03GL</sampMatCode.building> <sampMatCode.cookext>A07MZ</sampMatCode.cookext> <sampMatCode.building>A03GL</sampMatCode.building> <sampMatCode.cookext>A07NA</sampMatCode.cookext>
Chewing gum	<sampMatCode>A035M</sampMatCode>
Dry peas (drying of peas is not considered processed if the moisture content is between 16 and 19%)	<sampMatCode>A0DCD</sampMatCode>
Green peas (fresh peas without pods are considered unprocessed)	<sampMatCode>A012J</sampMatCode>
Dry camomile flowers (herbal infusion, dried product considered unprocessed)	<sampMatCode>A0D9D#F28.A07KG </sampMatCode>
Bovine meat (muscle) from cow or ox or bull (base term code A01QX), **without/excluding the visible fat** (food tested and reported in line with the sample description to which pesticide and VMPR MRL apply). The facet code F20 A0F4V='Excluding visible fat' is explicitly added to the base term code	<sampMatCode>A01QX#F20.A0F4V</sampMatCode>
Deer fresh meat (muscle) from **hunted**, not farmed, animals.	<sampMatCode>A01SA#F21.A07RY</sampMatCode>

[44] List of food categories and sub-categories and respective codes based on Commission Recommendation 2010/307/EU on the monitoring of acrylamide and Commission Recommendation 2013/647/EU (Annex, point C).

Example	XML
The facet code F21=A07RY must be selected to indicate that the animal was 'wild'; if the animal instead was 'farmed' or 'raised', then the facet code A07RY should not be reported	
Feed sample of maize grains Code A07XG='Maize grain (feed)' intended for chicken/poultry Facet F23 target consumer code=A07VD='Poultry feed' OR one of its sub-codes (e.g. A18EH='Chicken feed')	<sampMatCode>A07XG#F23.A18EH</sampMatCode>
Water given to farmed rabbit The full code will be A0F7L#F23.A07VE='Freshwater for animal farming' & 'Rabbit feed'	<sampMatCode>A0F7L#F23.A07VE</sampMatCode>
Pizza taken in a takeaway shop, packed in a laminated pizza box The full code will be A03ZN#F18.A07NL$F19.A07PN Where: A03ZN=Pizza and pizza-like dishes PACKAGING-FORMAT=Box PACKAGING-MATERIAL=Laminated paper-plastic foil (the takeaway should be reported in the sampPoint data element)	<sampMatCode>A03ZN#F18.A07NL$F19.A07PN</sampMatCode>
Pizza taken in a takeaway shop, not packed The full code will be A03ZN#F10.A18PX where: A03ZN=Pizza and pizza-like dishes QUALITATIVE-INFO=Not Packed (the takeaway should be reported in the sampPoint data element)	<sampMatCode>A03ZN#F10.A18PX</sampMatCode>

Example	XML
Infant formula based on milk, heated in the microwave inside a plastic feeding bottle The full code will be A03QF#F28.A07HB$F18.A07NM$F19.A16RX where: A03QF=Infant formula, milk-based, liquid PROCESS=Microwave-cooking, PACKAGING-FORMAT=Bottle PACKAGING-MATERIAL=Polypropylene (PP)	<sampMatCode>A03QF#F28.A07HB$F18.A07NM$F19.A16RX</sampMatCode>
Hemp seed flour The full code will be A0F0N#F27.A016B Built starting from the base term A0F0N =Dried nuts/seeds and related flours and powders and then added F27 code A016B=hemp seeds	<sampMatCode>A0F0N#F27.A016B</sampMatCode>
Bread made with hemp seed flour The full code will be A0BY0#F04.A016B$F04.A0F0M Where: A0BY0=Leavened bread and similar F04.A016B=Hemp seeds F04.A0F0M=Nut/seeds paste/emulsion/paste	<sampMatCode>A0BY0#F04.A016B$F04.A0F0M</sampMatCode>

E.03 Text description of the matrix of the sample taken (sampMatText) (optional)

After describing the matrix with the most detailed level of information available using FoodEx2 in the sampMatCode field, this free text data element can be completed to report a full textual description of the product sampled and to provide additional relevant information. This will provide a possibility of crosschecking for the codes reported and could highlight any data quality problem at the data analysis level.

In cases in which suitable codes to describe the item sampled cannot be found, it is recommended to ask EFSA for support or the addition of codes.

The description of the product sampled should not include the brand name which can be reported in the element E.10 (sampMatInfo).

F.01 Sample analysed identification code (sampAnId), G.01 Coded description of the matrix analysed (anMatCode), and G.02 Text description of the matrix analysed (anMatText)

When left empty the three elements sampAnId, anMatCode and anMatText will be assumed to have respectively the same value as the 'sample taken identification code' (element D.01 'sampId'), 'Coded description of the matrix of the sample taken' (element E.02 'sampMatCode'), and 'Text description of the matrix of the sample taken' (element E.03 'sampMatText'), respectively. Therefore, there is no need to provide these data elements unless the nature of the sample analysed differs from the sample taken.

Each sample analysed must be identified by a unique sample identification reference (sampAnId) no longer than 100 characters.

When the analytical results corresponding to different parameters are reported for the same sample analysed, the unique sample (analysed) identification number (sampAnId) must be maintained for that sample analysed in all transmissions.

The data element 'Coded description of the matrix analysed' (anMatCode) reports the matrix sample analysed characteristics encoded using the FoodEx2 catalogue's codes, while the data element 'Text description of the matrix analysed' (anMatText) describes it as free text and could be reported on a voluntary basis if e.g. the sample analysed description (anMatCode) through the FoodEx2 codes are not sufficiently detailed.

E.04 Country of origin on the sample taken (origCountry) (mandatory)

The country of origin must be completed for all samples in ISO 3166-1-alpha-2 format. Reporting countries are encouraged to identify the origin of the product, particularly for unprocessed (raw) food products and for cases where a non-compliant sample has been found.

Goods whose production involved more than one country will be deemed to originate in the country where they underwent their last, substantial, economically justified processing or working in an undertaking equipped for that purpose and resulting in the manufacture

of a new product or representing an important stage of manufacture[45]. Thus, a single country of origin must be reported as described in the labelling requirements of Regulation (EU) No 1169/2011.

Codes can be selected from the COUNTRY catalogue.

In cases in which the exact country of origin is unknown, but some information is available, Table 3 above summarises the available unspecific country codes which are the same as for D.03: sampCountry.

It should be noted that records with origCountry reported as an unspecific code ('XX', 'AA', 'EU', 'XC', 'XD', 'XE') will be grouped as unknown (code 'XX') for statutory reporting, e.g. the pesticides Annual Report.

For pesticide residue annual reporting, samples taken in the overseas territories of EU countries must continue to be reported as their true country of origin (origCountry), but these samples may be reclassified for the Annual Report formatting to be presented as part of the EU country and the EFSA algorithm will use the attribute 'moperRecodedCountry', visible in the COUNTRY catalogue, to reclassify them as domestic samples.

For VMPR Plan 3, the country of origin should not be equal to an EU country including the country of the reporting organisation. The results for Plan 3 with an EU country as origin of the sample will then be rejected of the report.

Example	**XML**
Rice from Thailand packed in Iceland	<origCountry>TH</origCountry>
An individual country cannot be determined (unspecific codes such as XC, XD, XE can be selected). If needed at the reporting stage, e.g. for the pesticides Annual Report, these may be aggregated by EFSA	<origCountry>XE</origCountry>

E.06 Area of origin for fisheries or aquaculture activities code of the sample taken (origFishAreaCode) (optional)

For fish, seafood and other marine products the Food and Agriculture Organization fishing area should be reported.

Codes can be selected from the FAREA catalogue.

Example	**XML**
Baltic herring caught in Skagerrak and Kattegat tested for brominated flame retardants (percentage fat should always be reported in this case, results reported for each congener)	<sampMatCode> <origFishAreaCode>M27IIIa</origFishAreaCode> <paramCode> <exprResPerc>fatPerc=45</exprResPerc> <exprResType>B003A</exprResType>

[45] Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011 on the provision of food information to consumers, amending Regulations (EC) No 1924/2006 and (EC) No 1925/2006 of the European Parliament and of the Council, and repealing Commission Directive 87/250/EEC, Council Directive 90/496/EEC, Commission Directive 1999/10/EC, Directive 2000/13/EC of the European Parliament and of the Council, Commission Directives 2002/67/EC and 2008/5/EC and Commission Regulation (EC) No 608/2004.

F.03 Year of analysis (analysisY) (mandatory)

The year of analysis must be reported for all results.

Example	XML
Sample analysed in 2017	<analysisY>2017</analysisY>

H.01 Sample analysed portion sequence (anPortSeq) (optional)

This element contains a sequential number (e.g. 1, 2, 3) to be used when a laboratory sample is analysed for the same substance more than once. anPortSeq should only be used for repeated analysis of the same sample with the same method (i.e. under repeatable conditions) and only when legally required (e.g. aflatoxins in dried fruits where three laboratory samples belonging to the same original sample must be analysed according to Regulation (EU) 2023/2782). If different methods are used for the same sample and parameter, only the most accurate and reliable result should be reported (irrespective of the existence of a legal limit).

When reporting results which are subject to assessment against a legal limit, anPortSeq must not be used. Either:

- the result derived with the most accurate or reliable analysis must be reported; or
- when samples were analysed with equally accurate techniques, the mean value should be reported. In cases for which a mean is calculated, the date of the last component result should be reported, and the most applicable analytical method should be reported.

The 'sample taken' could be analysed for the same parameter more than once to perform a counter-analysis or to confirm a positive sample. In these cases, the only result to be reported is the one for which the evaluation is performed and the 'sample analysed portion' should not be used.

Example	XML
Each portion into which the laboratory sample is divided and analysed for aflatoxins	<anPortSeq>1</anPortSeq>

J.01 Identification code of the laboratory (labId) (mandatory)

A unique code to identify each laboratory providing laboratory results must be reported here (e.g. the national laboratory code). This code must also be used when providing information on participation in proficiency tests in National Reports. The mapping between code and laboratory name is the reporting country's responsibility (i.e. competent authority/organisation reporting data to EFSA). It should be updated in case of a request by Commission, EURLs or EFSA.

Example	XML
National Reference Laboratory of Poland	<labId>PolandNRL</labId>

J.02 Laboratory accreditation (labAccred) (mandatory)

This element indicates whether the laboratory performing the analysis has been accredited as required by Article 37 of Regulation (EU) No 2017/625.

For pesticide monitoring only two codes from the LABACC catalogue may be used (see table below).

Codes can be selected from the LABACC catalogue.

Example	XML
Accredited according to ISO/IEC 17025	<labAccred>L001A</labAccred>
For results generated by laboratories not or not yet accredited according to ISO/IEC 17025 (e.g. when the laboratory is awaiting the final audit from the accreditation body)	<labAccred>L003A</labAccred>

J.03 Laboratory country (labCountry) (mandatory)

Indicate using ISO 3166-1-alpha-2 country codes the country where the laboratory is located. The country code must be unique for each labId provided.

Codes can be selected from the COUNTRY catalogue.

Example	XML
Germany	<labCountry>DE</labCountry>

K.01 Type of parameter (paramType) (optional)

This data element indicates whether the parameter (paramCode K.02) reported has been analysed in full or partially; it also makes it possible to indicate that the selected paramCode refers to the analysis of a single component of 'Multicomponent' residue definitions (VMPR and pesticide residues) or of an individual parameter of a 'summed' parameter (e.g. dioxins TEQ).

A substance's residue definitions or marker compound used for VMPR and pesticide residue MRLs can be broadly split into two types:

- 'Simple': Compounds that can be analysed using one single calibration substance (in terms of identity: same substance or same substance mix of isomers, etc.).
- 'Multicomponent': Compounds that can be analysed using several different calibration substances (e.g. the parent compound and one or more metabolites).

Starting from the 2021 data collection this data element has been made optional, and the use and meaning of paramType were revised according to definitions reported in Table 5, with the aim of making data reporting easier. EFSA automatically pre-assigns the paramType in those cases in which the paramCode/paramType combination is unambiguous. However, in case of multicomponent paramCode calculated from measurements of individual components or the sum of individual parameters, the

paramType should still be reported to indicate if all the expected parts as described by the parameter name have been analysed and summed up or not.

Codes to assign the paramType are selected from the PARAMTYP catalogue; however, in order to harmonise and clarify the scope of the definition, a simplified version will be used as described in Table 5 below.

Table 5: paramType codes and correspondent interpretation

Code	Code interpretation	Note
P002A	Part of a sum	Result from analysis of a component that is part of a calculated result reported for a paramCode (either P004A or P005A)
P004A	Sum based on subset	Result for which the full analysis has not been performed, and one or more components are not part of the calculated result for the paramCode
P005A	paramCode fully analysed	Result for which the full analysis has been performed, and all components are part of the calculated result for the paramCode
P001A and P003A are not to be used		

EFSA develops and updates a separate document with the full list of paramCode and pre-assigned paramType, available in Knowledge Junction with other supporting tools, following the criteria explained here:

- Individual components of a multicomponent/sum paramCode: paramType =P002A.
- paramCode measured with one calibration compound (or a mix of compounds), covering the full description of paramCode: paramType =P005A.
- Multicomponent/sum paramCode calculated from measurements of individual components: paramType =P004A/P005A.

In the last case data providers are requested to report either paramType 'P005A' if all the expected parts have been analysed as specified by paramCode, or 'P004A' otherwise.

For pesticide residues, in order to check for MRL compliance it is a legal requirement to analyse the full residue definitions as defined in Regulation (EU) No 396/2005 (i.e. all the components) and reflected in the correspondent paramCode; the current valid residue definitions and paramCodes are also available in the EFSA Legal Limits database. Additionally, results on those individual components associated with P002A are strongly recommended to be reported too. These will normally not be included in the data analysis presented in the EU Report on pesticide residues. However, for specific data analysis the results labelled as P002A might be used by EFSA in later mandates received by the Commission on specific substances (e.g. acetamiprid[46]).

For veterinary medicinal products, a similar approach is established. However, in case of negative[47] screening results the reporting of the single components associated with the P002A is sufficient and the multicomponent/sum paramCode does not need to be reported. In this case, EFSA will automatically generate the record related to the complex paramCode

[46] https://open.efsa.europa.eu/questions/EFSA-Q-2022-00589
[47] In this context, EFSA flags the 'negative' results those reported with the following combinations of codes: RESTYPE='LOD' or 'LOQ' or 'CCB' or 'BIN' or 'CCA' AND evalCode is different from J041A='Detected'

in the sDWH, which will be then accounted for and totalised in the summary results presented in both the National and EU VMPR Reports.

For contaminants, the single substances or congener-specific occurrence data must be reported, in addition to the sum (when required for assessment against maximum levels) or complex mixtures of occurrence. These data are essential for dietary exposure assessments since animal and human exposure estimates on food/feed required substance/congener-specific occurrence data. The sums of congener/substance groups reported alone are of very limited use for EFSA.

Here some examples of paramType assignments are shown.

Example	XML
Result of analysis of the sum of malachite green and leucomalachite green (paramCode=RF-00004513-PAR) in meat of aquaculture products (Minimum Required Performance Limit (MRPL) defined); both components analysed and summed	<paramType>P005A</paramType> EFSA pre-assignment: P004A/P005A Data providers should report paramType P005A
Result of partial analysis of sum of malachite green and leucomalachite green (paramCode=RF-00004513-PAR); only leucomalachite green analysed	<paramType>P004A</paramType> EFSA pre-assignment: P004A/P005A Data providers should report paramType P004A
Result of analysis for leucomalachite green (paramCode=RF-00001727-PAR) which is one of the components of the sum reported with paramCode=RF-00004513-PAR (see above)	<paramType>P002A</paramType> Automatically assigned by EFSA
Result of analysis for permethrin (sum of isomers) (MRL defined) (paramCode=RF-0842-001-PPP)	<paramType>P005A</paramType> Automatically assigned by EFSA
Result reported for aldicarb (sum of aldicarb, its sulfoxide and its sulfone, expressed as aldicarb) (paramCode=RF-0020-001-PPP) in plant commodities where all the components have been analysed	<paramType>P005A</paramType> EFSA pre-assignment: P004A/P005A Data providers should report paramType P005A. Additionally, aldicarb (paramCode=RF-0020-002-PPP) as P002A, aldicarb sulfoxide (paramCode=RF-0020-003-PPP) as P002A and aldicarb sulfone (paramCode=RF-0020-004-PPP) as P002A
Result of analysis for Betamethasone in cow meat (paramCode=RF-00000273-VET) (MRL defined)	<paramType>P005A</paramType> Automatically assigned by EFSA
Result of analysis for Betamethasone in sheep meat (paramCode=RF-00000273-VET) (no MRL defined – not authorised use)	<paramType>P005A</paramType> Automatically assigned by EFSA
Result of analysis for Benzo-a-pyrene in smoked meat (paramCode=RF-00000046-ORG) (ML defined)	<paramType>P005A</paramType> Automatically assigned by EFSA
Result of analysis for Benzo-a-pyrene in smoked paprika (paramCode=RF-00000046-ORG) (no ML defined)	<paramType>P005A</paramType> Automatically assigned by EFSA

Example	XML
Result of analysis for the sum of 2 polycyclic aromatic hydrocarbons (PAH) indicators (benzo[a]pyrene and chrysene) in smoked paprika (paramCode=RF-00004427-PAR) (no ML defined); both components analysed and summed	<paramType>P005A</paramType> EFSA pre-assignment: P004A/P005A Data providers should report paramType P005A
Result of analysis for sum of 2 PAH indicators (benzo[a]pyrene and chrysene) in smoked paprika (paramCode=RF-00004427-PAR) (no ML defined); only chrysene analysed	<paramType>P004A</paramType> EFSA pre-assignment: P004A/P005A Data providers should report paramType P004A

K.02 Coded description of parameter (paramCode) (mandatory)

The parameter code is used to indicate the substance identified in the laboratory analysis.

It should contain codes linked to the ChemMonRep hierarchy of the PARAM catalogue. This means that if a specific paramCode is in the PARAM catalogue but is not in the ChemMonRep hierarchy, it cannot be transmitted.

Example	XML
Results of analysis for aflatoxins sum of B1, B2, G1 and G2	<paramCode>RF-00000435-TOX</paramCode>
Results of analysis for the aflatoxin B1 alone as component of the sum of aflatoxins	<paramCode>RF-00000150-TOX</paramCode>
Results of analysis for cloxacillin	<paramCode>RF-00000566-VET</paramCode>
Results of testing for the sweetener saccharin	<paramCode>RF-00000013-ADD</paramCode>
Results of analysis for terbacil	<paramCode>RF-0912-001-PPP</paramCode>
Results of analysis for the flavouring caffeine	<paramCode>RF-00000038-NTR</paramCode>

Each code of the ChemMonRep hierarchy is also present in one or more specific "analysis" hierarchies that are used in EFSA sDWH to classify data according to legal limits or legislation, to generate National and Annual Reports and to include results in specific data analysis or exposure assessment.

Consequently**, data providers should make sure that the paramCodes used for reporting results intended for a specific domain are included in the hierarchy of that domain as explained in the table below** (Table 6). This information can be found in the PARAM catalogue, in the EFSA Catalogue Browser, on the right-hand side under 'Reportability'.

Table 6: List of analysis hierarchies of PARAM catalogue and associated domain

Domain	Analysis hierarchy
VMPR	vmprParam
Pesticides residues	pestParam
Contaminants	chemAnalysis
Additives	addAnalysis

Regarding the paramText, please avoid the use of the ampersand character (&) when preparing the XML files[48].

L.01 Analytical method identification (anMethRefId) (mandatory)

This element should contain a code not longer than 50 characters to identify an analytical method used within the laboratory that links all results obtained from the same analytical method.

Example	XML
Delvo test for antibacterial substances in bulk milk validated in 2017	<anMethRefId>BulkMilkAntibioticSCR2017</anMethRefId>
Gas chromatography–mass spectrometry analysis for pesticide residues in honey used in the national reference laboratory	<anMethRefId>NRLGC-MSHoney</anMethRefId>
Liquid chromatography–mass spectrometry analysis for aspartame in soft drinks	<anMethRefId>2020-LC-MS-E951</anMethRefId>
Coupling liquid and gas chromatography with subsequent flame ionisation detection to analyse MOH in vegetable oils	<anMethRefId>2019-LC-GC-FID-Veg-Oil</anMethRefId>

The 'Analytical method reference code' (anMethRefCode), the 'Analytical method code' (anMethCode), the 'Analytical method text' (anMethText), and the 'Additional information on the analytical method' (anMethInfo) must be constant (the same) for all results with the same 'Analytical method identification' (anMethRefId). Please see the example below when coding your anMethRefId

Example					Combination
Lab	Result	AnMethCode	AnMethText	AnmethInfo	anMethRefId
1	1	F027A	LC-MS/MS	combinationMS_LC	XX12_LC_MS_Lab1
	2	F027A	LC-MS/MS	combinationMS_LC	XX12_LC_MS_Lab1
	3	F027A	LC-MS/MS	combinationMS_LC	XX12_LC_MS_Lab1
2	4	F027A	LC-MS/MS	combination_lab2	XX12_LC_MS_Lab2
	5	F027A	LC-MS/MS	combination_lab2	XX12_LC_MS_Lab2
	6	F027A	LC-MS/MS	combination_lab2	XX12_LC_MS_Lab2

[48] The ampersand character is not allowed as such in XML format as well as in other tagged formats or file types (like HTML or JSON), causing different types of reading errors when these files are parsed by some application. As the paramText field is not a mandatory SSD2 field and it is not used for any validation purpose, you can modify its content without any impact by '&' (also in this case easily doable by a find-replace function of your text editor). You can also consider that all the forbidden characters can be entered in an XML file once "isolated" with a CDATA session (e.g. <![CDATA[&]]> or <![CDATA[Substance Name & name & name]]>.

L.03 Analytical method type (anMethType), L.04 Analytical method code (anMethCode) (mandatory)

The analytical method type is used to indicate whether the analysis was performed to detect the presence of a substance/class of substances ('screening' AT06A) or to quantify/unequivocally identify the substance ('confirmation' AT08A). 'Screening' code should only be selected when a qualitative method returns a negative result; 'confirmation' should be reported for quantitative/semi-quantitative analytical methods.

The analytical method code describes the type of analysis performed by the laboratory. It is strongly advised to report the specific analytical method, instead of reporting the anMethCode code F001A='Classification not possible'. For chemical contaminants and additives domain, the system returns an error message if the anMethCode is reported as code F001A='Classification not possible'; if the generic code F001A is reported, enter also anMethText. In 2025, for flavourings the system will return a warning message if the anMethCode is reported as code F001A='Classification not possible' (in 2026 the system will return an error message for flavourings)

Codes can be selected from the ANLYTYP catalogue and the ANYLMD catalogue.

Example	XML
Charm II test to screen for tetracyclines in animal tissues	<anMethType>AT06A</anMethType> <anMethCode>F580A</anMethCode>
Multiresidue method using gas chromatography with tandem mass spectrometry	<anMethType>AT08A</anMethType> <anMethCode>F049A</anMethCode>
Liquid chromatography–tandem mass spectrometry used to quantify unauthorised residues in animal samples	<anMethType>AT08A</anMethType> <anMethCode>F027A</anMethCode>

M.01 Result identification code (resId) (mandatory)

This element must be provided for every record in the dataset and **must be unique** for an analytical result reported for a sample across all data collections from a data provider. This identifier is also used for communication between EFSA and the data provider during the transmission and validation phases. When validating data, it is essential to be able to detect, which results are actually counted and to be able to identify which results may need to be amended. resId will be displayed in validation reports for non-compliant results (in aggregated tables by drill-down).

It is recommended that certain prefixes or suffixes are included to ensure the resId is unique within the country.

Example	XML
Result reported by an Estonian veterinary laboratory in 2017	<resId>EEVetLab2017_0009845634</resId>
Result reported by the Italian pesticides national reference laboratory in 2017	<resId>ITNRL2017_ADE0000456792</resId>
Result reported by a Danish food testing laboratory in 2017	<resId>DKDTU2017_K0000034597X</resId>

M.02 Accreditation procedure for the analytical method (accredProc) (mandatory)

This code describes the validation/accreditation status of the method linked to anMethRefId.

Codes can be selected from the MDACC catalogue.

Example	XML
Method accredited according to ISO/IEC17025 and validated according to Commission Implementing Regulation (EU) 2021/808[49] on the performance of analytical methods for veterinary medicine residue controls	<accredProc>V007A</accredProc>

M.03 Result unit (resUnit) (mandatory)

This element indicates the units of measurement for the numerical values resLOD, resLOQ, resVal, resLLWR, resULWR, resValUncert, resValUncertSD, CCalpha, CCbeta, evalLowLimit, or evalHighLimit. Codes can be selected from the chemUnit hierarchy of the UNIT catalogue. This hierarchy reflects the standard International System of Units (SI) for concentrations: grams, milligrams, micrograms, picograms or nanograms per kilogram, gram, or litre (for liquids). Restriction to these units allows the results to be converted by EFSA to a single unit type for consistent presentation in tables of reports or comparison in data analysis. Liquid samples will be converted by EFSA on the assumption that one litre corresponds to one kilogram, irrespective of the density. The table below lists the resUnit codes typically reported in the context of different residue domains.

Example	XML
Reporting the results of pesticide monitoring in milligram/kilogram	<resUnit>G061A</resUnit>
Reporting the results of testing for beta-agonists (VMPR) in microgram/kilogram	<resUnit>G050A</resUnit>
Reporting the results of testing for mycotoxins in microgram/kilogram	<resUnit>G050A</resUnit>
Reporting the results of testing for metals in milligram/kilogram	<resUnit>G061A</resUnit>
Reporting the results of testing for dioxins and PCBs in picogram/gram	<resUnit>G080A</resUnit>
Reporting the results of testing for polycyclic aromatic hydrocarbons (PAHs) in microgram/kilogram	<resUnit>G050A</resUnit>

M.04 Result limit of detection (resLOD) (optional)

The limit of detection (LOD) is the lowest concentration that can be determined to be statistically different from a 'blank' analytical result. Results with the LOD reported may be

[49] Commission Implementing Regulation (EU) 2021/808 of 22 March 2021 on the performance of analytical methods for residues of pharmacologically active substances used in food-producing animals and on the interpretation of results as well as on the methods to be used for sampling and repealing Decisions 2002/657/EC and 98/179/EC. OJ L 180, 21.5.2021, p. 84–109.

used by EFSA to assess new scenarios when estimating the consumer's chronic exposure. resLOD must be reported if resType=LOD.

Example	XML
Result reported as LOD (i.e. resType=LOD) with a limit of detection =0.001	<resLOD>0.001</resLOD>

M.05 Result limit of quantification (resLOQ) (optional)

The resLOQ, the numerical value of the limit of quantification (LOQ), is the lowest validated residue concentration of the analyte, which can be quantified and reported by routine monitoring with validated methods.

This data element is always required unless:

- unvalidated methods are used (infrequent cases);
- the summed LOQ of the 'Multicomponent' pesticide residue definition/sum of contaminants cannot be calculated (where resInfo.notSummed='Y', see also Section M.20 below);
- the values for resLOD, CCbeta or CCalpha are reported for VMPR;
- resType =BIN, where resLOD should be reported.

An LOQ is required for the following reasons[50,51,52]:

1 Uncertainty: the LOQ is used by EFSA as a substitution method for the calculation of the middle and upper bound for the left-censored results on residue/contaminant concentrations.
2 Sensitivity and method evaluation: the LOQ is required to ensure the quality and comparability of analytical results, to ensure that acceptable accuracy is achieved and to ensure that false positives or false negatives are avoided.
3 To apply quality criteria: if a cut-off value is applied based on the LOQ, this will affect both quantified and left-censored data.

In cases where neither the LOD nor LOQ is provided, results cannot be used in exposure assessments and scientific reports.

For veterinary monitoring, one of resLOD, resLOQ, CCalpha and CCbeta must be reported for each result.

Example	XML
LOQ=0.005 milligram/kilogram	<resLOQ>0.005</resLOQ>

[50] 'Use of cut-off values on the limits of quantification reported in datasets used to estimate dietary exposure to chemical contaminants.' (EFSA, 2018c).
[51] The guidance in this document is intended for laboratories involved in the official control of pesticide residues in food and feed across the European Union. (European Commission, 2018)
[52] 'In order to decide if the analytical methods used for pesticide monitoring in accordance with Article 28 of Regulation (EC) No 396/2005 is sufficiently sensitive to identify samples containing residues that exceed the legal limits, a sensitivity check needs to be performed by the laboratories.' (European Commission, 2015, p. 3).

M.08 CCalpha (CCalpha) and M.09 CCbeta (CCbeta) (optional)

Decision limit (CCalpha) means the limit at and above which it can be concluded with an error probability of α that a sample is non-compliant. Since CCalpha accounts for measurement uncertainty, this value must be reported for confirmatory results where the result is evaluated for compliance[53,54].

Detection capability (CCbeta) means the smallest content of the substance that may be detected, identified and/or quantified in a sample with an error probability of β. For substances for which no permitted limit has been established, the detection capability is the lowest concentration at which a method is able to detect truly contaminated samples with a statistical certainty of 1 – β. For substances with an established permitted limit, this means that the detection capability is the concentration at which the method can detect permitted limit concentrations with a statistical certainty of 1 – β. The detection capability must be reported for screening methods for veterinary residues.

For multicomponent residue definitions/marker compounds for MRL, where one or more of the components is quantified, it is sufficient to report the CCalpha of the substance used for the evaluation of compliance.

In cases of multicomponent residue definitions/marker compounds for MRL where no component can be quantified, the CCalpha of the usual main component should be reported as 'representative' for confirmatory tests.

For screening tests, it is sufficient to report the CCbeta for the individual components.

For veterinary medicinal residues, when the analytical method is validated according to Commission Implementing Regulation (EU) 2021/808 the reporting of either CCalpha or CCbeta is required. For A3b and B1b substances when the validation is done according to the Pesticides domain CCalpha and CCbeta are not required.

The use of CCalpha and CCbeta is also permitted for certain mycotoxins in food of animal origin (for instance AFM1 in milk or OTA A in pig meats).

Example	**XML**
CCalpha reported for a confirmatory test	<CCalpha>20</CCalpha>
CCbeta reported for a screening test	<CCbeta>350</CCbeta>

M.10 Result value (resVal) (optional)

The resVal must be used to report the measured concentration of the substance in the product expressed in the unit reported in resUnit. resVal is mandatory if resType=VAL and must be greater than 0. If a sample was analysed using (qualitative) screening methods, the data element resVal must be left blank. See also the paragraph on M.16 Type of results (resType).

[53] Commission Implementing Regulation (EU) 2021/808 of 22 March 2021 on the performance of analytical methods for residues of pharmacologically active substances used in food-producing animals and on the interpretation of results as well as on the methods to be used for sampling and repealing Decisions 2002/657/EC and 98/179/EC. OJ L 180, 21.5.2021, p. 84–109
[54] Commission Decision 2002/657/EC.

For processed products in general, the results must be reported for the sample analysed, i.e. the processed product, without any recalculation of the result to the unprocessed product. If the pesticide residues domain and results expressed on fruits have stones (e.g. peaches, mangoes, avocados), the analytical result should be recalculated back to the whole fruit when checking for MRL compliance. However, when exposure assessments are undergone the pulp (without the stone) will be mapped with the consumption data. Therefore, when reporting either options the use of facet F20 is recommended to indicate if the analytical result is expressed with stone (A07QJ) or without stone (A07QK).

The MRL will only be validated considering the processed pesticide residue and VMPR samples, as MRL are set for fresh/unprocessed samples in both legal frameworks, i.e. the MRL will not be used to validate the plausibility of resVal, resType and evalCode reported if the sample is 'processed'. Further, MRL will not be validated for 'Wild' game samples analysed for VMPR substances. See also Section 7 describing the Legal Limits database structure and its use.

The distribution and descriptive statistics for quantifiable results for specific residues/markers in different matrices may be presented in the validation and web reports. These values would also be used in exposure assessments.

Example	**XML**
Measured concentration of a residue in a sample is 5.6 milligrams/kilogram	<resVal>5.6</resVal>

M.11 Result value recovery rate (resValRec) and M.12 Result value corrected for recovery (resValRecCorr) (optional)

The results from analytical methods which do not include an extraction step or analytical methods which use certified reference material at a certified concentration must be reported uncorrected for extraction recovery during the sample preparation.

Calculated recovery corrections are typically used to assess the performance of the method. These should not be applied to adjust the numerical results of pesticide residue analysis.

However, for mycotoxins as described in Commission Regulation (EU) 2023/2782, erucic acid as described in Commission Regulation (EU) 2023/2783, nitrates as described in Commission Regulation (EC) No 1882/2006 and lead, cadmium, mercury, inorganic tin, 3-MCPD and benzo(a)pyrene as described in Commission Regulation No 333/2007[55] the results must be adjusted for recovery and the recovery rate reported (unless specific conditions occur, e.g. for result significantly lower or higher than the maximum level).

The result value recovery rate (resValRec) associated with the concentration measurement is expressed as a percentage (%), i.e. 100 should be reported for a 100% rate.

Unless otherwise specified, the result expressed is considered by EFSA as not corrected for recovery. It is strongly recommended to report whether the analytical result has been or not corrected for recovery within the data element resValRecCorr ('Yes' ('Y') or 'No' ('N')).

[55] Commission Regulation (EC) No 333/2007 of 28 March 2007 laying down the methods of sampling and analysis for the official control of the levels of lead, cadmium, mercury, inorganic tin, 3-MCPD and benzo(a)pyrene in foodstuffs. OJ L 88, 29.3.2007, p. 29–38.

In case of an empty field in the data element 'resValRecCorr', the system will return a Warning message with respect to the chemical contaminants domain. If the data provider reports a result corrected for recovery, the data element resValRecCorr must be set to 'Yes' ('Y'). If reported, the results recovery must be greater than '0'.

Example	XML
The concentration of aflatoxin M1 was corrected for a recovery rate of 63%	<resValRec>63</resValRec> <resValRecCorr>Y</resValRecCorr>

M.13 Expression of result percentage (exprResPerc) and M.14 Expression of result type (exprResType) (optional)

These elements are used to indicate when the concentration is expressed as a percentage of a component of the sample, for example, on a dry weight basis.

For pesticide residues, the MRLs for eggs and milk apply to the whole product. However, the pesticides that are fat soluble tend to concentrate on the fat part of the product. Therefore, when reporting pesticides in eggs or milk it is necessary to report if the result is expressed as 'whole weight', code B001A, (the result is on the whole egg - after removal of the shell- or whole milk - based on a fat content of 4% by weight-) or if the result is expressed on the 'fat weight' code B003A, (the laboratory has separated the fat phase and the result is provided on the fat part. This information will allow EFSA to correctly check the consistency of result evaluation in view of the exposure assessment.

For product of animal origin concerning meat, it is to be considered that the MRLs apply to the muscle or to the fat. If fat soluble pesticide is analysed in meat sample and exprResType is reported as 'fat weight' (code B003A), the results will be checked against the MRL for fat. While if exprResType is expressed as 'whole weight' (B001A) the fat percentage under exprResPerc should be reported. If it is not reported, EFSA will consider default values whenever possible. If the pesticide analysed is not fat soluble, it is highly recommended to express the result as whole weight so is checked against the MRLs for muscle.

Directive (EC) 2002/32 describes the maximum levels of undesirable substances in mg/kg in the feedstuffs with a moisture content of 12% (88% dry matter); in order to check compliance and to derive concentration levels usable in exposure assessment it is recommended to report feed contaminants data expressed on 88% dry matter (code B004A). The exprResType has to be reported for feed; if the analysis has been performed on whole weight, this should be indicated in the exprResType with the code 'B001A' and the moisture percentage of the sample in the exprResPerc.moistPerc field must be reported. The system will return an Error message if this BR is not followed.

For contaminants, Regulation (EU) 2023/915 establishes for example that results for aflatoxin B1, ochratoxin A, deoxynivalenol, zearalenon, fumonisins are expressed on dry matter for processed cereal-based foods and baby foods for infants and young children. In the case of reporting aromatic herbs and/or spices, percentage of moisture is required to be reported.

In cases where percentage of moisture is not available, but percentage of dry matter is instead, EFSA recommends calculation of the percentage of moisture by applying the calculation '100 – percentage of dry matter' = percentage of moisture.

For additives, exprResType should be reported, otherwise the system returns an error message. For flavourings, the system returns a warning message (in 2026, this BR will return an error message).

Codes can be selected from the EXPRRES catalogue.

Example	XML
Results for a fat-soluble pesticide measured in a butter sample expressed on a fat weight basis	<exprResPerc>fatPerc=80</exprResPerc> <exprResType>B003A</exprResType> OR <exprResPerc.fatPerc>80</exprResPerc.fatPerc> <exprResType>B003A</exprResType>
Results (moisture percentage) for heavy metals as occurred in seaweed samples expressed on a whole weight basis	<exprResPerc>moistPerc=40</exprResPerc> <exprResType>B001A</exprResType> OR <exprResPerc.moistPerc>40</exprResPerc.moistPerc> <exprResType>B001A</exprResType>
Results (moisture and fat percentage) for heavy metals expressed as occurred in seaweed samples expressed on a whole weight basis	<exprResPerc>moistPerc=40$fatPerc=5</exprResPerc> <exprResType>B001A</exprResType>

M.15 Result qualitative value (resQualValue) (optional)

When qualitative screening results (for example, biological tests) are reported with resType=BIN then resQualValue must be reported and the accepted value is NEG. For confirmatory results or quantifiable results resQualValue must not be reported.

Example	XML
Negative result for the presence of amoxicillin in a milk sample and using a Delvo test (screening)	<resQualValue>NEG</resQualValue>

M.16 Type of results (resType) (mandatory)

The resType indicates the type of analytical result obtained for a substance in a product.

Codes can be selected from the VALTYP catalogue.

Example	XML
The result can be quantified at a validated level and resVal is reported	<resType>VAL</resType>
The residue can be quantified but is below the reported value for CCalpha	<resType>CCA</resType>
The residue is below the LOQ	<resType>LOQ</resType>
The residue is below the LOD and resLOD is reported	<resType>LOD</resType>
The result of a qualitative screening test	<resType>BIN</resType>
The residue cannot be detected and CCbeta is reported	<resType>CCB</resType>

When the analytical result is below the LOQ of the analytical method, but a chromatographic peak below the quantification limit is seen and the data provider wishes to report it to allow exposure assessment refinements, the numerical resLOQ can be higher

than resVal and the resType should be reported as resType=LOQ. The system will return an Error message if this BR is not followed.

When resType= 'VAL', then resLOQ must be numerically lower than resVal except when multicomponent paramCodes are reported.

For test results in which the residue can be quantified at a validated level then the resType must be reported as VAL and the resVal must be greater than 0; in that case it is expected that the resType='confirmation' (see also paragraph on anMethType).

For VMPR monitoring, these additional cases apply. If the residue cannot be quantified and CCalpha is reported, then the resType='CCA' must be reported. If, however, the resLOQ is reported and it is below CCalpha, then the resType='LOQ' should be reported if the result is below the resLOQ. For qualitative screening method results, the expected values for resType are BIN (in association with resQualValue=NEG and resVal=blank) with detection capability reported in CCbeta, or alternatively the LOD reported in resLOD. For positive screening results, the quantitative confirmatory test results should be reported and not binary positive screening results. Quantitative screening method results can be reported in a similar way to confirmatory results (see above) with a value for CCbeta reported in place of a value for CCalpha.

In exceptional cases, for the veterinary medicinal products domain also the code AWR='Value above the upper limit of the working range' can be selected, but only when one of the six above codes would not be fit for purpose and when:

1 the identity of the residue has been analytically confirmed;
2 the laboratory is certain of the 'positive' occurrence of the residue in the tested sample;
3 even though quantifiable, the residue was not quantified with a given precision/accuracy as the residue concentration was above the upper level of the validated/calibrated/working analytical method range for residue concentration.

This specific code is expected to be selected only to report 'non-standard' samples, whose results are considered relevant at the national level for risk management reasons; for example, an 'environmental' sample consisting of a 'contaminated' syringe clearly containing a prohibited substance whose presence and identity could be confirmed, but its 'concentration' was well above the calibrated concentration curve. Thus, results coded with AWR can have sufficient information for risk management but will not be useful for risk assessment. If the resType code=AWR is selected, then a numerical value for the data elements CCalpha (or resLOQ) and resVal must be reported. If the resType code AWR is selected, EFSA would consider it as 'corresponding' to resType=VAL when e.g. counting the number of 'positive' detections.

M.17 Result value uncertainty (resValUncert) (optional)

The resValUncert indicates the expanded uncertainty value (usually 95% confidence interval) associated with the measurement. This uncertainty is expressed in the same unit as the one reported in the field resUnit.

For pesticide residue monitoring, it is recommended to populate this field especially if single residue methods are used and/or if for a multiresidue method the expanded measurement uncertainty is different than 50%.

According to Regulation (EU) 2023/2782 (on mycotoxins), Regulation (EC) No 705/2015 (on erucic acid), Regulation (EC) No 333/2007, and Regulation (EC) No 644/2017, the condition for acceptance of a lot should also take into consideration measurement uncertainty.

M.20 resInfo.notSummed (optional)

In line with the European Commission (2015) document on pesticides, the following provisions for reporting resLOQ according to the residue definition type are described:

- For multicomponent pesticide residue definitions, EFSA requests that the individual LOQ for each component quantified is reported separately from that residue definition and a summed LOQ, which is calculated by the reporting country.
- If the reporting country does not report the summed LOQ, then resLOQ can be null for a given paramCode set with paramType equal to P005A or P004A and resInfo.notSummed equal to 'Y'. Thus, the paramCode of the multicomponent and the resInfo.notSummed set to Y, must be reported. In this case, upon submission of the individual component LOQ (for paramType P002A substances) will be calculated by EFSA based on the LOQs reported for the individual components associated with paramType P002A. For this reason, the individual component resLOQ associated to paramType P002A is mandatory. If no individual resLOQ is reported for at least one component for a given paramCode with paramType P005A/P004A, no 'sum of LOQ' calculation will be done by EFSA.

For the calculated sum of contaminants, there are currently no standard guidelines on how to sum LOQs of individual substances. The reporting country can decide to report the LOQ by summing up the LOQs of all the individual substances to which the sum refers or to indicate resInfo.notSummed='Y' and resLOQ=null, if the results for the single substances and correspondent LOQs are reported. This approach is to avoid storing a false value of '99999' in resLOQ when the summed LOQ was not possible. Business rules apply to ensure that resLOQ can only be NULL where resInfo.notSummed='Y'. No value such as '99999' or similar (e.g. '999', '9999', '999999') shall be reported.

N.01 Limit for the result evaluation (evalLowLimit), N.03 Type of limit for the result evaluation (evalLimitType) (optional)

These two elements are used to report the numerical value of the legal maximum residue limit or maximum limit enforced when assessing a laboratory result and the type of legal limit.

In case of a non-regulated processed product the maximum limit to be indicated is the one of the regulated unprocessed product (Article 3 of Regulation (EU) 2023/915). The transformation factor (see Art. 3 of Regulation (EU) 2023/915) could be indicated in evalInfo.com or in a resInfo.com.

EFSA developed a harmonised database (Legal Limit Database) containing MRLs established for pesticides and veterinary medicine residues in Regulation (EC) No 396/2005 and Regulation (EC) No 37/2010. This database is used to validate the plausibility of the reported result evaluation (evalCode) with respect to the numerical comparison of result value (resVal) and the MRL when the reported sample is 'unprocessed'. Thus, the reporting of these elements would only be required in cases in which limits other than those defined

in the above-mentioned regulations or other than the official EU limits are in use, e.g. national limits.

Limit type codes can be selected from the LMTTYP catalogue.

For pesticide monitoring the typically reported value for the type of limit for the result evaluation (evalLimitType) data element is W002A (MRL). If the national or local limit (W990A) is reported, the result will be disregarded from the report analysis.

For VMPR monitoring the following limit types can be reported in evalLimitType: W002A=MRL, W005A=Minimum required performance limit, W006A=Reference point of action, W012A=Presence, W001A=Maximum limit (this applies only to coccidiostats, histomonostats and chemical elements) and W007A=Action level.

Example	**XML**
Reporting of an EU MRL in place	<evalLowLimit>0.003</evalLowLimit> <evalLimitType>W002A</evalLimitType>

N.04 Evaluation of the result (evalCode) (mandatory)

The evaluation (evalCode) must be applied at the level of each residue or marker within the analytical method. It provides the judgement of the reporting country on whether the result reported was considered to exceed the legal limit applicable to the sample or non-compliant due to, for example, the presence of forbidden/prohibited substances.

It is sufficient to report 'Above the level of concern' (evalCode=J003A) for results that were found to clearly exceed the limit (taking into account the measurement uncertainty) or level of concern, or 'Below the level of concern' (evalCode=J002A) for results that are below the limit or level of concern.

The result evaluation for each of the single components of a multicomponent residue definition/marker compound or of a contaminants group (i.e. associated with the paramType=P002A) should be reported with the code J029A='results not evaluated'.

For VMPR monitoring 'detected' (evalCode=J041A) in conjunction with evalLimitType='Presence' (code W012A) can be reported and this will be counted as a non-compliant result, although it is not recommended since the code J003A could be used.

Evaluation codes can be selected from the RESEVAL catalogue. The table below explains the use of codes that should typically be reported.

The count of non-compliant samples and results in EU reports will be based on the values reported in this data element in conjunction with evalInfo.resAsses as explained in paragraph N.06.3

Example	XML
The residue in the sample is considered to be above the level of concern. For residues this code is selected if the numerical value of the quantified residues is clearly above the legal limit taking into account the analytical measurement uncertainty; thus, the result must be evaluated against the legal limit set under the relevant MRL/ML legislation. The code J003A must not be used to indicate whether the measured residue in samples produced in the EU is not approved at EU level according to Regulation 1107/2009[56] (on the approved uses of plant protection products), nor to assess the presence of a pesticide residue (within a legal limit) in organic products that is not permitted in organic farming	<evalCode>J003A</evalCode>
The residue in the sample is considered to be below the level of concern	<evalCode>J002A</evalCode>
The residue was not evaluated; for example, when the substance is only part of the full residue definition/group (paramType=Part of a sum (P002A))	<evalCode>J029A</evalCode>
The residue was not evaluated as no legal limit applies to the substance or residue measured in the sample	<evalCode>J029A</evalCode>
The result is above the limit, but the residue in the sample is considered to be compliant, taking into account the analytical measurement uncertainty	<evalCode>J031A</evalCode>
The result indicates the occurrence of an illegal/prohibited VMPR included in Group A (no MRL set for these substances) or the detection of an unauthorised food additive	<evalCode>J041A</evalCode>

N.05 Action taken (actTakenCode), N.06.1 Conclusion of follow-up investigation (evalInfo.conclusion) and N.06.2 Comment (evalInfo.com) (optional)

Action taken should be reported when a non-conformity is identified during the control activities or if a measured substance is found above the level of concern. Multiple actions can be reported.

This is important for the pesticide samples if found non-compliant, to understand whether the product has been placed on the EU market and consumed or withdrawn without reaching the consumer or destroyed.

It is mandatory for VMPR and pesticides to report the action taken in case of non-compliant results.

[56] Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC. OJ L 309, 24.11.2009, p. 1–50.

Conclusion is used to classify the findings of follow-up investigations. The comment element allows additional details on non-compliant results or non-conformities. This element may be included in EFSA Annual Reports listing non-compliant results.

EvalInfo.conclusion and evalInfo.com can also be used to indicate when results are above a residue legal limit, but the final evaluation is compliant, e.g. cases of natural occurrence or environmental contamination.

EvalInfo.conclusion should be used for reporting a long shelf-life product (code 'C08A='Long shelf life product' from CONCLUS catalogue) for which the MRL in place at the time of placing it on the market was different than the MRL applicable on the current data collection for the given pesticide/crop combination.

For the additives and flavourings domains, evalInfo.conclusion is highly recommended to be used to indicate whether the food additive or flavouring was specified on the label of the analysed sample, or the positive analytical result was due to natural occurrence.

The codes to be used are those from the CONCLUS catalogue selecting the fa_ff hierarchy. The two main options to be used are C19A ('Yes, present on label/added') and C20A ('No, not present on label/not added'). A third option, 'Natural occurrence' (C05A), can also be used in those cases in which the substance is in the sample as part of the matrix itself. As an example, C05A could be reported in combination with code C20A (C20A$C05A) if the substance is not listed on the label/added but it occurs naturally.

'Action taken codes' can be selected from the ACTION catalogue.

'Conclusion' codes can be selected from the CONCLUS catalogue.

'evalInfo.com' can be reported with a free text, as appropriate. In the table below some examples are provided.

Example	XML
Follow-up investigation indicates illegal treatment and additional sampling is planned	<actTakenCode>I</actTakenCode> <evalInfo>conclusion=C04A$com=increased testing for this product in aquaculture is planned</evalInfo> OR <actTakenCode>I</actTakenCode> <evalInfo.conclusion>C04A</evalInfo.conclusion> <evalInfo.com>increased testing for this product in aquaculture is planned </evalInfo.com>
The result was non-compliant and there has been a rapid alert notification in RASFF	<evalCode>J003A</evalCode> <actTakenCode>R</actTakenCode> <evalInfo>com=Reference number 2018.1567</evalInfo> OR <actTakenCode>R</actTakenCode> <evalInfo.com>Reference number 2018.1567 </evalInfo.com>

Example	XML
Result considered to be compliant since investigations indicate exceedance may be due to the natural occurrence of the substance	<evalCode>J002A</evalCode> <actTakenCode>I</actTakenCode> <evalInfo>conclusion=C05A$com=investigations indicate exceedance may be due to natural occurrence of the substance </evalInfo> OR <evalCode>J002A</evalCode> <actTakenCode>I</actTakenCode> <evalInfo.conclusion>C05A</evalInfo.conclusion> <evalInfo.com>investigations indicate exceedance may be due to natural occurrence of the substance </evalInfo.com>
Result considered compliant, for a food additive present on the label and natural occurring in the food	<evalCode>J002A</evalCode> <evalInfo.conclusion >C19A$C05A</evalInfo.conclusion>
Result considered non-compliant, for a food additive not present on the label while found in the food	<evalCode>J003A</evalCode> <evalInfo.conclusion>C20A</evalInfo.conclusion>

N.06.3 Result assessment (evalInfo.resAsses) (optional)

This element can be used to report the single result overall evaluation ('Compliant' or 'Non-compliant'), e.g. when results are numerically above the legal limit (single result numerical evaluation) but deemed compliant by national expert judgement (e.g. by a national risk assessor) due, for example, to natural occurrence. This element is optional and can be different for each result in a sample.

The values reported in evalCode and evalInfo.resAsses will be used by EFSA to determine whether the result in the relevant annual/national reports is counted as compliant or non-compliant.

A sample will consequently be classified as non-compliant for a specific Annual Report if one or more results for substances covered by that regulation are counted as non-compliant.

For example, if evalCode=J003A (Above the level of concern) and evalInfo.resAsses=null then the result is counted as non-compliant; if evalCode=J003A (Above the level of concern) and evalInfo.resAsses=J037A (Compliant) then the result is counted as compliant. If evalCode=J002A (Below the level of concern) and evalInfo.resAsses =J038A (non-compliant) then the result is counted as non-compliant.

However, in the pesticide residues remit, the assessment of compliance or non-compliance is based only on the numerical comparison between the resVal and the MRL. Thus, it will be done based on the evalCode only. Further information can be provided in the evalInfo.resAsses if competent authorities considered it (e.g. if fish or feed is reported, or if organic samples are reported) but this information will not be used to count the number of non-compliance in the EU Annual Report.

Only the codes 'J037A' (Compliant) or 'J038A' (Non-compliant) of the RESEVAL catalogue are valid when reporting evalInfo.resAsses.

The below table shows the example of the element evalInfo.resAsses to be used in combination with evalInfo.com. It is important to note that where evalInfo.resAsses is reported and is different from evalCode, the reason for the difference must be reported in evalInfo.Conclusion. For example, the evalInfo.resAsses could be reported as in the following case: <evalInfo>resAsses=J037A$conclusion=C05A$com=Result is within a physiological range for this sample to be a naturally occurring hormone</evalInfo>.

sampMatCode	paramCode	evalCode	evalInfo.conclusion	evalInfo.com	evalInfo.resAsses
Milk, raw	Chloramphenicol	Above level of concern	Accidental	Contamination from sampler cannot be excluded	Compliant (J037A)
Pig	Zearalenone	Below level of concern		Presence of zeranol and absence of mycotoxins indicates illegal occurrence	Non-compliant (J038A)

The SSD data elements sampEventAsses, sampTkAsses, and sampAnAsses will not be used for EFSA data analysis purposes in counting results/samples non-compliances.

N.06.4 Restriction or exception (evalInfo.restrictionException) (optional)

This data element should be used to provide the restrictions/exceptions as described in the Regulation (EC) No 1333/2008 for each authorised food additives across the different additive food categories. This data element can also be used for food flavourings in line with Regulation (EC) No 1334/2008 where the restrictions/exceptions for their use are described.

The codes need to be selected from the ADDFOOD catalogue. The most detailed code that defines the restriction/exception should be chosen and reported in this data element. Few examples are described below:

Example	XML
Sample of mozzarella cheese analysed for lactic acid	<evalInfo.restrictionException>ADD00197A</evalInfo.restrictionException>
Sample of milk chocolate analysed for citric acid	<evalInfo.restrictionException>ADD00386A</evalInfo.restrictionException>
Sample of processed fish analysed for ascorbic acid	<evalInfo.restrictionException>ADD00622A</evalInfo.restrictionException>
No restrictions/exceptions to be reported	<evalInfo.restrictionException>ADD00881A</evalInfo.restrictionException>

Table 7: Full list of SSD2 elements, mapping to SSD1 and mandatory SSD2 elements

Element code	Element name	Element label	Type	Controlled terminology	Mandatory/optional element for chemical monitoring reporting	SSD1 element name	SSD1 element code
A.01	localOrgId	Local organisation identification code	xs:string (100)		Optional	localOrgId	O.1
A.02	localOrgCountry	Local organisation country	xs:string (2)	COUNTRY	Optional	localOrgCountry	O.2
A.03	localOrgInfo	Local organisation additional information	*CompoundType*		Optional		
B.01	progId	Sampling programme identification code	xs:string (100)		Mandatory	progCode	S.31
B.02	progLegalRef	Programme legal reference	xs:string (100)	LEGREF	Mandatory	progLegalRef	S.32
B.03	sampStrategy	Sampling strategy	xs:string (5)	SAMPSTR	Mandatory	progSampStrategy	S.33
B.04	progType	Programme type	xs:string (5)	PRGTYP	Mandatory	progType	S.34
B.05	sampMethod	Sampling method	xs:string (5)	SAMPMD	Optional	sampMethod	S.35
B.06	sampler	Sampler	xs:string (5)	SAMPLR	Mandatory		
B.07	sampPoint	Sampling point	xs:string (5)	SAMPNT	Mandatory	sampPoint	S.39
B.08	progInfo	Additional sampling programme information	*CompoundType*		Optional		
C.01	sampEventId	Sampling event identification code	xs:string (100)		Optional		
C.02	sampUnitType	Sampling unit type	xs:string (5)	SAMPUNTYP	Optional		
C.03	sampUnitSize	Sampling unit size	xs:double		Optional	lotSize	S.37
C.04	sampUnitSizeUnit	Sampling unit size unit	xs:string (5)	UNIT	Optional	lotSizeUnit	S.38
C.05	sampUnitIds	Other sampling unit identifications	*CompoundType*		Optional		
C.06	sampEventInfo	Additional sampling event information	*CompoundType*		Optional		
D.01	sampId	Sample taken identification code	xs:string (100)		Mandatory	labSampCode	S.01
D.02	repCountry	Reporting country	xs:string (2)	COUNTRY	Optional		
D.03	sampCountry	Country of sampling	xs:string (2)	COUNTRY	Mandatory	sampCountry	S.04
D.04	sampArea	Area of sampling	xs:string (5)	NUTS	Optional	sampArea	S.05
D.05	repYear	Reporting year	xs:integer (4)		Optional		
D.06	sampY	Year of sampling	xs:integer (4)		Mandatory	sampY	S.28

Element code	Element name	Element label	Type	Controlled terminology	Mandatory/optional element for chemical monitoring reporting	SSD1 element name	SSD1 element code
D.07	sampM	Month of sampling	xs:integer (2)		Mandatory	sampM	S.29
D.08	sampD	Day of sampling	xs:integer (2)		Mandatory	sampD	S.30
D.09	sampSize	Sample taken size	xs:double		Optional		
D.10	sampSizeUnit	Sample taken size unit	xs:string (5)	UNIT	Optional		
D.11	sampInfo.OrigSampId	Additional sample taken information	xs:string (100)		Optional		
E.01	sampMatType	Type of matrix	xs:string (5)	MTXTYP	Optional		
E.02	sampMatCode	Coded description of the matrix of the sample taken	*CompoundType*	MTX (FoodEx2)	Mandatory	EFSAProdCode, prodProdMeth, prodPack, prodTreat, prodIngred	S.12, S.15, S.16, S.17, S.20
E.03	sampMatText	Text description of the matrix of the sample taken	xs:string (250)		Optional	prodText	S.14
E.04	origCountry	Country of origin of the sample taken	xs:string (2)	COUNTRY	Mandatory	origCountry	S.06
E.05	origArea	Area of origin of the sample taken	xs:string (5)	NUTS	Optional	origArea	S.07
E.06	origFishAreaCode	Area of origin for fisheries or aquaculture activities code of the sample taken	xs:string (10)	FAREA	Optional	origFishAreaCode	S.08
E.07	origFishAreaText	Area of origin for fisheries or aquaculture activities text of the sample taken	xs:string (250)		Optional	origFishAreaText	S.09
E.08	procCountry	Country of processing of the sample taken	xs:string (2)	COUNTRY	Optional	procCountry	S.10
E.09	procArea	Area of processing of the sample taken	xs:string (5)	NUTS	Optional	procArea	S.11
E.10	sampMatInfo	Additional information on the matrix sampled	*CompoundType*		Optional	prodCom, prodY, prodM, prodD, expiryY, expiryM, expiryD, prodManuf, prodBrandName	S.21, S.22, S.23, S.24, S.25, S.26, S.27, S.19, S.18
F.01	sampAnId	Sample analysed identification code	xs:string (100)		Optional		

Element code	Element name	Element label	Type	Controlled terminology	Mandatory/optional element for chemical monitoring reporting	SSD1 element name	SSD1 element code
F.02	sampAnRefTime	Sample analysis reference time	xs:string (5)	REFTM	Optional		
F.03	analysisY	Year of analysis	xs:integer (4)		Mandatory	analysisY	R.02
F.04	analysisM	Month of analysis	xs:integer (2)		Optional	analysisM	R.03
F.05	analysisD	Day of analysis	xs:integer (2)		Optional	analysisD	R.04
F.06	sampAnInfo	Additional information on the sample analysed	*CompoundType*		Optional		
G.01	anMatCode	Coded description of the analysed matrix	*CompoundType*	MTX	Optional		
G.02	anMatText	Text description of the matrix analysed	xs:string (250)		Optional		
G.03	anMatInfo	Additional information on the analysed matrix	*CompoundType*		Optional		
H.01	anPortSeq	Sample analysed portion sequence	xs:string (100)		Optional	labSubSampCode	S.02
H.02	anPortSize	Sample analysed portion size	xs:double		Optional		
H.03	anPortSizeUnit	Sample analysed portion size unit	xs:string (5)	UNIT	Optional		
H.04	anPortInfo	Additional information on the sample analysed portion	*CompoundType*		Optional		
I.01	isolId	Isolate identification	xs:string (100)		Not applicable		
I.02	isolParamCode	Coded description of the isolate	*CompoundType*	PARAM	Not applicable		
I.03	isolParamText	Text description of the isolate	xs:string (250)		Not applicable		
I.04	isolInfo	Additional information on the isolate	*CompoundType*		Not applicable		
J.01	labId	Laboratory identification code	xs:string (50)		Mandatory	labCode	L.1
J.02	labAccred	Laboratory accreditation	xs:string (1)	LABACC	Mandatory	labAccred	L.2
J.03	labCountry	Laboratory country	xs:string (2)	COUNTRY	Mandatory	labCountry	L.3
J.04	labInfo	Additional information on the laboratory	*CompoundType*		Optional		
K.01	paramType	Type of parameter	xs:string (5)	PARAMTYP	Optional	paramType	R.08
K.02	paramCode	Coded description of the parameter	*CompoundType*	PARAM	Mandatory	paramCode	R.06
K.03	paramText	Parameter text	xs:string (250)		Optional	paramText	R.07
L.01	anMethRefId	Analytical method identification	xs:string (50)		Mandatory	anMethRefCode	R.09

Element code	Element name	Element label	Type	Controlled terminology	Mandatory/optional element for chemical monitoring reporting	SSD1 element name	SSD1 element code
L.02	anMethRefCode	Analytical method reference code	xs:string (5)	ANLYREFMD	Optional		
L.03	anMethType	Analytical method type	xs:string (5)	ANLYTYP	Mandatory		
L.04	anMethCode	Analytical method code	*CompoundType*	ANLYMD	Mandatory	anMethCode	R.10
L.05	anMethText	Analytical method text	xs:string (250)		Optional	anMethText	R.11
L.06	anMethInfo	Additional information on the analytical method	*CompoundType*		Optional		
M.01	resId	Result identification code	xs:string (100)		Mandatory	resultCode	R.01
M.02	accredProc	Accreditation procedure for the analytical method	xs:string (5)	MDACC	Mandatory	accredProc	R.12
M.03	resUnit	Result unit	xs:string (5)	UNIT	Mandatory	resUnit	R.13
M.04	resLOD	Result LOD	xs:double		Optional	resLOD	R.14
M.05	resLOQ	Result LOQ	xs:double		Optional	resLOQ	R.15
M.06	resLLWR	Result lower limit of the working range	xs:double		Optional		
M.07	resULWR	Result upper limit of the working range	xs:double		Optional		
M.08	CCalpha	CC alpha	xs:double		Optional	ccAlpha	R.16
M.09	CCbeta	CC beta	xs:double		Optional	ccBeta	R.17
M.10	resVal	Result value	xs:double		Optional	resVal	R.18
M.11	resValRec	Result value recovery rate	xs:double		Optional	resValRec	R.19
M.12	resValRecCorr	Result value corrected for recovery	xs:string (1)	YESNO	Optional	resValRecCorr	R.20
M.13	exprResPerc	Expression of result percentage	*CompoundType*		Optional	moistPerc, fatPerc	R.23 R.24
M.14	exprResType	Expression of result type	xs:string (5)	EXPRRES	Optional	exprRes	R.25
M.15	resQualValue	Result qualitative value	xs:string (3)	POSNEG	Optional	resQualValue	R.26
M.16	resType	Type of result	xs:string (3)	VALTYP	Mandatory	resType	R.27
M.17	resValUncert	Result value uncertainty	xs:double		Optional	resValUncert	R.22
M.18	resValUncertSD	Result value uncertainty standard deviation	xs:double		Optional	resValUncertSD	R.21
M.19	resRefId	Result reference identification	xs:string (100)		Optional		
M.20	resInfo.notSummed	Indicates LOQ should be calculated during the submission process	xs:string (1)	'Y'	Optional	resComm	R.32

Element code	Element name	Element label	Type	Controlled terminology	Mandatory/optional element for chemical monitoring reporting	SSD1 element name	SSD1 element code
N.01	evalLowLimit	Limit for the result evaluation	xs:double		Optional	resLegalLimit	R.28
N.02	evalHighLimit	Limit for the result evaluation (high limit)	xs:double		Optional		
N.03	evalLimitType	Type of limit for the result evaluation	xs:string (5)	LMTTYP	Optional	resLegalLimitType	R.29
N.04	evalCode	Evaluation of the result	xs:string (5)	RESEVAL	Mandatory	resEvaluation	R.30
N.05	actTakenCode	Action taken	xs:string(1)	ACTION	Optional	actTakenCode	R.31
N.06	evalInfo.conclusion	Conclusion of follow-up investigation	xs:string (5)	CONCLUS	Optional		
N.06	evalInfo.com	Comment	xs:string (250)		Optional		
N.06	evalInfo.resAsses	Assessment of the result	xs:string (5)	RESEVAL	Optional		
N.06	evalInfo.restrictionException	Restriction or exception	xs: string (250)	ADDFOOF	Optional		

3 Specific requirements for baby foods' data submission

This section refers to matrix classifications (FoodEx2) which are under the high-level code for 'Food products for the young population' (A03PV). When reporting samples of such foods, data providers must note the following specific conditions which apply.

For records to be included in the pesticides Annual Report:

- the progLegalRef value must be N028A (Commission Directives No 2006/125/EC) or N318A or N027A;
- baby foods are always considered to be processed;
- matrix classification code attributes must be as detailed as possible, e.g. for infant formula it is important to know whether it was powder or liquid, reconstituted or not. Baby food legal limits tend to apply to the ready to eat product, i.e. likely to the reconstituted form of the product in contrast, with other food products where the limits tend to apply to product as placed on the market.

Baby food samples are excluded from the VMPR Annual Report as defined in Regulation (EU) 2022/1646. A BR prevents that baby foods is reported with progLegalRef (N371A). Please see BR CHEMON55 in Table 8.

Baby food samples are accepted in the ChemMon data collection when they have been analysed for any valid ChemMon parameter as long as their progLegalRef is not N371A (Regulation (EU) 2022/1646).

4 Specific requirements for chemical contaminants' data submission

For some chemical results, more detailed and specific information is necessary to fully describe the sample and analytical results. These specific requirements (mandatory or recommended) are described here (Table 8). Specific requirements are updated annually to reflect the development of relevant legislation and in response to recommendations for data in EFSA's scientific opinions. Annual amendments are shared with the EFSA Scientific Network on Chemical Monitoring Data.

Table 8: Specific reporting requirements for certain contaminants, food additives and food flavourings.

Topic	SSD2 data element	Status of data element	Comment	Corresponding business rule (see Chapter 6)[57]	Legislative or other reference (where applicable)
Brominated flame retardants	Area of origin for fisheries or aquaculture activities code and text of the sample taken (E.06 and E.07)	Recommended	If data are reported on fish, it is recommended that the area of origin for fisheries is specified. When the specific information on the 'Area of origin for fisheries or aquaculture activities code' (E.06) is not available ('Unknown [M99]') as a minimum the fish's original environment should be given ('from freshwater' or 'from saltwater') in area of origin for fisheries or aquaculture activities text (E.07)	CHEMON20	
	Expression of result percentage/percentage of fat	Recommended	Strongly recommended that the percentage of fat in the original sample is always reported (regardless of whether the result value is expressed in whole weight, in fat weight or dry matter)	CHEMON21	
Dioxins and dioxin-like PCBs, non-dioxin-like PCBs	Area of origin for fisheries or aquaculture activities code and text of the sample taken (E.06 and E.07)	Recommended	If data are reported on fish, it is recommended that the area of origin for fisheries is specified. When the specific information on 'Area of origin for fisheries or aquaculture activities code' (E.06) is not available ('Unknown [M99]') as a minimum the fish original environment should be given ('from freshwater' or 'from saltwater') in area of origin for fisheries or aquaculture activities text (E.07)	CHEMON20	
	Coded description of the matrix of the sample taken (E.02)	Recommended	It is particularly important to classify the samples of fish meat and fish products at the most detailed FoodEx2 level available. If data are reported on fish, it is recommended that the analysed fish species be precisely reported, especially fish originating from the Baltic region	-	

[57] A '-' in this column means that no business rule is relevant given the type of requirement.

Topic	SSD2 data element	Status of data element	Comment	Corresponding business rule (see Chapter 6)[57]	Legislative or other reference (where applicable)
	Additional information on the matrix sampled (E.10)\comment	Recommended	If data are reported on fish, it is recommended that the length and/or weight of the fish samples be reported[58, 59]	-	Measurement Regulation (EC) 850/98 and Regulation (EC) 2187/2005
	Additional information on the matrix sampled (E.10)\year, month and day of production	Recommended	If data are reported on fish, it is recommended that when the fish have been caught be reported		
	Coded description of the parameter (K.02)	Recommended	The full set of the 29 dioxins and dioxin-like PCBs (17 PCDD/F, 12 dl-PCB), as listed in the Appendix to Annex I of Commission Regulation (EU) 2023/915, is strongly recommended to be reported when reporting results on dioxins and dioxin-like PCBs. For the non-dioxin-like PCBs, the six indicator congeners (PCB 28, PCB 52, PCB 101, PCB 138, PCB 153 and PCB 180) are strongly recommended to be reported. It is strongly recommended to report analytical results at the congener level in the measured concentration	CHEMON09 CHEMON10	Commission Regulation (EU) 2023/915
	Expression of result percentage (M.13)\percentage of fat	Recommended	It is recommended to report the percentage of fat in the original sample for food samples with maximum or action levels expressed on a fat basis: products of terrestrial animal origin, marine oils and vegetable oils and fats (marine oils included).	CHEMON21	Commission Regulations (EU) 278/2012[60] and Commission Regulations (EU) 644/2017[61]

[58] Council Regulation (EC) No 850/98 of 30 March 1998 for the conservation of fishery resources through technical measures for the protection of juveniles of marine organisms. OJ L 125, 27.4.1998, p. 1.
[59] Council Regulation (EC) No 2187/2005 of 21 December 2005 for the conservation of fishery resources through technical measures in the Baltic Sea, the Belts and the Sound, amending Regulation (EC) No 1434/98 and repealing Regulation (EC) No 88/98. OJ L 349, 31.12.2005, p.1-23.
[60] Commission Regulation (EU) No 278/2012 of 28 March 2012 amending Regulation (EC) No 152/2009 as regards the determination of the levels of dioxins and polychlorinated biphenyls. OJ L 91, 29.3.2012, p. 8–22.
[61] Commission Regulation (EU) No 644/2017 of 5 April 2017 laying down methods of sampling and analysis for the control of levels of dioxins, dioxin-like PCBs and non-dioxin-like PCBs in certain foodstuffs and repealing Regulation (EC) No 589/2014. OJ L 92, 6.4.2017, p. 9–34.

Topic	SSD2 data element	Status of data element	Comment	Corresponding business rule (see Chapter 6)[57]	Legislative or other reference (where applicable)
			It is recommended to report food samples of fish and offal and foods of plant origin (except oils) on a whole weight basis. Feed should be reported on the basis of 88% dry matter		
	Expression of result percentage (M.13)\percentage of fat	Recommended	It is recommended that the percentage of fat is provided for the other samples, when the lipid content has been determined	CHEMON21	
	Additional information on the result (M.20)	Recommended	If the sample was reconstituted before analysis, e.g. foods for infants and young children, it would be relevant to provide information on the exact reconstitution protocol (ratio dry product: added fluid (description of the fluid used) Examples: '10:90 (milk)', '20:80 (water)')	-	
Mineral oils	Expression of result percentage (M.13)\percentage of moisture	Recommended	It is recommended that the percentage of moisture in the original sample is always reported (regardless of whether the result value is expressed in whole weight, in fat weight or dry matter)	CHEMON11	
	Additional information on the result (M.20)	Recommended	The data providers are requested to report information on the molecular mass distribution expressed as the number of carbon atoms (referring to n-alkanes) including the range of carbon atoms and the maximum of the distribution curve	-	
Acrylamide	Coded description of the matrix of the sample taken (E.02)\ingredients (F04)	Recommended	It is recommended that the list of ingredients is provided in the 'Ingredients' facet for the following food items: 'Potato crisps', 'Pre-cooked French fries, potato products for home cooking', 'Breakfast cereals (excluding muesli and porridge)', 'Substitute coffee (dry)' and 'Baby foods, other than processed cereal-based foods'		

Topic	SSD2 data element	Status of data element	Comment	Corresponding business rule (see Chapter 6)[57]	Legislative or other reference (where applicable)
	Coded description of the matrix of the sample taken (E.02)\legislative classes (F33)	Mandatory	It is mandatory to provide additional product classification in the 'Legislative classes' facet. Data providers must consult the list of legislative classes applicable to acrylamide in FoodEx2 Catalogue Facet 33: Legislative classes	CHEMON12	Commission Regulation 2017/2158 establishing mitigation measures and benchmark levels for the reduction of the presence of acrylamide in food[62]
	Country of processing of the sample taken (E.08)	Recommended	It is recommended that the country where the food was processed is provided (ISO 3166-1-alpha-2)		
	Text description of the matrix of the sample taken (E.03)	Recommended	It is recommended that the following additional information is mentioned in the text description: Potato crisps (category 2): indicate whether batch fried or continuously fried; Pre-cooked French fries/home products (category 3): indicate whether the product is purchased fresh/frozen, and whether the starting material is fresh potato or potato dough; Crispbread (category 6): indicate whether the product is/is not fermented; Roasted coffee (category 7): indicates the degree of roasting (light, medium, dark)	-	
	Result value uncertainty (M.17)	Recommended	If available, information on the measurement uncertainty should be provided (range to be given in the same units as the result value (resVal))	-	

[62] Commission Regulation (EU) 2017/2158 of 20 November 2017 establishing mitigation measures and benchmark levels for the reduction of the presence of acrylamide in food. C/2017/7658. OJ L 304, 21.11.2017, p. 24–44.

Topic	SSD2 data element	Status of data element	Comment	Corresponding business rule (see Chapter 6)[57]	Legislative or other reference (where applicable)
	Additional information on the result (M.20)	Recommended	For the samples of the food category 3 (Pre-cooked French fries/potato product for home cooking), e.g. pre-cooked French fries, which have been prepared 'as consumed' before analysis, it is relevant to provide information on the exact cooking conditions (time, temperature and handling information). In addition, if the sample has been reconstituted before analysis, e.g. instant coffee powder, or foods for infant and young children, it is relevant to provide information on the exact reconstitution protocol (ratio dry product: added fluid; description of the fluid used) Examples: '2:100 (water)', '10:90 (milk)', '20:80 (water)'	-	Commission Recommendation (2010/307/EC)
Furan	Coded description of the analysed matrix (G.01)	Recommended	If the sample has been analysed 'as consumed', then it should be described in the analysed sample as consumed[63]	-	Commission Recommendation 2007/196/EC
	Additional information on the result (M.20)	Recommended	If the product is analysed as consumed, it is relevant to provide information on the exact cooking preparation with time, temperature and handling information (using the $ character to separate extra information). Example 'Heated in microwave$60°C$1.5min'	-	
	Sampling method (B.05)	Recommended	For the monitor of furan, 2-methylfuran and 3-methylfuran in food and to ensure that the samples are representative, it is advised to follow the sampling procedures laid down in part B of the Annex to Commission Regulation (EC) No 333/2007 <sampMethod>N011A</sampMethod>		Commission Recommendation (EC) 2022/495 & Commission Regulation (EC) 333/2007[64]

[63] Commission Recommendation No 2007/196/EC of 28 March 2007 on the monitoring of the presence of furan in foodstuff. OJ L 88, 29.3.2007, p.56-57.
[64] Commission Recommendation (EC) 2022/495 of March 2022 on monitoring the presence of furan and alkylfurans in food
Commission Regulation (EC) No 333/2007 of 28 March 2007 laying down the methods of sampling and analysis for the official control of the levels of lead, cadmium, mercury, inorganic tin, 3-MCPD and benzo(a)pyrene in foodstuffs. OJ L 88, 29.3.2007, p. 29–38.

Topic	SSD2 data element	Status of data element	Comment	Corresponding business rule (see Chapter 6)[57]	Legislative or other reference (where applicable)
Polycyclic aromatic hydrocarbons	Coded description of the matrix of the sample taken (E.02)\packaging material (F18)	Recommended	It is recommended to describe the container or wrapper that holds the product as marketed. This is important since a source of PAH contamination in food is the packaging in which it is marketed. According to legislation, the sample container must be of inert material to eliminate the possibility of migration contamination during sampling and analysis	CHEMON15	Commission Regulation (EC) 333/2007 laying down the methods of sampling and analysis for the official control of the levels of lead, cadmium, mercury, inorganic tin, 3-MCPD and benzo(a)pyrene in foodstuffs
	Result value recovery rate (M.11)	Recommended	Recommended to provide the recovery value associated with the concentration measurement (as a percentage) when an extraction step is applied in the analytical method	-	Commission Regulation (EC) No 333/2007
	Result value uncertainty (M.17)	Recommended	Recommended to provide the expanded uncertainty (95% confidence interval) associated with the concentration measurement (in units of the result)		Commission Regulation (EC) No 333/2007

Topic	SSD2 data element	Status of data element	Comment	Corresponding business rule (see Chapter 6)[57]	Legislative or other reference (where applicable)
3-MCPDs, 2-MCPDs and glycidyl esters	Analytical method code (L.04)	Mandatory	For the analysis of 3- and 2-MCPD esters and glycidyl esters it should be clarified whether the samples have been analysed with one of the four methods validated by ISO (the International Organization for Standardization). For the four methods, the appropriate code from the catalogue ANLYMD must be reported; otherwise, a reference to the different methods must be provided. The same applies for 3- and 2-MCPD total referring to the ester part of the sum.	-	EN ISO 18363-1:2021[65] EN ISO 18363-2:2018[66] EN ISO 18363-3:2024[67] EN ISO 18363-4:2021[68]
	Expression of result percentage (M.13)\percentage of fat	Recommended	It is recommended that the percentage of fat in the original sample is always reported (regardless of whether the result value is expressed in whole weight, in fat weight or dry matter)	CHEMON21	
Mycotoxins	Coded description of the matrix of the sample taken (E.02)	Mandatory	It is important to classify the food/feed samples of grains at the most detailed FoodEx2 level available. This is particularly needed for 'Grains and grain-based products' and 'Food for infants and small children'	-	
	Coded description of the matrix of the sample taken (E.02)\Production Method (F21)	Recommended	It is recommended that it is reported whether the sample was obtained from the produce of traditional (non-organic) or organic farming	CHEMON17	
	Result value recovery rate (M.11)	Recommended	It is recommended that the recovery value associated with the concentration measurement is provided (as a percentage)		Commission Regulation (EU) 2023/2782

[65] https://www.iso.org/obp/ui/en/#iso:std:iso:18363:-1:ed-1:v1:en
[66] https://www.iso.org/obp/ui/en/#iso:std:iso:18363:-2:ed-1:v1:en
[67] https://www.iso.org/obp/ui/en/#iso:std:iso:18363:-3:ed-1:v1:en
[68] https://www.iso.org/obp/ui/en/#iso:std:iso:18363:-4:ed-1:v1:en

Topic	SSD2 data element	Status of data element	Comment	Corresponding business rule (see Chapter 6)[57]	Legislative or other reference (where applicable)
	Expression of result percentage (M.13)\percentage of moisture	Recommended	It is recommended that the percentage of moisture in the original sample of feed is reported and for processed cereal-based foods for infants and young children	CHEMON11	
	Result value uncertainty (M.17)	Recommended	It is recommended that the expanded uncertainty (95% confidence interval) associated with the concentration measurement be provided	-	Commission Regulation (EU) 2023/2782
	Additional information on the result (M.20)	Recommended	If the sample was reconstituted before analysis, e.g. infant formula and follow-on formula, it would be relevant to provide information on the exact reconstitution protocol (ratio dry product: added fluid (description of the fluid used) Examples: '14:86 (water)')	-	
Arsenic and derivatives	Coded description of the matrix of the sample taken (E.02)	Recommended	For seaweed, it is strongly recommended that information is provided to identify the presence of the alga Hijiki. For rice, it is strongly recommended that information is provided about the type of rice	-	
	Coded description of the matrix of the sample taken (E.02)\Process (F28)	Recommended	Reporting data on rice (as grains for human consumption). In order to be able to distinguish raw rice and rice that has undergone any kind of treatment, in the 'Process' facet (F28) it is recommended to provide at least the codes for 'unprocessed' or 'processed'. Additionally, it is recommended that it is clearly indicated if the original sample is a dehydrated product	CHEMON18	
	Coded description of the matrix of the sample taken (E.02)\ingredients (F04)	Recommended	Reporting of rice-based products. If a product contains rice (e.g. a ready-to-eat meal for children, cereal-based; rice cake) it should be specified in this field. Furthermore, it is recommended that the type of algae included in alga-based foods for special nutritional use is described	-	
Cadmium and derivatives	Result value recovery rate (M.11)	Recommended	It is recommended that the recovery value associated with the concentration measurement is provided (as a percentage) when an extraction step is applied in the analytical method	-	Commission Regulation (EC) No 333/2007

Topic	SSD2 data element	Status of data element	Comment	Corresponding business rule (see Chapter 6)[57]	Legislative or other reference (where applicable)
	Result value uncertainty (M.17)	Recommended	It is recommended that the expanded uncertainty (95% confidence interval) associated with the concentration measurement is provided		Commission Regulation (EC) No 333/2007
Lead and derivatives	Result value recovery rate (M.11)	Recommended	It is recommended that the recovery value associated with the concentration measurement (as a percentage) is provided when an extraction step is applied in the analytical method	-	Commission Regulation (EC) No 333/2007
	Result value uncertainty (M.17)	Recommended	It is recommended that the expanded uncertainty (95% confidence interval) associated with the concentration measurement is provided		Commission Regulation (EC) No 333/2007
Mercury and derivatives	Coded description of the matrix of the sample taken (E.02)	Recommended	It is particularly important to classify the samples of fish meat, seafood and fish/seafood products at the most detailed FoodEx2 level available	-	
	Area of origin for fisheries or aquaculture activities code and text of the sample taken (E.06 and E.07)	Recommended	If data are reported on fish, it is recommended that the area of origin for fisheries is specified. If the specific information on 'Area of origin for fisheries or aquaculture activities code' (E.06) is not available ('Unknown [M99]') at least the fish original environment should be given ('from fresh water' or 'from salt water') in area of origin for fisheries or aquaculture activities text (E.07)	CHEMON20	
Nitrates in vegetables and other food commodities	Result value recovery rate (M.11)	Recommended	It is recommended that the recovery value associated with the concentration measurement is provided (as a percentage)[69]		Commission Regulation (EC) No 1882/2006
	Result value uncertainty (M.17)	Recommended	It is recommended that the expanded uncertainty (95% confidence interval) associated with the concentration measurement is provided (in units of the result)	-	Commission Regulation (EC) No 1882/2006

[69] Commission Regulation (EC) No 1882/2006 of 19 December 2006 laying down methods of sampling and analysis for the official control of the levels of nitrates in certain foodstuffs. OJ L 364, 20.12.2006, p.25.

Topic	SSD2 data element	Status of data element	Comment	Corresponding business rule (see Chapter 6)[57]	Legislative or other reference (where applicable)
Chlorates and perchlorates	Coded description of the matrix of the sample taken (E.02)\process (F28)	Recommended	Some product treatments, like deep-freezing, blanching or treatments at elevated temperatures have a significant effect on the chlorate level in food. Therefore, it is recommended to report facet F28 (Process) and select at least the code for 'processed' or 'unprocessed'; if possible, specify the most appropriate code describing the process from the SSD2 catalogue	CHEMON19	Commission Recommenda-tion (EU) 2015/682[70] Regulation (EU) 2020/749[71]
Food additives occurrence	Coded description of the matrix sampled (E02)\legislative classes (F33)	Mandatory	It is required to provide additional product classification (food category code) based on Commission Regulation (EC) No 1333/2008 on food additives, as last amended. Mapping from FoodEx2 base terms to legislative categories is automatically applied in the EFSA catalogue as implicit facets in most of the cases; if the F33 facet is not implicitly assigned, it is required to add it.	CHEMON39	Regulation (EC) No 1333/2008
Food flavourings occurrence	Coded description of the matrix sampled (E02)\legislative classes (F33)	Recommended	It is recommended to provide additional product classification (food category code) based on Regulation (EC) No 1334/2008 on food flavourings, as last amended. Mapping from FoodEx2 base terms to legislative categories is automatically applied in the EFSA catalogue as implicit facets in most of the cases; if the F33 facet is not implicitly assigned, it is recommended to add it	CHEMON39	Regulation (EC) No 1334/2008 and Regulation (EC) No 1333/2008
Bisphenol	Coded description of the matrix sampled (E02)\packaging material (F19)	Mandatory	It is mandatory to provide additional product classification (food category code) based on Commission Regulation (EC) No 213/2018 on bisphenol[72]. The list of codes to be used, according to	CHEMON14	Commission Regulation (EU) 2018/213

[70] Commission Recommendation (EU) 2015/682 of 29 April 2015 on the monitoring of the presence of perchlorate in food. OJ L 111, 30.4.2015 p.32-33.
[71] Commission Regulation (EU) 2020/749 of 4 June 2020 amending Annex III to Regulation (EC) No 396/2005 of the European Parliament and of the Council as regards maximum residue levels for chlorate in or on certain products. OJ L 178, 08/06/2020, p. 7–20
[72] Commission Regulation (EU) 2018/213 of 12 February 2018 on the use of bisphenol A in varnishes and coatings intended to come into contact with food and amending Regulation (EU) No 10/2011 as regards the use of that substance in plastic food contact materials. C/2018/0685. OJ L 41, 14.2.2018, p. 6–12.

Topic	SSD2 data element	Status of data element	Comment	Corresponding business rule (see Chapter 6)[57]	Legislative or other reference (where applicable)
			the MTX catalogue is provided in the F19 packaging material facet of the MTX catalogue		
Mineral oil hydrocarbons			Additional SSD requirements for the reporting on mineral oil hydrocarbon analytical results are detailed in the JRC guidance referenced[73]	-	Bratinova S and Hoekstra E, 2019

[73] S. Bratinova, E. Hoekstra (Editors) Guidance on sampling, analysis and data reporting for the monitoring of mineral oil hydrocarbons in food and food contact materials, Luxembourg: Publications Office of the European Union, 2019 ISBN 978-92-76-00172-0, doi:10.2760/208879, JRC115694

5 Algorithm to classify samples according to legislative matrix groups

5.1 Veterinary medicinal product residues

For the specific purpose of the National and Annual Reports of VMPR, EFSA has created an algorithm which interprets the matrix code reported (sampMatCode from the FoodEx2 classification and description system) and groups them according to the reportable groups defined in the EU VMPR legislation.

The algorithm is published on Knowledge Junction (EFSA, 2024) with other data collection supporting tools and documents. This is intended to help data providers ensure that each sample and result, which they expect to appear in their national VMPR report and in the EU VMPR Report, will be correctly classified based on the FoodEx2 codes reported in their data transmissions.

5.2 Pesticide residues

For the specific purpose of the preparation of the EFSA EU Annual Reports on pesticide residues, EFSA has created an algorithm which converts the reported sampMatCode FoodEx2 term to a MATRIX code according to the reportable groups defined in the pesticide legislation. For raw primary commodities (RPC) these mappings are explicitly recorded in the FoodEx2 catalogue as attributes of each term.

The algorithm is published on Knowledge Junction with other data collection supporting tools and documents. This is intended to help data providers ensure that each sample and result which they expect to appear in their pesticide residues national and annual reporting will be correctly classified based on the FoodEx2 codes reported in their data transmissions.

6 Business Rules

Business rules are provided to ensure the data submitted through the EFSA Data Collection Framework (DCF) are fit for purpose for use in EFSA's scientific assessments.

There are three groups of BR:

1. General business rules (GBR), which apply to all data submitted to EFSA through the DCF, including microbiological data as well as chemical.
2. Chemical monitoring business rules (CHEMON), which apply to all chemical monitoring data.
3. Specific business rules that apply to a specific subset of the chemical monitoring data, e.g. there are a small number of rules which enforce legislative or reporting requirements in relation to pesticides, VMPR, food additives or specific contaminants.

Table 9: Full list of general business rules (GBR) with troubleshooting tips

Business Rule Code	Description	Error/Warning Message	Type of error	Status	Comment
GBR1				Inactive	This rule originally required that resId was unique and the database key for each record. This is now done through the DCF schema, so the rule is no longer active
GBR2	For the records with the same 'Sample taken identification code' (sampId) and/or when the 'Sampling event identification code' (sampEventId) is reported, then the descriptors for the sampling event, the local organisation and the sampling programme (sections A, B, C) must be constant (the same) for all records with the same 'Sampling event identification code' (sampEventId). The data elements in sections A, B, and C are: localOrgId, localOrgCountry, localOrgInfo, sampStrategy, progType, sampMethod , sampler, sampPoint, progInfo, sampUnitType, sampUnitSize, sampUnitSizeUnit, sampUnitIds, sampEventInfo	The sampling event or local organisation or sampling programme descriptors (sections A, B, C[74]) are not constant for all records with the same sampId or sampEventId	Error	Active	Note: progId and progLegalRef were removed from the list of elements which must be consistent for the first time in the 2020 data collection Check that all required elements in Section C of the SSD2 data model are consistent for all the samples reported for the same sampId or Sampling Event Id
GBR3	The descriptors for the sample taken and the matrix sampled (sections D, E) and the 'Sampling event identification code' (sampEventId) must be constant (the same) for all records with the same 'Sample taken identification code' (sampId). The data elements in the sections D and E	The sample taken or matrix sampled descriptors (sections D, E) or sampEventId are not constant for all records with the same sampId	Error	Active	

[74] Sections A, B, C, D, E, F, G, H and I refer to the SSD2 data model sections as defined in the Standard Sample Description ver. 2.0 (EFSA 2013) guidance document.

Business Rule Code	Description	Error/Warning Message	Type of error	Status	Comment
	are: sampId, repCountry, sampCountry, sampArea, sampY, sampM, sampD, sampSize, sampUnitSize, sampInfo, sampMatType, sampMatCode, sampMatText, origCountry, origArea, origFishAreaCode, origFishAreaText, procCountry, procArea, sampMatInfo				
GBR4	The descriptors for the sample analysed and the matrix analysed (Sections F, G) and the 'Sample taken identification code' (sampId) must be constant (the same) for all records with the same 'Sample analysed identification code' (sampAnId). The data elements in the sections F and G are: sampAnId, sampAnRefTime, analysisY, analysisM, analysisD, sampAnInfo, anMatCode, anMatText, anMatInfo	The sample analysed or matrix analysed descriptors (Sections F, G) or sampId are not constant for all records with the same sampAnId	Error	Active	
GBR5	If a value in 'Sample analysed identification code' (sampAnId) and 'Sample analysed portion sequence' (anPortSeq) is reported, then the descriptors for the sample analysed portion (Section H) must be constant (the same) for all records with the same 'Sample analysed identification code' (sampAnId) and 'Sample analysed portion sequence' (anPortSeq). The data elements in the Section H are: anPortSeq, anPortSize, anPortSizeUnit, anPortInfo	The sample analysed portion descriptors (Section H) are not constant for all records with the same sampAnId and anPortSeq	Error	Active	
GBR6	If a value in 'Isolate identification' (isolId) is reported, then the descriptors for the isolate (Section I) and the 'Sample taken identification	The isolate descriptors (Section I) or sampId are not constant for all records with the same isolId	Error	Active	This GBR is relevant to biological data

Business Rule Code	Description	Error/Warning Message	Type of error	Status	Comment
	code' (sampId) must be constant (the same) for all records with the same 'Isolate identification' (isolId). The data elements in the Section I are: isolId, isolParamCode, isolParamText, isolInfo				
GBR7	If a value in 'Local organisation identification code' (localOrgId) is reported, then the 'Local organisation country' (localOrgCountry) must be constant (the same) for all records with the same 'Local organisation identification code' (localOrgId)	localOrgCountry is not constant for all records with the same localOrgId	error	active	
GBR8	If a value in 'Sampling programme identification code' (progId) is reported, then the 'Programme legal reference' (progLegalRef) must be constant (the same) for all records with the same 'Sampling programme identification code' (progId)	progLegalRef is not constant for all records with the same progId	error	inactive	Note: This BR was deprecated for the first time for the 2020 Data collection to ensure progLegalRef can optionally be reported at result level i.e. a different progLegalRef for results in the same sample
GBR10	The 'Laboratory country' (labCountry) must be constant (the same) for all records with the same 'Laboratory identification code' (labId)	labCountry is not constant for all records with the same labId	error	active	
GBR11	The 'Analytical method reference code' (anMethRefCode), the 'Analytical method code' (anMethCode), the 'Analytical method text' (anMethText), and the 'Additional information on the analytical method' (anMethInfo) must be constant (the same) for all records with the same 'Analytical method identification' (anMethRefId)	anMethRefCode, anMethCode, anMethText or anMethInfo is not constant for all records with the same anMethRefId	error	active	

Business Rule Code	Description	Error/Warning Message	Type of error	Status	Comment
GBR12	The 'Area of sampling' (sampArea) must be within the 'Country of sampling' (sampCountry)	sampArea is not within sampCountry	error	active	
GBR13	The 'Area of origin of the sample taken' (origArea) must be within the 'Country of origin of the sample taken' (origCountry)	origArea is not within origCountry	error	active	
GBR14	The 'Area of processing of the sample taken' (procArea) must be within the 'Country of processing of the sample taken' (procCountry)	procArea is not within procCountry	error	active	
GBR15	If in the 'Coded description of the matrix of the sample taken' the generic-term facet (sampMatCode.gen) is reported with the descriptor 'Other' (A07XE), then a text must be reported in the 'Text description of the matrix of the sample taken' (sampMatText)	sampMatText is missing, though mandatory if sampMatCode.gen is 'Other' (A07XE)	error	active	
GBR16	If in the 'Coded description of the analysed matrix' the generic-term facet' (anMatCode.gen) is reported with the descriptor 'Other' (A07XE), then a text must be reported in the 'Text description of the matrix analysed' (anMatText)	anMatText is missing, though mandatory if anMatCode.gen is 'Other' (A07XE)	error	active	
GBR18	If the reported value in the 'Analytical method code' (anMethCode.base) is 'Classification not possible' (F001A), then a text must be reported in the 'Analytical method text' (anMethText)	anMethText is missing, though mandatory if anMethCode.base is 'Classification not possible' (F001A)	error	active	
GBR19	The value in the data element 'Percentage of fat' (exprResPerc.fatPerc) must be expressed as a percentage and so be	exprResPerc.fatPerc is not between '0' and '100'	error	active	

Business Rule Code	Description	Error/Warning Message	Type of error	Status	Comment
	between '0' and '100' (e.g. '40' must be reported for 40 %)				
GBR20	The value in the data element 'Percentage of moisture ' (exprResPerc.moistPerc) must be expressed as a percentage and so be between '0' and '100' (e.g. '40' must be reported for 40 %)	exprResPerc.moistPerc is not between '0' and '100'	Error	Active	
GBR21	The value in the data element 'Percentage of alcohol' (exprResPerc.alcoholPerc) must be expressed as a percentage and so be between '0' and '100' (e.g. '40' must be reported for 40 %)	exprResPerc.alcoholPerc is not between '0' and '100'	Error	Active	
GBR22	If the value in the 'Expression of result type' (exprResType) is 'Fat weight' (B003A), then a value should be reported in the 'Percentage of fat' (exprResPerc.fatPerc)	WARNING: exprResPerc.fatPerc is missing, though recommended if exprResType is 'Fat weight' (B003A)	Warning	Active	
GBR23	If the value in the 'Expression of result type' (exprResType) is 'Dry matter' (B002A), then a value must be reported in the 'Percentage of moisture ' (exprResPerc.moistPerc)	exprResPerc.moistPerc is missing, though mandatory if exprResType is expressed on 'dry matter' basis	Error	Active	
GBR24	If a 'Sampling unit size' (sampUnitSize) is reported, then a 'Sampling unit size unit' (sampUnitSizeUnit) must be reported	sampUnitSizeUnit is missing, though sampUnitSize is reported	Error	Active	
GBR25	If a 'Sample taken size' (sampSize) is reported, then a 'Sample taken size unit' (sampSizeUnit) must be reported	sampSizeUnit is missing, though sampSize is reported	Error	Active	
GBR26	If a 'Sample analysed portion size' (anPortSize) is reported, then a 'Sample analysed portion size unit' (anPortSizeUnit) must be reported	anPortSizeUnit is missing, though anPortSize is reported	Error	Active	

Business Rule Code	Description	Error/Warning Message	Type of error	Status	Comment
GBR27	If the value reported in 'Type of result' (resType) is different from 'Qualitative Value (Binary)' (BIN) (i.e. not a qualitative value), then a 'Result unit' (resUnit) must be reported	resUnit is missing, though resType is not 'Qualitative Value (Binary)' (BIN)	Error	Active	
GBR28	If the value reported in 'Type of result' (resType) is 'Qualitative Value (Binary)' (BIN) (i.e. a qualitative value), then a 'Result qualitative value' (resQualValue) must be reported	resQualValue is missing, though resType is 'Qualitative Value (Binary)' (BIN)	Error	Active	
GBR29	If a value is reported in at least one of the following data elements: 'Result LOD' (resLOD), 'Result LOQ' (resLOQ), 'Result lower limit of the working range' (resLLWR), 'Result upper limit of the working range' (resULWR), 'CC alpha' (CCalpha), 'CC beta' (CCbeta), 'Result value' (resVal), 'Result value uncertainty' (resValUncert), 'Result value uncertainty Standard deviation' (resValUncertSD), 'Limit for the result evaluation (Low limit)' (evalLowLimit), 'Limit for the result evaluation (High limit)' (evalHighLimit), then a 'Result unit' (resUnit) must be reported	resUnit is missing, though at least one numeric data element (resLOD, resLOQ, resLLWR, resULWR, CCalpha, CCbeta, resVal, resValUncert, resValUncertSD, evalLowLimit, evalHighLimit) is reported	Error	Active	
GBR30	If a value is reported in 'Limit for the result evaluation ' (evalLowLimit), then a 'Type of limit for the result evaluation' (evalLimitType) must be reported	evalLimitType is missing, though evalLowLimit is reported	Error	Active	
GBR32	The value reported in 'Limit for the result evaluation (High limit)' (evalHighLimit) must be greater than the value reported in 'Limit for the	evalHighLimit is not greater than evalLowLimit	Error	Active	

Business Rule Code	Description	Error/Warning Message	Type of error	Status	Comment
	result evaluation (Low limit)' (evalLowLimit)				
GBR33	If 'Result value' (resVal) is greater than 'Limit for the result evaluation' (evalLowLimit), then the value in 'Evaluation of the result' (evalCode) must be different from 'below or equal the level of concern' (J002A)	evalCode is 'below or equal the level of concern' (J002A), though resVal is greater than evalLowLimit	Error	Active	
GBR34	If 'Evaluation of the result' (evalCode) is either 'above the level of concern' (J003A) or 'Compliant due to measurement uncertainty' (J031A), and the value in 'Type of limit for the result evaluation' (evalLimitType) is different from 'Minimum Required Performance Limit (MRPL)' (W005A), then 'Result value' (resVal) must be greater than 'Limit for the result evaluation' (evalLowLimit)	resVal is lower than evalLowLimit, though evalCode is either 'above the level of concern' (J003A) or 'Compliant due to measurement uncertainty' (J031A)	Error	Active	
GBR35	If 'Evaluation of the result' (evalCode) is 'below or equal to the level of concern' (J002A), then 'Result value' (resVal) must be less than or equal to 'Limit for the result evaluation' (evalLowLimit)	resVal is greater than evalLowLimit, though evalCode is 'below or equal to maximum permissible quantities' (J002A)	Error	Active	
GBR36	If the value in the data element 'Type of result' (resType) is 'Non-Detected Value (below LOD)' (LOD), then a value must be reported in the data element 'Result LOD' (resLOD)	resLOD is missing, though resType is 'Non-Detected Value (below LOD)' (LOD)	Error	Active	
GBR37	The value in 'Result LOD' (resLOD) must be less than or equal to the value in 'Result LOQ' (resLOQ)	resLOD is not less than or equal to resLOQ	Error	Active	

Business Rule Code	Description	Error/Warning Message	Type of error	Status	Comment
GBR38	The value in 'Result LOD' (resLOD) must be greater than '0'	resLOD is not greater than '0'	Error	Active	
GBR39	If the value in the data element 'Type of result' (resType) is 'Non-Quantified Value (below LOQ)' (LOQ), then a value must be reported in the data element 'Result LOQ' (resLOQ), except if resInfo.notSummed equal 'Y'	resLOQ is missing, though resType is 'Non-Quantified Value (below LOQ)' (LOQ) and resInfo.notSummed is not 'Y'	Error	Active	
GBR40	The value in 'Result LOQ' (resLOQ) must be greater than 0	resLOQ is not greater than 0	Error	Active	
GBR41	If the value in the data element 'Type of result' (resType) is 'Value below CCalpha (below CCα)' (CCA) AND accredProc is not equal to V999A 'Not Validated', then a value must be reported in the data element 'CC alpha' (CCalpha) (unvalidated methods excluded)	CCalpha is missing, though resType is 'Value below CCalpha (below CCα)' (CCA)	Error	Active	The qualification "AND accredProc is not equal to V999A 'Not Validated'" was added in 2019
GBR42	The value in 'CC alpha' (CCalpha) must be less than the value in 'CC beta' (CCbeta)	WARNING: CCalpha is not less than CCbeta	Warning	Active	
GBR43	The value in 'CC alpha' (CCalpha) must be greater than '0'	CCalpha is not greater than '0'	Error	Active	
GBR44	If the value in the data element 'Type of result' (resType) is 'Value below CCbeta (below CCβ)' (CCB) AND accredProc is not equal to V999A 'Not Validated', then a value must be reported in the data element 'CC beta' (CCbeta) (unvalidated methods excluded)	CCbeta is missing, though resType is 'Value below CCbeta (below CCβ)' (CCB)	Error	Active	The qualification "AND accredProc is not equal to V999A 'Not Validated'" was added in 2019

Business Rule Code	Description	Error/Warning Message	Type of error	Status	Comment
GBR45	The value in 'CC beta' (CCbeta) must be greater than '0'	CCbeta is not greater than '0'	Error	Active	
GBR46	If the value in the data element 'Type of result' (resType) is 'Numerical Value' (VAL), then a value must be reported in the data element 'Result value' (resVal)	resVal is missing, though resType is 'Numerical Value' (VAL)	Error	Active	
GBR47	If the value in the data element 'Type of result' (resType) is 'Non-Detected Value (below LOD)' (LOD), then the data element 'Result value' (resVal) must be empty	resVal is reported, though resType is 'Non-Detected Value (below LOD)' (LOD)	Error	Active	
GBR48	The value in 'Result value' (resVal) must be greater than '0'	resVal is not greater than '0'	Error	Active	
GBR49	The value in 'Result value recovery rate' (resValRec) must be greater than '0'	resValRec is not greater than '0'	Error	Active	
GBR50	The value in 'Result value uncertainty Standard deviation' (resValUncertSD) must be greater than '0'	resValUncertSD is not greater than '0'	Error	Active	
GBR51	The value in 'Result value uncertainty' (resValUncert) must be greater than '0'	resValUncert is not greater than '0'	Error	Active	
GBR53	The date of the slaughtering, reported in 'Day of slaughtering' (sampEventInfo.slaughterD), 'Month of slaughtering' (sampEventInfo.slaughterM), and 'Year of slaughtering' (sampEventInfo.slaughterY), must be a valid date	The combination of values in sampEventInfo.slaughterD, sampEventInfo.slaughterM, and sampEventInfo.slaughterY is not a valid date	Error	Active	
GBR54	The date of the sampling, reported in 'Day of sampling' (sampD), 'Month of sampling' (sampM), and 'Year of	The combination of values in sampD, sampM, and sampY is not a valid date	Error	Active	

Business Rule Code	Description	Error/Warning Message	Type of error	Status	Comment
	sampling' (sampY), must be a valid date				
GBR55	The date of the arrival in the laboratory, reported in 'Arrival Day' (sampInfo.arrivalD), 'Arrival Month' (sampInfo.arrivalM), and 'Arrival Year' (sampInfo.arrivalY), must be a valid date	The combination of values in sampInfo.arrivalD, sampInfo.arrivalM, and sampInfo.arrivalY is not a valid date	Error	Active	
GBR56	The date of the production, reported in 'Day of production' (sampMatInfo.prodD), 'Month of production' (sampMatInfo.prodM), and 'Year of production' (sampMatInfo.prodY), must be a valid date	The combination of values in sampMatInfo.prodD, sampMatInfo.prodM, and sampMatInfo.prodY is not a valid date	Error	Active	
GBR57	The date of the expiry, reported in 'Day of expiry' (sampMatInfo.expiryD), 'Month of expiry' (sampMatInfo.expiryM), and 'Year of expiry' (sampMatInfo.expiryY), must be a valid date	The combination of values in sampMatInfo.expiryD, sampMatInfo.expiryM, and sampMatInfo.expiryY is not a valid date	Error	Active	
GBR58	The date of the analysis, reported in 'Day of analysis' (analysisD), 'Month of analysis' (analysisM), and 'Year of analysis' (analysisY), must be a valid date	The combination of values in analysisD, analysisM, and analysisY is not a valid date	Error	Active	
GBR60	The date of the isolation, reported in 'Isolation day' (isolInfo.isolD), 'Isolation month' (isolInfo.isolM), and 'Isolation year' (isolInfo.isolY), must be a valid date	The combination of values in isolInfo.isolD, isolInfo.isolM, and isolInfo.isolY is not a valid date	Error	Active	This GBR is applicable to biological data
GBR61	The reporting year, reported in 'Reporting year' (repYear), must be less than or equal to the current year	The reporting year, reported in repYear, is greater than the current year	Error	Active	

Business Rule Code	Description	Error/Warning Message	Type of error	Status	Comment
GBR62	The date of the slaughtering, reported in 'Day of slaughtering' (sampEventInfo.slaughterD), 'Month of slaughtering' (sampEventInfo.slaughterM), and 'Year of slaughtering' (sampEventInfo.slaughterY), must be less than or equal to the current date	The date of the slaughtering, reported in sampEventInfo.slaughterD, sampEventInfo.slaughterM, and sampEventInfo.slaughterY, is not less than or equal to the current date	Error	Active	
GBR63	The date of the sampling, reported in 'Day of sampling' (sampD), 'Month of sampling' (sampM), and 'Year of sampling' (sampY), must be less than or equal to the current date	The date of the sampling, reported in sampD, sampM, and sampY, is not less than or equal to the current date	Error	Active	
GBR64	The date of the arrival in the laboratory, reported in 'Arrival Day' (sampInfo.arrivalD), 'Arrival Month' (sampInfo.arrivalM), and 'Arrival Year' (sampInfo.arrivalY), must be less than or equal to the current date	The date of the arrival in the laboratory, reported in sampInfo.arrivalD, sampInfo.arrivalM, and sampInfo.arrivalY, is not less than or equal to the current date	Error	Active	
GBR65	The date of the production, reported in 'Day of production' (sampMatInfo.prodD), 'Month of production' (sampMatInfo.prodM), and 'Year of production' (sampMatInfo.prodY), must be less than or equal to the current date	The date of the production, reported in sampMatInfo.prodD, sampMatInfo.prodM, and sampMatInfo.prodY, is not less than or equal to the current date	Error	Active	
GBR67	The date of the analysis, reported in 'Day of analysis' (analysisD), 'Month of analysis' (analysisM), and 'Year of analysis' (analysisY), must be less than or equal to the current date	The date of the analysis, reported in analysisD, analysisM, and analysisY, is not less than or equal to the current date	Error	Active	
GBR69	The date of the isolation, reported in 'Isolation day' (isolInfo.isolD), 'Isolation month' (isolInfo.isolM), and 'Isolation year' (isolInfo.isolY), must	The date of the isolation, reported in isolInfo.isolD, isolInfo.isolM, and	Error	Active	This GBR is applicable to biological data

Business Rule Code	Description	Error/Warning Message	Type of error	Status	Comment
	be less than or equal to the current date	isolInfo.isolY, is not less than or equal to the current date			
GBR70	The 'Day of slaughtering' (sampEventInfo.slaughterD) must be between 1 and 31	sampEventInfo.slaughterD is not between 1 and 31	Error	Active	
GBR71	The 'Day of sampling' (sampD) must be between 1 and 31	sampD is not between 1 and 31	Error	Active	
GBR72	The 'Arrival Day' (sampInfo.arrivalD) must be between 1 and 31	sampInfo.arrivalD is not between 1 and 31	Error	Active	
GBR73	The 'Day of production' (sampMatInfo.prodD) must be between 1 and 31	sampMatInfo.prodD is not between 1 and 31	Error	Active	
GBR74	The 'Day of expiry' (sampMatInfo.expiryD) must be between 1 and 31	sampMatInfo.expiryD is not between 1 and 31	Error	Active	
GBR75	The 'Day of analysis' (analysisD) must be between 1 and 31	analysisD is not between 1 and 31	Error	Active	
GBR77	The 'Isolation day' (isolInfo.isolD) must be between 1 and 31	isolInfo.isolD is not between 1 and 31	Error	Active	This GBR is applicable to biological data
GBR78	The 'Month of slaughtering' (sampEventInfo.slaughterM) must be between 1 and 12	sampEventInfo.slaughterM is not between 1 and 12	Error	Active	
GBR79	The 'Month of sampling' (sampM) must be between 1 and 12	sampM is not between 1 and 12	Error	Active	
GBR80	The 'Arrival Month' (sampInfo.arrivalM) must be between 1 and 12	sampInfo.arrivalM is not between 1 and 12	Error	Active	
GBR81	The 'Month of production' (sampMatInfo.prodM) must be between 1 and 12	sampMatInfo.prodM is not between 1 and 12	Error	Active	

Business Rule Code	Description	Error/Warning Message	Type of error	Status	Comment
GBR82	The 'Month of expiry' (sampMatInfo.expiryM) must be between 1 and 12	sampMatInfo.expiryM is not between 1 and 12	Error	Active	
GBR83	The 'Month of analysis' (analysisM) must be between 1 and 12	analysisM is not between 1 and 12	Error	Active	
GBR85	The 'Isolation month' (isolInfo.isolM) must be between 1 and 12	isolInfo.isolM is not between 1 and 12	Error	Active	This GBR is applicable to biological data
GBR86	If the 'Day of slaughtering' (sampEventInfo.slaughterD) is reported, then the 'Month of slaughtering' (sampEventInfo.slaughterM) must be reported	sampEventInfo.slaughterM is missing, though sampEventInfo.slaughterD is reported	Error	Active	
GBR87	If the 'Day of sampling' (sampD) is reported, then the 'Month of sampling' (sampM) must be reported	sampM is missing, though sampD is reported	Error	Active	
GBR88	If the 'Arrival Day' (sampInfo.arrivalD) is reported, then the 'Arrival Month' (sampInfo.arrivalM) must be reported	sampInfo.arrivalM is missing, though sampInfo.arrivalD is reported	Error	Active	
GBR89	If the 'Day of production' (sampMatInfo.prodD) is reported, then the 'Month of production' (sampMatInfo.prodM) must be reported	sampMatInfo.prodM is missing, though sampMatInfo.prodD is reported	Error	Active	
GBR90	If the 'Day of expiry' (sampMatInfo.expiryD) is reported, then the 'Month of expiry' (sampMatInfo.expiryM) must be reported	sampMatInfo.expiryM is missing, though sampMatInfo.expiryD is reported	Error	Active	
GBR91	If the 'Day of analysis' (analysisD) is reported, then the 'Month of analysis' (analysisM) must be reported	analysisM is missing, though analysisD is reported	Error	Active	

Business Rule Code	Description	Error/Warning Message	Type of error	Status	Comment
GBR92	If the 'Completion day of analysis' (sampAnInfo.compD) is reported, then the 'Completion month of analysis' (sampAnInfo.compM) must be reported	sampAnInfo.compM is missing, though sampAnInfo.compD is reported	Error	Active	
GBR93	If the 'Isolation day' (isolInfo.isolD) is reported, then the 'Isolation month' (isolInfo.isolM) must be reported	isolInfo.isolM is missing, though isolInfo.isolD is reported	Error	Active	This GBR is applicable to biological data
GBR94	The date of the production, reported in 'Day of production' (sampMatInfo.prodD), 'Month of production' (sampMatInfo.prodM), and 'Year of production' (sampMatInfo.prodY), must be less than or equal to the date of the expiry, reported in 'Day of expiry' (sampMatInfo.expiryD), 'Month of expiry' (sampMatInfo.expiryM), and 'Year of expiry' (sampMatInfo.expiryY)	The date of the production, reported in sampMatInfo.prodD, sampMatInfo.prodM, and sampMatInfo.prodY, is not less than or equal to the date of the expiry, reported in sampMatInfo.expiryD, sampMatInfo.expiryM, and sampMatInfo.expiryY	Error	Active	
GBR95	The date of the production, reported in 'Day of production' (sampMatInfo.prodD), 'Month of production' (sampMatInfo.prodM), and 'Year of production' (sampMatInfo.prodY), must be less than or equal to the date of the sampling, reported in 'Day of sampling' (sampD), 'Month of sampling' (sampM), and 'Year of sampling' (sampY)	The date of the production, reported in sampMatInfo.prodD, sampMatInfo.prodM, and sampMatInfo.prodY, is not less than or equal to the date of the sampling, reported in sampD, sampM, and sampY	Error	Active	

Business Rule Code	Description	Error/Warning Message	Type of error	Status	Comment
GBR97	The date of the sampling, reported in 'Day of sampling' (sampD), 'Month of sampling' (sampM), and 'Year of sampling' (sampY), must be less than or equal to the date of the analysis, reported in 'Day of analysis' (analysisD), 'Month of analysis' (analysisM), and 'Year of analysis' (analysisY)	The date of the sampling, reported in sampD, sampM, and sampY, is not less than or equal to the date of the analysis, reported in analysisD, analysisM, and analysisY	Error	Active	
GBR99	The date of the sampling, reported in 'Day of sampling' (sampD), 'Month of sampling' (sampM), and 'Year of sampling' (sampY), must be less than or equal to the date of the isolation, reported in 'Isolation day' (isolInfo.isolD), 'Isolation month' (isolInfo.isolM), and 'Isolation year' (isolInfo.isolY)	The date of the sampling, reported in sampD, sampM, and sampY, is not less than or equal to the date of the isolation, reported in isolInfo.isolD, isolInfo.isolM, and isolInfo.isolY	Error	Active	This GBR is applicable to biological data
GBR100	The date of the slaughtering, reported in 'Day of slaughtering' (sampEventInfo.slaughterD), 'Month of slaughtering' (sampEventInfo.slaughterM), must be less than or equal to the date of the sampling, reported in 'Day of sampling' (sampD), 'Month of sampling' (sampM), and 'Year of sampling' (sampY)	The date of the slaughtering, reported in sampEventInfo.slaughterD, sampEventInfo.slaughterM, and sampEventInfo.slaughterY, is not less than or equal to the date of the sampling, reported in sampD, sampM, and sampY	Error	Active	
GBR101	If the value in the data element 'Coded description of the parameter' (paramCode.base) is different from 'Not in list' (RF-XXXX-XXX-XXX), then the combination of values in the data elements 'Coded description of the parameter' (paramCode.base), 'Sample taken identification code'	More than one paramCode per sample analysed portion for one sample analysed is reported, though paramCode is different from 'Not in list' (RF-XXXX-XXX-XXX)	Error	Active	

Business Rule Code	Description	Error/Warning Message	Type of error	Status	Comment
	(sampId), 'Sample analysed identification code' (sampAnId), and 'Sample analysed portion sequence' (anPortSeq) must be unique, i.e. only one result per parameter for each sample analysed portion per sample analysed				
GBR102	The value in the data element 'Result value' (resVal) must be greater than or equal to the value in the data element 'Result LOD' (resLOD)	resVal is not greater than or equal to resLOD	Error	Active	
GBR103	If the value in 'Coded description of the analysed matrix' (anMatCode) is reported, then the value in sampAnId should be reported	sampAnId is missing, though anMatCode is reported	Error	Active	

Table 10: Full list of chemical monitoring business rules with troubleshooting tips

Business Rule Code	Description	Error Message	Type of Error	Status	Comment
DOMAIN VALIDATION	The record is flagged according to the 'Programme legal reference' (progLegalRef) and the 'Coded description of the parameter' (paramCode.base)	NOTE: The record is flagged according to the 'Programme legal reference' (progLegalRef) and the 'Coded description of the parameter' (paramCode.base)	Not Applicable	Active	This rule appears in the downloadable set of business rules but does not generate any messages. It only invokes EFSA processes to flag the incoming data and adaptation for Data Provider use could be requested
CHEMON03	A value in the data element 'Analytical method code' (anMethCode.base) must be reported	anMethCode.base is missing, though a value should be reported	Error	Active	
CHEMON04	The value in the data element 'Result value recovery' (resValRec) should be greater than or equal to 1 (for 85%, the value 85 should be reported)	WARNING: resValRec is less than 1. Please check whether the resValRec is correctly reported (e.g. for 85%, the value 85 should be reported)	Warning	Active	
CHEMON05	The value in the data element 'Result value recovery' (resValRec) should be between 50 and 150	WARNING: resValRec is not between 50 and 150	Warning	Active	
CHEMON06	The value in the data element 'Percentage of fat in the original sample' (exprResPerc.fatPerc) should be greater than or equal to 1 (e.g. for 85%, the value 85 should be reported)	WARNING: exprResPerc.fatPerc is less than 1. Please check whether the exprResPerc.fatPerc is correctly reported (e.g. for 85%, the value 85 should be reported)	Warning	Active	
CHEMON07	The value in the data element 'Percentage of moisture in the original sample' (exprResPerc.moistPerc) should be greater than or equal to 1 (e.g. for 85%, the value 85 should be reported)	WARNING: exprResPerc.moistPerc is less than 1. Please check whether the exprResPerc.moistPerc is correctly reported (e.g. for 85%, the value 85 should be reported)	Warning	Active	

Business Rule Code	Description	Error Message	Type of Error	Status	Comment
CHEMON08	If the value in the data element 'Result value' (resVal) is equal to the value in the data element 'Result LOQ' (resLOQ), then the value in the data element 'Type of result' (resType) must be equal to 'Non-Quantified Value (below LOQ)' (LOQ) or 'Numerical Value' (Val)	resType is not equal to LOQ or VAL, though resVal is equal to resLOQ	Error	Active	Numeric results which are equal to the LOQ reported should have a value in resType of either LOQ or VAL
CHEMON09	If the value in the data element 'Parameter code' (paramCode) is a dioxin or dioxin-like PCB, then the full set of the 29 dioxins and dioxin-like PCBs (17 PCDD/Fs, 12 dl-PCBs) should be reported (as listed in the Appendix to Annex I of the Commission Regulation (EU) 2023/915)	WARNING: The full set of the 29 dioxins and dioxin-like PCBs (17 PCDD/Fs, 12 dl-PCBs) is not reported, though mandatory, as listed in the Appendix to Annex I of the Commission Regulation (EU) 2023/915	Warning	Active	
CHEMON10	If the value in the data element 'Parameter code' (paramCode) is a non-dioxin-like PCB, then the six indicator congeners (PCB 28, PCB 52, PCB 101, PCB 138, PCB 153, and PCB 180) should be reported (as listed in the Appendix to Annex I of the Commission Regulation (EU) 2023/915)	WARNING: The six indicator congeners (PCB 28, PCB 52, PCB 101, PCB 138, PCB 153, and PCB 180) are not all reported, though mandatory, as listed in the Appendix to Annex I of the Commission Regulation (EU) 2023/915	Warning	Active	
CHEMON11	If the value in the data element 'Parameter code' (paramCode.base) has as ancestor 'Mineral oils' (RF-00000396-ORG), or 'Mycotoxins' (RF-00000132-TOX), then a value in the data element 'Percentage of moisture in the original sample' (exprResPerc.moistPerc) should be reported (regardless of whether the result value is expressed in whole weight, fat weight or dry matter)	WARNING: exprResPerc.moistPerc is missing, though recommended when paramCode is a mineral oil or a mycotoxin	Warning	Active	

Business Rule Code	Description	Error Message	Type of Error	Status	Comment
CHEMON12	If the value in the data element 'Parameter code' (paramCode.base) is 'Acrylamide' (RF-00000410-ORG), then the value in the data element 'Legislative classes' (sampMatCode.legis) must be reported and must contain the additional product classification (categories and sub-categories) based on Commission Regulation (EU) 2017/2158 and Commission Recommendation (EU) 2019/1888 on the monitoring of acrylamide in food	sampMatCode.legis is not reported or does not contain a specific product code, though paramCode is acrylamide (it is mandatory to provide additional product classification based on Commission Recommendation 2019/1888 and Commission Regulation 2017/2158 on acrylamide)	Error	Active	
CHEMON14	If the value in the data element 'Parameter code' (paramCode.base) has as ancestor 'Bisphenol compounds' (RF-00001240-PAR), then a value in the data element 'Packaging material' (sampMatCode.packmat) must be reported	sampMatCode.packmat is missing, though mandatory when paramCode is a bisphenol compound	Error	Active	
CHEMON15	If the value in the data element 'Parameter code' (paramCode.base) has as ancestor 'Polycyclic aromatic hydrocarbons' (RF-00000040-ORG), then a value in the data element 'Packaging material' (sampMatCode.packmat) should be reported	WARNING: sampMatCode.packmat is missing, though recommended when paramCode is a PAH	Warning	Active	
CHEMON17	If the value in the data element 'Parameter code' (paramCode.base) has as ancestor 'Mycotoxins' (RF-00000132-TOX), then the value in the data element 'Method of production' (sampMatCode.prod) should be reported	WARNING: sampMatCode.prod is missing though it is recommended to report whether the sample was obtained from the produce of traditional (non-organic) or organic farming when paramCode is a mycotoxin	Warning	Active	

Business Rule Code	Description	Error Message	Type of Error	Status	Comment
CHEMON18	If the value in the data element 'Parameter code' (paramCode.base) has as ancestor 'Arsenic and derivatives' (RF-00000127-CHE), and data are reported on rice (as grains for human consumption), then the value in the data element 'Process' (sampMatCode.process) should be reported	WARNING: sampMatCode.process is not reported, though it is recommended to specify at least the codes for 'processed' or 'unprocessed' when reporting data on rice and paramCode is arsenic	Warning	Active	
CHEMON19	If the value in the data element 'Parameter code' (paramCode.base) is equal to 'Chlorates' (RF-00000015-CHE), or 'Perchlorate' (RF-00001336-PAR) or 'RF-1078-001-PPP' Quaternary Ammonium Compounds (QACs) or any children thereof, then the value in the data element 'Process' (sampMatCode.process) should be reported	WARNING: sampMatCode.process is not reported, though it is recommended to specify at least the code for processed or unprocessed when paramCode is chlorate, perchlorate or QACs	Warning	Active	Changed introduced starting from the 2022 ChemMon data collection so that it retunes a Warning and no longer an Error
CHEMON20	If the value in the data element 'Coded description of the matrix sampled' (sampMatCode.base) has as ancestor 'Processed or preserved seafood' (A0BZ4), or 'Fish, other aquatic animals and products derived thereof (feed)' (A0BNJ) and the value in the data element 'Parameter code' (paramCode.base) has as ancestor 'Brominated flame retardants' (RF-00000074-ORG), or 'Dioxins and PCBs' (RF-00000114-ORG), or 'Mercury and derivatives' (RF-00000169-CHE), then a value in 'Area of origin for fisheries or aquaculture activities code' (origFishAreaCode) should be reported	WARNING: origFishAreaCode is missing, though recommended when data are reported on fish, and paramCode is BFR, dioxins and PCBs, or mercury and derivatives	Warning	Active	

Business Rule Code	Description	Error Message	Type of Error	Status	Comment
CHEMON21	If the value in the data element 'Parameter code' (paramCode.base) has as ancestor 'Brominated flame retardants' (RF-00000074-ORG), or 'Dioxins and PCBs' (RF-00000114-ORG), or '3-MCPDs' (RF-00000376-ORG), then a value in the data element 'Percentage of fat in the original sample' (exprResPerc.fatPerc) should be reported (regardless of whether the result value is expressed on whole weight, fat weight or dry matter)	WARNING: exprResPerc.fatPerc is missing, though recommended when reporting data on BFR, dioxins and PCBs, or 3-MCPDs	Warning	Active	
CHEMON22	If the value in 'Link To Original Sample' (sampInfo.origSampId) is reported, i.e. a follow-up sample, then the value in 'Sampling Strategy' (sampStrategy) should be 'suspect sampling' (ST30A)	WARNING: sampStrategy is not suspect sampling, though sampInfo.origSampId is reported	Warning	Active	
CHEMON23	The value in the data element 'Analytical Method Type' (anMethType) must be equal to 'Screening' (AT06A), or 'Confirmation' (AT08A)	anMethType is not screening or confirmation	Error	Active	
CHEMON24	The value in the data element 'Result qualitative value' (resQualValue) must be equal to 'negative/absent' (NEG), because neither positive screening results nor qualitative confirmation results should be reported, unless the reported 'Parameter code' (paramCode) is equal to 'MOAHs 3 to 7 ring' (RF-00011484-PAR)	resQualValue is different from negative/absent	Error	Active	
CHEMON26	If the value in the data element 'Action Taken' (actTakenCode) is equal to 'Follow-up investigation' (I), then a value in the data element 'Conclusion of follow-up investigation' (evalInfo.conclusion) should be reported	WARNING: evalInfo.conclusion is missing, though actTakenCode is follow-up investigation	Warning	Active	

Business Rule Code	Description	Error Message	Type of Error	Status	Comment
CHEMON27	If the result is reported for VMPR or pesticides (is_vet=1 or is_pest=1), then the value in 'Coded description of the matrix of the sample taken' (sampMatCode) should be equal to the value in 'Coded description of the analysed matrix' (anMatCode)	WARNING: anMatCode is different from sampMatCode, though the matrix sampled should be equal to the analysed matrix	Warning	Active	
CHEMON28	If the result is reported for VMPR (is_vet=1), then only recommended 'Sampling point' (sampPoint) codes should be reported	WARNING: sampPoint is not in the recommended list of codes	Warning	Active	
CHEMON30	If the value in the data element 'Evaluation of the result' (evalCode) is 'Above maximum permissible quantities (above level of concern)' (J003A), then the value in the data element 'Analytical Method Type' (anMethType) must be equal to 'Confirmation' (AT08A)	anMethType is not confirmation, though evalCode is above maximum permissible quantities	Error	Active	
CHEMON31	If the value in the data element 'Accreditation procedure for the analytical method' (accredProc) is 'Accredited and validated according to Commission Implementing Regulation (EU) 2021/808' (V007A) and the value in the data element 'Analytical method type' (anMethType) is 'Confirmation' (AT08A) and the assigned 'Type of parameter' (paramType) is not equal to 'Part of a sum' (P002A), then a value in the data element 'CC alpha' (CCalpha) must be reported	CCalpha is missing, though mandatory if accredProc is accredited and validated according to Com. Implementing Regulation 2021/808 and anMethType is confirmation and paramType is not part of a sum	Error	Active	
CHEMON32	If the value in the data element 'Accreditation procedure for the analytical method' (accredProc) is 'Accredited and validated according to Commission Implementing Regulation (EU) 2021/808' (V007A) and the value	CCbeta is missing, though mandatory if accredProc is accredited and validated according to Com. Implementing Regulation 2021/808 and anMethType is screening	Error	Active	

Business Rule Code	Description	Error Message	Type of Error	Status	Comment
	in the data element 'Analytical method type' (anMethType) is 'Screening' (AT06A), then a value in the data element 'CC beta' (CCbeta) must be reported				
CHEMON33	If the value in 'Type of results' (resType) is equal to 'Qualitative value (binary)' (BIN), then the value in the data element 'Analytical method type' (anMethType) should be equal to 'Screening' (AT06A)	resType is BIN but anMethType is not screening	Error	Active	
CHEMON34	If the value in the data element 'Analytical method type' (anMethType) is 'Confirmation' (AT08A), then the value in 'Type of results' (resType) should not be equal to 'Qualitative Value (Binary)' (BIN), and the value in 'Result qualitative value' (resQualValue) should not be reported	WARNING: resType is equal to BIN or resQualValue is reported, though anMethType is confirmation	Warning	Active	
CHEMON35	The value in the data element 'Type of limit for the result evaluation' (evalLimitType) should be equal to 'Maximum Residue Level (MRL)' (W002A), or 'Minimum Required Performance Limit (MRPL)' (W005A), or 'Reference point of action (RPA)' (W006A), or 'Presence' (W012A), or 'Maximum Limit' (W001A), or 'Action level' (W007A), or 'Target Level (TL)' (W008A), or 'National or local limit' (W990A)	WARNING: evalLimitType is not in the list of recommended codes	Warning	Active	

Business Rule Code	Description	Error Message	Type of Error	Status	Comment
CHEMON36	If the value in the data element 'Type of limit for the result evaluation' (evalLimitType) is equal to 'Maximum Residue Level (MRL)' (W002A), then the value in 'Evaluation of the result' (evalCode) should be equal to 'Below or equal to maximum permissible quantities (below or equal to level of concern)' (J002A), or 'Above the maximum permissible quantities (above level of concern)' (J003A), or 'Compliant due to measurement uncertainty' (J031A), or 'result not evaluated' (J029A)	WARNING: evalCode is not in the recommended list of codes when evalLimitType is MRL	Warning	Active	
CHEMON37	If the result is reported for contaminants (is_occ=1) or additives(is_add=1) and if the value in 'Evaluation of the result' (evalCode) is equal to 'Detected' (J041A), or 'Above the maximum permissible quantities' (J003A), then a value in the data element 'Action taken' (actTakenCode) should be reported	WARNING: actTakenCode is missing, though recommended when evalCode is detected or greater than the maximum permissible quantities	Warning	Active	
CHEMON39_a	If the result is reported for additives (is_add=1), then the value in the data element 'Legislative classes' (sampMatCode.legis) must be used to report the additional product classification (food category code) based on Regulation (EC) No 1333/2008 on food additives, as last amended.	sampMatCode.legis does not contain specific product code (food category code) based on Regulation (EC) No 1333/2008 on food additives, as last amended	Error	Active	Starting in 2024, the facet [F33] Legislative classes has been implicitly assigned to most of the FoodEx2 base terms. If the F33 is not present, it must be explicitly assigned by the Data Provider for the food additives domain.

Business Rule Code	Description	Error Message	Type of Error	Status	Comment
CHEMON39_b	If the result is reported for flavourings (is_flav=1), then the value in the data element 'Legislative classes' (sampMatCode.legis) should be used to report the additional product classification (food category code) based on Regulation (EC) No 1334/2008 on food additives, as last amended.	WARNING: sampMatCode.legis does not contain specific product code (food category code) based on Regulation (EC) No 1334/2008 on food flavourings, as last amended	Warning	Active	Starting in 2024, the facet [F33] Legislative classes has been implicitly assigned to most of the FoodEx2 base terms. If the F33 is not present, it should be explicitly assigned by the Data Provider for the food flavourings domain. This becomes an error message in 2026.
CHEMON40	If the value in the data element 'Type of result' (resType) is 'Qualitative Value (Binary)' (BIN), then the data element 'Result value' (resVal) must be empty	A numerical value for resVal is reported, though resType is a qualitative value (binary, BIN). Please check the record	Error	Active	
CHEMON41	If the value in the data element 'Result type' (resType) is equal to 'Numerical Value' (VAL), then the value in the data element 'Result LOQ' (resLOQ) should not be greater than the value in the data element 'Result value' (resVal) (if the result is a positive detection, the result value cannot be below the reported LOQ)	WARNING: the selected resType is VAL for a result that contains a value less than the reported LOQ	Warning	Active	
CHEMON42	If the value in the data element 'Result value recovery corrected' (resValRecCorr) is equal to 'Yes' (Y), then a value in the data element 'Result value recovery' (resValRec) should be reported	WARNING: resValRec is missing, though resValRecCorr is reported if the result is corrected for recovery the corrected value should be reported (mean recovery in the range of 70-120%)	Warning	Active	

Business Rule Code	Description	Error Message	Type of Error	Status	Comment
CHEMON43	If the result is reported for pesticides (is_pest=1) or VMPR (is_vet=1), then the value in the data element 'Sampling year' (sampY) should be lower than or equal to the submission year minus 1	sampYear should be lower than or equal to the submission year minus 1	Error	Active	The 'sampY' should typically be less than the year in which a sample is transmitted (e.g. samples transmitted in 2022 should typically have been sampled in 2021). This BR only applies to results related to residue domains for which Annual Reports are to be prepared by EFSA: pesticide residues and VMPR. The BR returns an Error message. Change introduced starting with the 2022 ChemMon data collection.
CHEMON44	A value in the data element 'Result LOQ' (resLOQ) must be reported, unless an unvalidated method is used, or notSummed=Y or the result is reported for VMPR (is_vet=1), or the resType is BIN	resLOQ is missing, though a value should be reported	Error	Active	
CHEMON45	A value in at least one of the following data elements must be reported: 'Result LOQ' (resLOQ) or 'Result LOD' (resLOD) or 'CC beta' (CCbeta) or 'CC alpha' (CCalpha) if 'Analytical method' is not an unvalidated methods ('Accreditation procedure' not equal to 'Not validated') and resInfo.NotSummed is not equal to 'Y'	One of resLOQ, resLOD, CCbeta or CCalpha must be reported unless an unvalidated method is used	Error	Active	
CHEMON46	If the value in the data element 'Evaluation of the result' (evalCode) is 'above the level of concern' (J003A), or 'Compliant due to measurement uncertainty' (J031A) and evalLimitType is not equal to 'Presence' (W012A), then the value in 'Type of result' (resType) must be equal to 'VAL'	The selected resType code is different from VAL, though evalCode is 'greater than maximum permissible quantities' or 'compliant due to measurement uncertainty'. Please check the record	Error	Active	

Business Rule Code	Description	Error Message	Type of Error	Status	Comment
CHEMON47	If the value in the data element 'Result type' (resType) is equal to 'Non-Quantified Value (below LOQ)' (LOQ), then the value in the data element 'Result value' (resVal) should not be greater than the value in the data element 'Result LOQ' (resLOQ)	WARNING: the selected resType is LOQ for a result that contains a value greater than the reported LOQ	Warning	Active	
CHEMON48	If the value in the data element 'Type of parameter' (paramType) is different from 'Part of a sum' (P002A) and the value in the data element 'Result value' (resVal) is greater than or equal to the value in the data element 'Limit for the result evaluation' (evalLowLimit), then the value in the data element 'Evaluation of the result' (evalCode) should be different from 'Result not evaluated' (J029A)	WARNING: where resVal greater than or equal to evalLowLimit, then the evalCode is expected to be reported	Warning	Active	
CHEMON49	If the value in the data element 'Programme type' (progType) is equal to 'Official (EU) programme' (K009A), and the value in 'Programme legal reference' (progLegalRef) is 'Regulation (EC) No 396/2005 (amended)' (N027A), then the value in 'Sampling strategy' (sampStrategy) should be equal to 'Objective sampling' (ST10A)	sampStrategy is not 'Objective sampling' (ST10A), though only random sampling should be reported under EU MACP for pesticides	Error	Active	Samples taken in the framework of the EU-coordinated programme are expected to be collected according to random sampling strategy. It becomes an error for Pesticides in 2025.

Business Rule Code	Description	Error Message	Type of Error	Status	Comment
CHEMON50	If the value in the data element 'Programme type' (progType) is equal to 'Official (National and EU) programme' (K018A) and the value in 'Programme legal reference' (progLegalRef) contains 'Regulation (EC) No 396/2005 (amended)' (N027A), then the value in 'Sampling strategy' (sampStrategy) can only be equal to 'Objective sampling' (ST10A) or 'Selective sampling' (ST20A)	The reported combination of codes for progType, progLegalRef and sampStrategy is not valid for pesticides. Please check these variables	Error	Active	Description updated in 2025.
CHEMON51	If the value in 'Programme legal reference' (progLegalRef) contains 'Regulation (EC) No 396/2005 (amended)' (N027A), the value in 'Sampling strategy' (sampStrategy) can only be equal to 'Objective sampling' (ST10A), or 'Selective sampling' (ST20A), or 'Suspect sampling' (ST30A)	The reported combination of codes for progType, progLegalRef and sampStrategy is not valid for pesticides. Please check these variables	Error	Active	
CHEMON52	If the value in 'Programme legal reference' (progLegalRef) contains 'Regulation (EC) No 396/2005 (amended)' (N027A), the value in 'Programme type' (progType) can only be equal to 'Official (National) programme' (K005A), or 'Official (EU) programme' (K009A), or 'Official (National) programme for Third Country Import' (K038A) or 'Official (National and EU) programme' (K018A)	The reported progType is not one of the values allowed for pesticides	Error	Active	Description updated in 2025.

Business Rule Code	Description	Error Message	Type of Error	Status	Comment
CHEMON53	If 'Programme legal reference '(progLegalRef) is 'Regulation (EC) No396/2005 (amended)' (N027A) and the value in 'Programme type' (progType) is equal to 'EU increased control programme on imported food' (K019A), then the value in 'Sampling strategy' (sampStrategy) can only be equal to 'Suspect sampling' (ST30A)	The reported combination of codes for progType and progLegalRef is not valid. Please check these variables.	Error	Inactive	Due to the update of table 2 in 2025, the specific rule is not active any longer
CHEMON54	If the value in 'Programme legal reference' (progLegalRef) is 'Commission Implementing Regulation (EU) No 2019/1793' (N317A), then the value in 'Programme type' (progType) is equal to 'EU increased control programme on imported food' (K019A) and the value in 'Sampling strategy' (sampStrategy) can only be equal to 'Suspect sampling' (ST30A)	sampStrategy is not 'Suspect sampling', though the progLegalRef is Commission Regulation (EU) No 2019/1793	Error	Active	It becomes an error in 2025. Description updated in 2025. Regulation (EU) 2019/1793 repeals the obsolete Regulation (EC) 669/2009
CHEMON55	If the value in the data element 'Programme legal reference' (progLegalRef) is 'Samples of food products falling under Directive 2006/125/EC (N028A) or is 'Samples of food products falling under Regulation (EU) 2016/127' (N318A), then the value in the data element 'Coded description of the matrix of the sample taken' (sampMatCode.base) should have as parent term 'Food products for young population' (A03PV)	The reported sampMatCode does not refer to baby food, although the progLegalRef applies to this type of food. Please check these variables	Error	Active	Description updated in 2025.
CHEMON56	If the result is reported for pesticides (is_pest=1), then the value in the data element 'Expression of result' (exprResType) can only be equal to 'Whole weight' (B001A), or 'Fat basis' (B003A), or 'Reconstituted product' (B007A)	The reported exprResType is not one of the values allowed for pesticides	Error	Active	

Business Rule Code	Description	Error Message	Type of Error	Status	Comment
CHEMON57	The combination of values in the data elements 'Parameter code' (paramCode) and 'Sample taken identification code' (sampId) must be unique, except for analysis on aflatoxins	The combination of values in paramCode and sampId is not unique for the same sample. Please correct this record	Error	Active	
CHEMON58	If the result is reported for pesticides (is_pest=1) or for VMPR (is_vet=1), then the 'Country of sampling' (sampCountry) has to be equal to the country of the reporting organisation	sampCountry does not match with the country of the reporting organisation	Error	Active	For PPP this is an error. It becomes an error for VMPR in 2025. CHEMON58_a and CHEMON58_b merged.
CHEMON59	If the result is reported for pesticides, then the value in 'Type of limit for the result evaluation' (evalLimitType) can only be 'Maximum Residue Level (MRL)' (W002A), or 'National or local limit' (W990A), or missing	the reported evalLimitType is not one of the values allowed for pesticides	Error	Active	It becomes an error for Pesticides in 2025.
CHEMON60	If the result is reported for pesticides (is_pest=1), then the value in evalCode can only be 'less than or equal to maximum permissible quantities' (J002A), or 'greater than maximum permissible quantities' (J003A), or 'Result not evaluated' (J029A), or 'Compliant due to measurement uncertainty' (J031A)	The reported evalCode is not one of the values allowed for pesticides	Error	Active	
CHEMON61	If the result is reported for pesticides (is_pest=1), then the value in 'Type of result' (resType) can only be equal to 'Non-Detected Value (less than LOD)' (LOD), 'Non-Quantified Value (less than LOQ)' (LOQ), 'Qualitative Value (Binary)' (BIN), or 'Numerical Value' (VAL)	The reported resType is not one of the values allowed for pesticides	Error	Active	
CHEMON62	If resInfo.notSummed is equal to 'Yes' (Y), then the result should be reported for multicomponents/sum and at least the LOQ of one of the components, should be reported	resInfo.notSummed is equal to yes, though the LOQ result is not reported for at least one of the multicomponents	Error	Active	

Business Rule Code	Description	Error Message	Type of Error	Status	Comment
CHEMON63	If the coded sample matrix sampMatCode is under the high-level code A03PZ (i.e. the sample is a baby food), the progLegalRef cannot be N371A since these samples are excluded from the VMPR Annual Report as defined in Regulation (EU) 2022/1646 and Regulation (EU) 2022/1644	progLegalRef is Regulation (EU) 2022/1646, though the reported sampMatCode is a baby food. Please check these variables since samples of baby food are excluded from VMPR legislation	Error	Active	Regulation (EU) 2022/1646 and Regulation (EU) 2022/1644 repel the obsolete Council Directive (EC) No 23/1996 (amended)
CHEMON64	If the sample reported is taken under Regulation (EU) No 2019/1793 (N317A), then the values in 'Country of origin' (origCountry) and in 'Coded description of the matrix of the sample taken' (sampMatCode) can only be those listed in the Regulation	The selected origCountry and sampMatCode is not a valid code when the sample is taken under Regulation No 2019/1793. Please correct this record	Error	Active	Description updated in 2025.
CHEMON65	The value in 'Result assessment' (evalInfo.resAsses) can only be equal to 'Compliant' (J037A) or 'Non-compliant' (J038A)	The value in evalInfo.resAsses is not equal to compliant or non-compliant, though only these values are allowed	Error	Active	
CHEMON66_a	If the value in 'Result assessment' (evalInfo.resAsses) is equal to 'Compliant' (J037A) and the value in 'Evaluation of the result' (evalCode) is equal to 'Above the level of concern' (J003A), or the value in 'Evaluation of the result' (evalCode) is equal to 'Detected' (J041A) and the value in (evalLimitType) is equal to 'Presence' (W012A), then a value in 'Conclusion of follow-up investigation' (evalInfo.conclusion) should be reported	WARNING: evalInfo.conclusion is missing, though the result evaluation reported is an exceedance and the value reported in evalInfo.resAsses is compliant	Warning	Active	

Business Rule Code	Description	Error Message	Type of Error	Status	Comment
CHEMON66_b	If the value in 'Result assessment' (evalInfo.resAsses) is equal to 'Non-compliant' (J038A) and the value in 'Evaluation of the result' (evalCode) is not equal to 'Above the level of concern' (J003A), and the value in 'Evaluation of the result' (evalCode) is not equal to 'Detected' (J041A) and the value in (evalLimitType) is not equal to 'Presence' (W012A), then a value in 'Conclusion of follow-up investigation' (evalInfo.conclusion) should be reported	WARNING: evalInfo.conclusion is missing, though the result evaluation reported is a non-exceedance and the value reported in evalInfo.resAsses is non-compliant	Warning	Active	
CHEMON67	The values in 'Sample taken assessment' (evalInfo.sampTkAsses) and 'Sampling event assessment' (evalInfo.sampEventAsses) should not be reported	WARNING: evalInfo.sampTkAsses and/or evalInfo.sampEventAsses are reported. Please note that this information will not be used for further data analysis in the frame of the preparation of pesticides and VMPR reports	Warning	Active	
CHEMON68	The domain of the progLegalRef should match with the paramCode domain	The selected paramCode belongs to a domain different than the progLegalRef domain. Please check this record;	Error	Active	New rule was introduced in 2021. It became an Error in 2022
CHEMON69	If the 'Expression of result type' (exprResType) is equal to 'Whole weight' (B001A) and the result is reported in feed, then the 'Percentage of moisture' (moistPerc) must be reported	moistPerc is missing, though the result reported for feed is expressed on whole weight	Error	Active	New rule was introduced in 2021 only for the contaminants domain. It became an Error in 2022
CHEMON70	If the result is reported for pesticides in egg or milk, then the 'Expression of result' (exprResType) 'whole weight' (code B001A) must be reported	exprResType is missing, though the MRL is compliant with a whole weight commodity	Error	Active	New rule was introduced in 2021 only for pesticides. It becomes an Error in 2025
CHEMON71	If the result is reported for contaminants in feed, then the 'Expression of result type' (exprResType) must be reported	exprResType is missing, though the analysis has been reported in feed	Error	Active	New rule was introduced in 2021. It became an Error in 2022. It only applies to contaminants

Business Rule Code	Description	Error Message	Type of Error	Status	Comment
CHEMON72	If the result (resType =VAL) is reported for pesticides, then the 'Result value uncertainty' (resValUncert) should be reported	WARNING: resValUncert is missing, though the analysis has been reported for pesticides	Warning	Active	New rule was introduced in 2021. It will continue to be warning in 2025.
CHEMON73	When reporting VMPR data on feed and water given to animals, the 'Target consumer' facet (F23) should be reported	WARNING: facet F23 – target consumer is missing, though data are reported on feed or water given to animals	Warning	Active	
CHEMON76	When reporting VMPR results for two or more samples (sampId) with the same sampEventId the F01 facet code of the sampMatCode shall be the same for each sample reported	The F01 facet code of the sampMatCode is not the same for each of the samples (sampId) reported for the same sample event (sampEventId)	Error	Active	New rule was introduced in 2022, which returns an Error message. It only applies to VMPR
CHEMON77	If the analytical results refer to pooled samples, with sampling method 'sampMethod' code N002A or N031A, the data element 'sampUnitSizeUnit' must be reported with code G005A ('Unit') and the element 'sampUnitSize' must be returned with the actual number of the single samples pooled	sampUnitSizeUnit or sampUnitSize is missing, though a pooled sample has been reported	Error	Active	New rule was introduced in 2022. It becomes an Error in 2025.
CHEMON78	If the value in the data element 'Type of result' (resType) is 'Qualitative Value (Binary)' (BIN), then the data element resLOQ must be empty	A numerical value for resLOQ is reported, though resType is qualitative value (binary, BIN). Please check the record	Error	Active	New rule was introduced in 2022, which returns a Warning message. It became an Error in 2023.
CHEMON79_a	If the result is reported for contaminants (is_occ=1) or additives (is_add=1), then the value in 'Analytical Method' (anMethCode) must be different from 'Classification not possible' (F001A)	anMethCode must be different from 'Classification not possible'	Error	Active	New rule was introduced in 2022 for contaminants and in 2023 for the food additives domain. It becomes an Error in 2025 CHEMON79_a, CHEMON79_b, and CHEMON79_c will be merged in 2026.
CHEMON79_b	If the result is reported for flavourings (is_flav=1), then the value in 'Analytical Method' (anMethCode) should be different from 'Classification not possible' (F001A).	WARNING: anMethCode should be different from 'Classification not possible'	Warning	Active	New rule is introduced in 2025. It becomes an error in 2026. CHEMON79_a, CHEMON79_b, and CHEMON79_c will be merged in 2026.

Business Rule Code	Description	Error Message	Type of Error	Status	Comment
CHEMON79_c	If the result is reported for contaminants (is_occ=1), additives (is_add=1) or flavourings (is_flav=1), then the value in 'Analytical Method' (anMethCode) should be different from 'Unknown' (F500A) or 'Unspecified' (F598A)	WARNING: anMethCode should be different from 'Unknown' or 'Unspecified'	Warning	Active	New rule is introduced in 2025. It becomes an error in 2026. CHEMON79_a, CHEMON79_b, and CHEMON79_c will be merged in 2026.
CHEMON80	If the result is reported for contaminants, then a value in the data element 'Result value corrected for recovery' (resValRecCorr) should be reported	WARNING: resValRecCorr is missing, though a value should be reported	Warning	Active	New rule was introduced in 2022 for contaminants domain, which returns a Warning message
CHEMON81	If the value reported in resVal is less than the value reported in resLOQ, then the value in resType should be equal to 'Below or equal to LOQ' (LOQ)	resType is not 'LOQ', though resVal is less than resLOQ, except for Multicomponent Residue Definitions	Error	Active	New rule was introduced in 2022. It became an Error in 2023
CHEMON82	The value in resLOQ should be different from 99999 but also 999, 9999, 999999, 9999999	resLOQ cannot be equal to '99999'; please use the data element 'resInfo.notSummed'=Y to avoid storing a false LOQ	Error	Active	New rule was introduced in 2022 to avoid storing a false LOQ, which returns an Error message
CHEMON83	If the code F10.A18PX on the sampMatCode is reported, then the facet F19 and the facet F18 should not be reported	WARNING: packaging material or packaging format reported even though the code F10.A18PX is reported	Warning	Active	New rule was introduced in 2022.
CHEMON84_a	If the result is reported for chemical contaminants (is occ=1) or additives (is_add=1) the 'Expression of result' (exprResType) must be reported	exprResType is missing, though the analysis has been reported for additives	Error	Active	New rule was introduced in 2024. It becomes an error in 2025 for additives.
CHEMON84_b	If the result is reported for flavourings (is flav=1) the 'Expression of result' (exprResType) should be reported	WARNING: exprResType is missing, though the analysis has been reported for food flavourings	Warning	Active	New rule is introduced in 2025. It becomes an error in 2026.

Business Rule Code	Description	Error Message	Type of Error	Status	Comment
CHEMON85	If the result is reported for VMPR (is_vet=1) or pesticides (is_pest=1) and if the value in 'Evaluation of the result' (evalCode) is equal to 'Detected' (J041A), or 'Above the maximum permissible quantities' (J003A) and results assessment is empty, or result assessment is equal to Non-compliant (J038A), then a value in the data element 'Action taken' (actTakenCode) must be reported	actTakenCode is missing, though mandatory for pesticides and VMPR when evalCode is detected or greater than maximum permissible quantities or evalInfo.resAsses is non-compliant	Error	Active	New rule was introduced in 2024 for VMPR and Pesticides. It became an error for VMPR and Pesticides in 2024.
CHEMON86	If the result is reported for additives (is_add=1) or flavourings (is_flav=1), then the physical-state facet of the sample (F03) if not implicitly present in the 'description of the matrix of the sample' (sampMatCode) is highly recommended to be reported	WARNING: sampMatCode.state is not reported even though highly recommended	Warning	Active	New rule is introduced in 2025, which returns a warning message.
CHEMON87	If the result is reported for additives (is_add=1) or flavourings (is flav=1), then 'conclusion of follow-up investigation' (evalInfo.conclusion) is highly recommended to be reported	WARNING: evalInfo.conclusion is not reported even though highly recommended	Warning	Active	New rule is introduced in 2025, which returns a warning message.
CHEMON88	If the result is reported for additives (is_add=1) or flavourings (is flav=1), then 'restriction or exception' (evalInfo.restrictionException) is highly recommended to be reported	WARNING: evalInfo. restrictionException is not reported even though highly recommended	Warning	Active	New rule is introduced in 2025, which returns a warning message. Based on the outcome of the first pilot year this business rule might become an error in 2026

Business Rule Code	Description	Error Message	Type of Error	Status	Comment
CHEMON89	If the result is reported for additives (is_add=1) or flavourings (is flav=1), then the target consumer facet (F23) is highly recommended to be reported when the sample refers to food category 13 (Foods intended for particular nutritional uses as defined by Directive 2009/39/EC)	WARNING: the target consumer facet (F23) is not reported even though highly recommended	Warning	Active	New rule is introduced in 2025, which returns a warning message.
CHEMON90_a	If the paramCode "RF-0102-001-PPP Copper" is reported, the use of facet F20 and/or F28 is recommended	WARNING: The use of facet F20 and/or F28 is recommended	Warning	Active	New rule is introduced in 2025. It becomes an error in 2026.
CHEMON90_b	If the paramCode "RF-0102-001-PPP Copper" is reported, then the field resValUncert should be populated	WARNING: Measurement Uncertainty when reporting "RF-0102-001-PPP Copper" is recommended	Warning	Active	New rule is introduced in 2025. It becomes an error in 2026.
CHEMON91	If the result is reported for VMPR (is_vet=1), then only one F33 facet under parent term 'Veterinary Medicinal Product Residues Classes' (A1ANN) should be reported for the 'Coded description of the matrix of the sample taken' (sampMatCode) and 'Analytical Method' (anMatCode)	WARNING: only one F33 facet under "Veterinary Medicinal Product Residues classes (Annex III – 2022/1646)" should be reported.	Warning	Active	New warning introduced in 2025 for VMPR.
CHEMON92	If the result is reported for VMPR (is_vet=1), then the base term used for the 'Coded description of the matrix of the sample taken' (sampMatCode and 'Analytical Method' (anMatCode) must belong to the VetDrugRes hierarchy	the base term reported does not belong to the vetDrugRes hierarchy.	Error	Active	New rule is introduced in 2025. It becomes an error in 2025.
CHEMON93	If the result is reported for VMPR (is_vet=1) and programme type (progType) is not equal to 'Official (National) programme for Third Country Import' (K038A) and the country of origin is equal to the country of reporting organisation, and	WARNING: one among sampArea, origArea, origFishAreaCode or procArea should be reported when evalCode is detected or greater than maximum permissible quantities or	Warning	Active	New warning is introduced in 2025 for VMPR. For non-compliant results of VMPR Plan 1 and Plan 2, the area where the sample was collected should be reported. This only applies if the country of origin is the

Business Rule Code	Description	Error Message	Type of Error	Status	Comment
	'Evaluation of the result' (evalCode) is equal to 'Detected' (J041A), or 'Above the maximum permissible quantities' (J003A) and results assessment is empty, or result assessment is equal to 'Non-compliant' (J038A), then a value in the data element 'Area of sampling' (sampArea) or 'Area of origin of the sample taken' (origArea) or 'Area of origin for fisheries or aquaculture activities code of the sample taken' (origFishAreaCode) or 'Area of processing of the sample taken' (procArea) should be reported'	evalInfo.resAsses is non-compliant			same of the country of the reporting organisation.
CHEMON94	If the 'programme type' (progType) is 'Official (National) programme for Third Country Import' (K038A) or 'EU increased control programme on imported food' (K019A), then sampling point (sampPoint) can only be equal to 'Border Control Posts' (E010A)	WARNING: progType is K038A or K019A but sampPoint is not equal to 'Border Control Posts' (E010)	Warning	Active	New rule is introduced in 2025. It becomes an error in 2026.
CHEMON95	If the result is reported for PPP (is_pest=1) and 'Evaluation of the result' (evalCode) is equal to 'Non-compliant' (J038A), then a value in the data element 'country of origin', different from 'XX', 'AA', 'EU', 'XC', 'XD', 'XE' must be reported	WARNING: Country of origin must be different from 'Unknown'	Warning	Active	New rule is introduced in 2025. It becomes an error in 2026.
CHEMON96	If the result is reported for VMPR (is_vet=1), and programme type (progType) is 'Official (National) programme' (K005A)', then sampling strategy (sampStrategy) can only be equal to 'Objective sampling' (ST10A), 'Selective sampling' (ST20A), 'Suspect sampling' (ST30A) or 'Other' (ST90A)	WARNING: progType is K005A but sampStrategy is not 'Objective sampling' (ST10A) or 'Selective sampling' (ST20A) or 'Suspect sampling' (ST30A) or 'Other' (ST90A)	Warning	Active	New rule is introduced in 2025. It becomes an error in 2026.
CHEMON97	If the result is reported for pesticides (is_pest=1), contaminants (is_occ=1), additives (is_add=1) or flavourings (is flav=1) and programme type (progType) is 'Official (National)	WARNING: progType is K005A but sampStrategy is not 'Objective sampling' (ST10A) or 'Selective sampling' (ST20A) or 'Suspect sampling' (ST30A)	Warning	Active	New rule is introduced in 2025. It becomes an error in 2026.

Business Rule Code	Description	Error Message	Type of Error	Status	Comment
	programme' (K005A)', then sampling strategy (sampStrategy) can only be equal to 'Objective sampling' (ST10A), 'Selective sampling' (ST20A) or 'Suspect sampling' (ST30A)				
CHEMON98	If the result is reported for contaminants (is_occ=1) and related to control plans, therefore, linked to Commission Delegated Regulation (EU) 2022/931 and Implementing Regulation (EU) 2022/932 (progLegRef N375A), then programme type (progType) can be only 'Official (National) programme' (K005A) or 'Official (National and EU) programme' (K018A) or 'Official (National) programme for Third Country Import' (K038A)	WARNING: progLegRef is N375A but progType is not K005A or K018A or K038A	Warning	Active	New rule is introduced in 2025. It becomes an error in 2026.
FOODEX2_ SAMPMAT	The value in sampMatCode should be coded according to FoodEx2 classification rules	sampMatCode is not coded according to FoodEx2 classification rules	Error	Active	
FOODEX2 _ANMAT	The value in anMatCode should be coded according to classification rules	anMatCode is not coded according to FoodEx2 classification rules	Error	Active	
LL_01_VMPR LL_01_PPP	If the value in 'Result type' (resType) is 'Numerical value' (VAL), and the coded sample is unprocessed and value in 'Type of limit for the result evaluation' (evalLimitType) is 'Maximum Residue Level (MRL)' (W002A) or is not reported and the value in 'Result value' (resVal) is greater than the MRL, then the value in 'Evaluation of the result' (evalCode) must be different from 'Less than or	The selected result evaluation (evalCode) is incorrect; result value (resVal) exceeds the result legal limit. Please correct this record	Warning (VMPR)/Error (PEST)	Active	

Business Rule Code	Description	Error Message	Type of Error	Status	Comment
	equal to maximum permissible quantities' (J002A)				
LL_02_VMPR LL_02_PPP	If the value in 'Result type' (resType) is 'Numerical value' (VAL), and the coded sample is unprocessed and the value in 'Type of limit for the result evaluation' (evalLimitType) is 'Maximum Residue Level (MRL)' (W002A) or is not reported and the value in 'Result value' (resVal) is less than or equal to the MRL, then the value in 'Evaluation of the result' (evalCode) must be different from 'Greater than maximum permissible quantities' (J003A) and 'Compliant due to measurement uncertainty' (J031A)	The selected result evaluation (evalCode) is incorrect; the result value (resVal) is equal to or below the result legal limit. Please correct this record	Warning (VMPR)/ Error (PEST)	Active	
LL_03	The value in paramType must be reported for multicomponent/sum to indicate if the full analysis has been performed as indicated by paramCode	paramType is missing, though it should be reported	Error	Active	Modified for the data collection of 2021 according to a new paramType mapping approach
LL_03_b	The value in paramType should be equal to the pre-assigned paramType	WARNING: the reported paramType is different from EFSA pre-assigned paramType	Warning	Active	Modified for the data collection of 2021 according to a new paramType mapping approach
LL_04/LL_04_b	If the result is reported for pesticides (is_pest=1), and the paramCode is part of the legal limits database, then the combination of the matrix sampled and the 'Parameter code' (paramCode.base) should match with the plausible legal combinations as reflected in the legal limits database (PlausibleCombinationPPP=1), unless the result is reported for a part of sum	The selected paramCode does not refer to the correct legal Residue Definition for the sample analysed. Please correct the paramCode	Error	Active	

7 Controlled terminology catalogues

Controlled terminology catalogues are available for reference and download from EFSA's Knowledge Junction on Zenodo (EFSA, 2018).

Table 11: Full list of catalogues and the hierarchies in use for chemical monitoring reporting

Controlled terminology (catalogues)	Chemical monitoring reporting hierarchy*	Analysis hierarchies**
ACTION	Master hierarchy	Not applicable
ADDFOOD	Master hierarchy	FARestExc and FFRestExc
ANLYMD	Master hierarchy	Not applicable
ANLYREFMD	Master hierarchy	Not applicable
ANLYTYP	Master hierarchy	Not applicable
CONCLUS	Master hierarchy	faff (for food additives and food flavourings)
COUNTRY	Master hierarchy	Master hierarchy
EXPRRES	Master hierarchy	Not applicable
FAREA	Master hierarchy	Not applicable
LABACC	Master hierarchy	Not applicable
LEGREF	ChemMonLegref	See Table 12 below for legislation applicability to the specific domains
LMTTYP	Master hierarchy	Not applicable
MDACC	Master hierarchy	Not applicable
MTX	Reporting hierarchy Use food, feed or non-food matrices as applicable	MTXCLS – vmprCls (for VMPR)*** MATRIX (for pesticide residues)***
NUTS	NUTS2016	Not applicable
PARAM	ChemMonRep	addAnalysis flavAnalysis chemAnalysis pestParam vmprParam
PARAMTYP	Master hierarchy	Master hierarchy
POSNEG	Master hierarchy	Not applicable

Controlled terminology (catalogues)	Chemical monitoring reporting hierarchy*	Analysis hierarchies**
PRGTYP	Master hierarchy	Not applicable
REFTM	Master hierarchy	Not applicable
RESEVAL	Master hierarchy	Not applicable
SAMPLR	Master hierarchy	Not applicable
SAMPMD	Master hierarchy	Not applicable
SAMPNT	Master hierarchy	vmprClasses (for VMPR)
SAMPSTR	chemSampStr	Not applicable
SAMPUNTYP	Master hierarchy	Not applicable
UNIT	chemUnit	Not applicable
VALTYP	chemValTyp	Not applicable
YESNO	Master hierarchy	Not applicable

* All chemical monitoring records will be validated to ensure the values reported exist in the reporting hierarchy specified.

** Analysis hierarchies are specified only when there are legislative or reporting needs which require a specific grouping of reported values. All values which exist in one or more of these will also be in the reporting hierarchy for each catalogue.

***This is not a hierarchy as such, but a dedicated catalogue (based on the MTX catalogue), which is needed for specific sample matrices mapping according to the sectoral domain legislation.

Table 12: List of LEGREF values for the progLegalRef data element and domain attributes

LEGALREF code	LEGALREF description	Residue domain applicability
N027A	Regulation (EC) No 396/2005 (amended)	PEST (PESTICIDES)
N112A	Regulation (EC) No 1333/2008 (amended)	ADD (ADDITIVES)
N113A	Regulation (EC) No 1334/2008 (amended)	FLAV (FLAVOURINGS)
N211A	Commission Recommendation No 161/2010	OCC (CONTAMINANTS)
N371A	Commission Implementing Regulation (EU) 2022/1646 and Commission Delegated Regulation (EU) 2022/1644	VMPR
N023A	Commission Regulation (EC) No 2073/2005 (amended)	OCC
N252A	Directive 2002/32/EC	OCC
N302A	Commission Recommendation 2015/682	OCC
N028A	Directive 2006/125/EC	PEST, OCC, ADD
N129A	Regulation (EC) No 178/2002 (amended)	OCC
N139A	Regulation (EC) No 853/2004 (amended)	OCC
N208A	Commission Recommendation No 196/2007	OCC
N312A	Commission Recommendation (EU) 2014/118	OCC
N313A	Commission Recommendation (EU) 2013/165	OCC
N304A	Commission Recommendation (EU) 2017/84	OCC
N310A	Commission Regulation (EU) 2017/2158	OCC
N319A	Commission Recommendation 2006/576/EC	OCC
N320A	Commission Recommendation 2013/711/EU amended	OCC
N154A	Commission Directive (EC) No 40/2003	OCC
N101A	Regulation (EC) No 767/2009 (amended)	OCC
N324A	Commission Recommendation (EU) 2019/1888	OCC
N323A	Regulation (EU) No 2017/625	OCC, ADD
N317A	Commission Implementing Regulation (EU) 2019/1793	PEST, OCC, ADD
N318A	Commission Delegated Regulation (EU) 2016/127 and Regulation (EU) 2016/128	PEST, OCC, ADD
N372A	Commission Recommendation (EU) 2022/495	OCC
N379A	Commission Regulation (EU) 2023/915	OCC
N375A	Commission Delegated Regulation (EU) 2022/931 and Implementing Regulation (EU) 2022/932	OCC
N376A	Commission Recommendation (EU) 2022/553	OCC
N377A	Commission Recommendation (EU) 2022/561	OCC

It is recommended that data providers use as specific as LEGREF term as possible to ensure appropriate inclusion in reports and other data re-uses. Please note that reporting LEGREF=`Regulation (EC) No 178/2002 (amended)' (N129A) will flag the record as is_occ=1 (see also Section 9 below on reporting flags); this will ensure that data are used for exposure assessment or other specific data analysis but not necessarily included in EU Annual Reports. If a specific piece of legislation is not available in the controlled terminology catalogue LEGREF

and/or in the specific catalogue hierarchy ‘ChemMonLegRef’, data providers should contact EFSA with a suggested new term during the major release consultation period in October–November each year or, if there is an urgent unpredicted need, at any other time.

8 Legal Limits database

EFSA developed a harmonised database (Legal Limit Database) containing maximum residue limits (MRLs) established for pesticides and veterinary medicine residues in Regulation (EC) No 396/2005, Regulation (EC) No 37/2010 and Directive (EC) No 141/2006 to support data providers in applying EU MRLs to numerical analytical result evaluation. It is intended that this resource will facilitate checking exceedances and sample compliance evaluation at results level.

In cases where an MRL change during the data collection reference period, the database will contain both MRLs with the dates of applicability. The legal limit applied will be determined by the sampling date of the sample and will only cover raw, unprocessed samples. There is a small number of substances for which legal limits are not harmonised across the legislation which applies to chemical monitoring. A common database of MRLs is considered beneficial for EFSA and the Member States, who should collaborate with the Commission in this respect.

An extraction of the database is visible and downloadable through EFSA MicroStrategy, and it will be a useful tool for data providers to facilitate reporting according to the legislation. It will also contain the history of legal limits throughout the years; data providers must still rely on the legislation as the official source of legal limits.

9 Reporting flags in the EFSA Scientific Data Warehouse

Since all chemical monitoring data transmissions to EFSA were merged into one data collection, it became necessary to understand and record in the sDWH the domains that are relevant for each result. There are substances that for instance are both pesticides and veterinary medicinal products or both contaminants and food additives. Many combinations are possible for these dual substances. One of the benefits of a single data collection is to avoid double reporting of such records when they need to appear in more than one domain report.

In order to ensure such a result record can be reported once and used in as many different domains and reports as are relevant, EFSA has implemented a flagging algorithm which identifies the relevance of each result stored in the EFSA sDWH. This has been done based on substance (paramCode) and legislation (progLegalRef) to date and the table below indicates the combinations which determine the flag value. EFSA creates and stores five flags for each result record to indicate its applicability to each of the five chemical monitoring domains: VMPR, pesticides, contaminants, food additives, and food flavourings.

The flags are created at the time of receiving the records into the DCF which enables them to be used to ensure specific BR only applies to records for which they are relevant.

EFSA is aware that the matrix of the sample tested and measurement Unit reported are also elements which affect the flags and adjustments to the algorithm are needed that will include the use of the Legal Limits database to identify parameter/matrix/legislation combinations that should trigger the flag creation in the future.

	Flag value
Records for which NEITHER progLegalRef NOR paramCode are in the domain*	0
Records for which progLegalRef AND paramCode are in the domain	1
Records for which ONLY paramCode is in the domain	2
Records for which ONLY progLegalRef is in the domain	3

* 'In the domain' means that the term is relevant to the domain. progLegalRef being in the domain is checked through the hierarchy ChemMonLegRef in the attributes of each term ('VMPR', 'PEST', 'OCC', 'ADD' and 'FLAV'). paramCode being in the domain is checked through each domain's analysis hierarchy (vmprParam, pestParam, chemAnalysis, addAnalysis & flavAnalysis). See also Table 12.

For example, under this approach, records would be flagged as follows:

Example	VMPR (is_vet)	Pesticides (is_pest)	Contaminants (is_occ)	Additives (is_add)	Flavourings (is_flav)
progLegalRef=VMPR records whose PARAM is only VMPR	1	0	0	0	0
progLegalRef=VMPR records whose PARAM is both VMPR and OCC (contaminants)	1	0	2	0	0
progLegalRef=VMPR records whose PARAM is both VMPR and pesticides	1	2	0	0	0
progLegalRef=VMPR and OCC (contaminants) records whose PARAM is both VMPR and OCC (contaminants)	1	0	1	0	0
progLegalRef=ADD records whose PARAM is both ADD and OCC	0	0	1	1	0
progLegalRef=FLAV records whose PARAM is only FLAV	0	0	0	0	1

Business rules can be applied according to the domain flags, e.g. CHEMON73 will apply if VMPR=1.

As an example, if a record is reported with progLegalRef=N371A (Regulation (EU) 2022/1646 on VMPR) and paramCode=RF-00000411-VET (Testosterone-17-Alpha), which is included only in 'vmprParam' hierarchy of the PARAM catalogue, then this record will have the flag for VMPR equal to 1 (is_vet=1) and the flag for the other four domains equal to '0' (is_pest=0 and is_occ=0 and is_add=0 and is_flav=0). If, instead, a record is reported with progLegalRef=N371A (Regulation (EU) 2022/1646 on VMPR) and paramCode=RF-0024-002-PPP (Amitraz), which is included in 'vmprParam' and 'pestParam' hierarchies, then this record will be flagged as is_vet=1 and is_pest=2 and is_occ=0 and is_add=0 and is_flav=0.

10 Validation, National and Annual Reports

Data submitted through the ChemMon data collection will be used for EFSA scientific assessments. In addition, EFSA will produce a series of reports based on each calendar year of these data to fulfil customer and legislative requirements. The following table (Table 13) is a summary of the reports which will be derived from data submissions and the filters that will be used to select the data.

Data providers should report the appropriate LEGREF code (or combination of codes), which indicates the legislation under which the samples were taken and analysed in order to fulfil the specific legislative control activity requirements. Please refer to reporting flags in EFSA's sDWH based on LEGREF and PARAM codes as described above in Section 8.

Table 13: Summary of reports

Customer	Purpose	ChemMon domain flag inclusion	Note
Data providers and validators	Validation dashboard reports: • Pesticides • VMPR • Chemical contaminants • Additives • Flavourings	Only those records with domain flag value=1 will appear in each of the four sections of these validation reports (pesticides, VMPR, chemical contaminants, food additives and food flavourings). Please note that these dashboards with summarised and/or aggregated results are generated by EFSA for each single reporting organisation in the given country	Each submitted record may appear in more than one section of the validation dashboard report
Data providers and validators, as supporting tool during the validation process	National Reports: • Chemical contaminants • Food additives • Flavourings	Reports generated for each of the chemical contaminants and food additives results domain: All records with flag value is_occ=1 (contaminants). All records with flag value is_add=1 (food additives). All records with flag value is_flav=1 (food flavourings). Please note that these reports are generated by EFSA for each single reporting organisation in the given country. The National Reports can be created at any time by the data providers/national organisation	Each submitted record may appear in more than one domain National Report
Member States/EFTA/pre-accession countries for delivery to the European Commission	National Reports: • VMPR	Reports generated only for VMPR results domain: All records with flag value is_vmpr=1 Please note that these reports are generated by EFSA for each single reporting organisation in the given country. The VMPR National Report can be created any time by the data providers/national organisation	Each submitted record may appear in more than one domain National Report

Customer	Purpose	ChemMon domain flag inclusion	Note
European Commission	Statutory EU Annual Reports: • Pesticides • VMPR	Annual Reports generated only for pesticides and VMPR results domain: All records with flag value is_vmpr=1 OR All records with flag value is_vmpr=1, excluding the VMPR matrix class = 'Other'	Each submitted record may appear in more than one domain EU Annual Report
European Commission	Aggregated data for: • Pre-filling one of the pre-defined tables (Table 1.4) of the EC Annual Report on Official Control (AROC) Report	All four ChemMon residue domains official control data (pesticides, VMPR, contaminants and food additives). Data extraction from EFSA sDWH coupled with the EC AROC platform to facilitate Member States in submitting data in their Annual Report on the implementation of their multiannual national control plans (MANCP) in a standard model form	Each submitted record/sample may appear in more than one domain of EC AROC

11 Data validation and acceptance

Datasets transmitted to the EFSA Data Collection Framework (DCF) will be acknowledged automatically by the system through an acknowledgement (ack) message. The data provider will receive the ack message followed by the results of the BR validation for their dataset. The 'ack details' message can be downloaded as an XML file containing the list of errors found by the system. These process steps are fully described in the DCF user manual for data providers.

To resolve errors and warnings about data quality, data providers are invited to make use of the troubleshooting suggestions in Table 9 and Table 10 to correct and re-transmit their datasets. In addition, the network collaboration site[75] contains information and frequently asked questions that will help to resolve any issues.

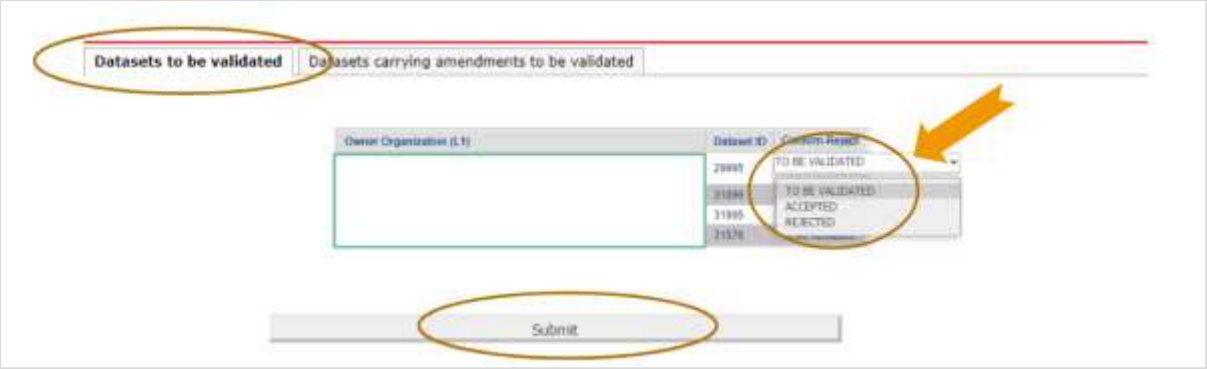
If clarification is still required, data providers should contact data.collection@efsa.europa.eu. This channel is monitored daily, and each query will be answered as soon as possible by the most appropriate EFSA staff member available.

Once the datasets have reached 'Valid' or 'Valid with Warning' status, the data provider will be able to 'Submit' them to the EFSA sDWH. Datasets can be submitted through DCF by flagging the dataset ID that has to be submitted and by clicking the 'Submit' button as depicted in the image below.

The 'Submitted' data will then be visible through validation reports in MicroStrategy. Both data providers and data validators can view the validation reports in MicroStrategy.

Once the data validator is satisfied that the datasets 'Submitted' are accurate and complete, they will be able to 'Accept' the data through the confirmation document in MicroStrategy. This ensures that data are in the EFSA sDWH and ready for use. Data validators can accept or reject the data, by selecting the final status of the datasets, 'Accepted' or 'Rejected', from the drop-down menu 'Confirm-Reject', in correspondence with the relative dataset ID. At the end of the process, the data validator must submit the final status of the datasets by clicking the 'Submit' button as depicted below.

[75] https://efsa815.sharepoint.com/sites/chemical-monitoring-data-network/



It is important to note that once data are 'Accepted' in the sDWH, the only way to correct them is through the record 'Update procedure' described in GDE2 Guidance (EFSA, 2014a) (5.2 Amendment Operations p. 18-30). EFSA encourages data providers to ensure a thorough validation of data transmitted before acceptance.

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List of abbreviations

AOCS	American Oil Chemists' Society
AROC	EC Annual Report on Official Controls
AWR	Above the analytical Working Range
BR	Business Rules
CCα, CCalpha	Decision limit
CCβ, CCbeta	Detection capability
ChemMon	Chemical Monitoring data collection of EFSA
DCF	Data Collection Framework
EEA	European Economic Area
EU	European Union
EU MACP	EU Multi-Annual Coordinated Programme
FoodEx2	Food classification and description system (version 2) of EFSA
FCM	Food Contact Materials
GDE2	Guidance on Data Exchange (version 2.0)
GBR	General business rules
LOD	Limit of Detection
LOQ	Limit of Quantification
MANCP	Multi-Annual National Control Plans
MRL	Maximum Residue Limit
MRPL	Minimum Required Performance Limit
NUTS	Nomenclature of territorial units for statistics
PAH	Polycyclic aromatic hydrocarbons
RASFF	Rapid Alert System for Food and Feed
RPC	Raw primary commodities
sDWH	Scientific Data Warehouse
SSD2	Standard Sample Description (version 2.0)
TDS	Total diet study
TR	Transparency Regulation
VMPR	Veterinary Medicinal Product Residues
XML	extensible mark-up language