

# EURL Proficiency Test on the Determination of PCDD/Fs, PCBs, PBDEs, HBCDDs and PFASs in Fish Meal 2022

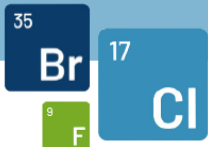
EURL-PT-POP\_2203-FM

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## Announcement

18 July 2022





## Summary

Test sample	<b>FEED:</b> Fish Meal [2203-FM]
Analytes of interest	<p><b>PCDD/Fs</b> (17 2,3,7,8-substituted PCDD/Fs)</p> <p><b>PCBs</b> (12 DL-PCBs, 6 NDL-PCBs)</p> <p><b>Mandatory</b> for NRLs: <b>PBDEs</b> (BDE-28, -47, -49, -99, -100, -153, -154, -183, -209)</p> <p><b>HBCDDs</b> (<math>\alpha</math>-HBCDD, <math>\beta</math>-HBCDD, <math>\gamma</math>-HBCDD or total HBCDD)</p> <p><b>Optional</b> for NRLs: <b>PFASs</b> (PFOS, PFOA, PFNA, PFHxS, Sum of PFOS, PFOA, PFNA, PFHxS)</p> <p><b>Other PFASs</b> (perfluoroalkylcarboxylic acids, perfluoroalkylsulfonic acids, perfluoroalkane sulphonamides)</p>
Methods	<p><b>PCDD/Fs, DL-PCBs:</b> GC-HRMS, GC-MS/MS and alternative methods; Bioanalytical screening methods</p> <p><b>Indicator PCBs, PBDEs, HBCDDs, PFASs:</b> Any kind of method</p>
Participants	NRLs, OFLs, other official laboratories, commercial laboratories performing the analysis of samples taken by feed business operators
Statistical evaluation	ISO 13528:2020, IUPAC Protocol
Participation fee	Participation fee for OFLs, other official and commercial laboratories
Registration	Online registration until <b>19 August 2022</b>



Shipment of samples	<b>30 August 2022</b>
Deadline for reporting of results	PFASs: <b>04 November 2022</b> PCDD/Fs and PCBs: <b>11 November 2022</b> PBDEs and HBCDDs: <b>18 November 2022</b>



## 1. Introduction

This proficiency test (PT) on the determination of **PCDD/Fs, PCBs, PBDEs, HBCDDs** and **PFASs in fish meal** is organized by the EURL for halogenated POPs in Feed and Food to be performed between September and November 2022. The objective is to assess analytical performance of laboratories and inter-laboratory comparability of results from analyses of PCDD/Fs, PCBs, PBDEs, HBCDDs and PFASs in one sample of **fish meal**.

National Reference Laboratories (NRLs) for halogenated POPs in Feed and Food from EU member states are requested to participate as part of their work programme for 2022. NRLs are invited to encourage the participation of Official Laboratories (OFLs) from their member states as part of their duties following Article 101 of regulation (EU) 2017/625 of the European Parliament and of the Council of 15 March 2017. Furthermore, participation of OFLs will allow the extension of the data basis for calculation of assigned values and evaluation of results.

**Official laboratories** and **commercial laboratories** performing the analysis of samples taken by feed business operators are invited to participate in this interlaboratory study. First results will be discussed by representatives of European Commission, NRLs and the EURL at the COM/EURL/NRL workshop in November 2022 in Freiburg, Germany or an equivalent online venue.

Participating laboratories will receive the evaluation of the PT results in preliminary and final reports.

EURL reserves all rights to publish and present the results of the interlaboratory study in scientific journals and/or conferences.

## 2. Test samples

The test sample is prepared from commercially available feed, naturally contaminated with PCDD/Fs, PCBs and PFASs and fortified with analytes of interest using technical mixtures of PBDEs and HBCDDs. Each participant will receive about **90 g** of the test sample.



### 3. Analytes of interest

NRLs for halogenated POPs in feed and food are requested to determine the following parameters:

#### ■ PCDD/Fs and PCBs:

- 17 2,3,7,8-substituted PCDD/Fs
- WHO-PCDD/F-TEQ (using WHO2005-TEF)
- 12 dioxin-like PCBs
- WHO-PCB-TEQ (using WHO2005-TEF)
- WHO-PCDD/F-PCB-TEQ (using WHO2005-TEF)
- Six non-dioxin-like PCBs (indicator PCBs): PCB 28, 52, 101, 138, 153, 180
- Sum of six non-dioxin-like PCBs (indicator PCBs): Sum of PCB 28, 52, 101, 138, 153, 180
- PCDD/F-PCB-BEQ, PCDD/F-BEQ and/or PCB-BEQ, if applicable (using bioanalytical screening methods)

#### ■ PBDEs and HBCDDs:

- PBDEs: BDE-28, BDE-47, BDE-49, BDE-99, BDE-100, BDE-153, BDE-154, BDE-183, BDE-209
- Sum of 8 PBDEs (without BDE-209), sum of 9 PBDEs (with BDE-209)
- HBCDDs:  $\alpha$ -HBCDD,  $\beta$ -HBCDD,  $\gamma$ -HBCDD
- Sum of  $\alpha$ -,  $\beta$ -,  $\gamma$ -HBCDD (using HPLC methods) or total HBCDD (using GC methods)

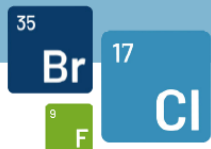
NRLs for halogenated POPs in feed and food are encouraged to determine the following optional parameters for PFASs:

#### ■ Main PFASs

- Linear perfluorooctanesulfonic acid (L-PFOS), perfluorooctanoic acid (PFOA), perfluorononanoic acid (PFNA), perfluorohexanesulfonic acid (PFHxS)
- Sum of L-PFOS, PFOA, PFNA, PFHxS
- Sum of total PFOS, PFOA, PFNA, PFHxS

#### ■ Other PFASs

- **Perfluoroalkylsulfonic acids (PFASs):** perfluorobutanesulfonic acid (PFBS), perfluoropentanesulfonic acid (PFPeS), perfluoroheptanesulfonic acid (PFHpS), branched perfluorooctanesulfonic acids (br-PFOS), perfluorononanesulfonic acid (PFNS), perfluorodecanesulfonic acid (PFDS), perfluoroundecane sulfonic acid (PFUnDS), perfluorododecane sulfonic acid (PFDoDS), perfluorotridecane sulfonic acid (PFTTrDS)



- **Perfluoroalkylcarboxylic acids (PFCAs):** perfluorobutanoic acid (PFBA), perfluoropentanoic acid (PFPeA), perfluorohexanoic acid (PFHxA), perfluoroheptanoic acid (PFHpA), perfluorodecanoic acid (PFDA), perfluoroundecanoic acid (PFUnDA), perfluorododecanoic acid (PFDoDA), perfluorotridecanoic acid (PFTTrDA), perfluorotetradecanoic acid (PFTeDA)
- Perfluorooctane sulphonamide (**FOSA**)

## 4. Methods

One or more of the following **detection methods** can be applied:

- GC-HRMS-, GC-MS/MS-methods or other alternative methods for PCDD/Fs and dioxin-like PCBs
- Bioanalytical screening methods for PCDD/Fs and dioxin-like PCBs
- Any kind of method for indicator PCBs, PBDEs, HBCDDs and PFASs.

## 5. Participation

NRLs for halogenated POPs in feed and food shall participate in this EURL PT and report the mandatory analytes of interest. From NRLs not participating in this PT or not reporting the mandatory analytes an explanation justifying the non-participation will be requested. In case of lack of collaboration the suggested “protocol for management of underperformance in comparative testing or lack of collaboration of NRLs” provided by DG SANTE will be followed.

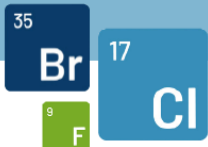
## 6. Statistical evaluation of results

Statistical evaluation of the PT results is performed by the EURL POPs according to:

- ISO 13528:2020, Statistical methods for use in interlaboratory studying by interlaboratory comparisons, International Organization for Standardization
- International Harmonized Protocol for the Interlaboratory studying of Analytical Chemistry Laboratories (IUPAC Technical Report, Pure Appl. Chem., Vol. 78, No. 1, pp-145-196, 2006).

## 7. Quality control

The Deutsche Akkreditierungsstelle GmbH attests that the provider of proficiency testing Chemisches und Veterinäruntersuchungsamt Freiburg, EU Reference Laboratory (EURL) for halogenated persistent organic pollutants (POPs) in Feed and Food is competent under the terms of DIN EN ISO/IEC 17043:2010 to carry out proficiency testing in the testing field of determination of halogenated persistent organic pollutants (POPs) in food and feed (Accreditation number: D-EP-18625-01-00).



## 8. Confidentiality

The identity of participating laboratories will be kept confidential.

For NRLs of EU member states, the suggested “protocol for management of underperformance in comparative testing or lack of collaboration of National Reference Laboratories (NRLs)” will be followed. The confidentiality of NRLs will be kept according to this protocol.

For OFLs of EU member states cooperating with NRL, the respective NRLs will inform the EURL for halogenated POPs about the participating OFLs and will receive the respective laboratory codes, invoices for participation fee and certificates of participation of the OFLs.

## 9. Participation fee

The participation of **NRLs of EU member states** is free of charge.

For **OFLs of EU member states (in cooperation with NRLs)** the following participation fees have to be paid:

- 250 € for determination of PCDD/Fs and/or DL-PCBs, NDL-PCBs
- 150 € for determination of PCDD/Fs, DL-PCBs using bioanalytical screening methods only
- 150 € for determination of NDL-PCBs only
- 150 € for determination of PBDEs, HBCDDs only
- 150 € for determination of PFASs only

In case of analysis of different groups of analytes (PBDEs, HBCDDs, PFASs) in the same sample the additional costs per group are 50 € (e.g. for additional analysis of PBDEs and/or HBCDDs and/or PFASs in addition to PCDD/Fs or PCBs).

The participation fees for **other official laboratories and commercial laboratories** are:

- 350 € for determination of PCDD/Fs and/or DL-PCBs, NDL-PCBs
- 250 € for determination of PCDD/Fs, DL-PCBs using bioanalytical screening methods only
- 250 € for determination of NDL-PCBs only
- 250 € for determination of PBDEs, HBCDDs only
- 250 € for determination of PFASs only

In case of analysis of different groups of analytes (PBDEs, HBCDDs, PFASs) in the same sample the additional costs per group are 75 €.

Invoices for participation of **OFLs and other official and commercial laboratories** will be sent before sending of the final report and the certificate of participation. In case of registration for the PT and not reporting of any results a fee of 150 € will be charged.



## 10. Registration

For registration for this interlaboratory study, participants are asked to fill out the respective online registration form using the following link.

### [Registration form](#)

(direct link: [https://ec.europa.eu/eusurvey/runner/EURL-PT-POP\\_2203-FM\\_Registration](https://ec.europa.eu/eusurvey/runner/EURL-PT-POP_2203-FM_Registration))

**Please register using the online registration form linked above until 19 August 2022.**

Registration for this PT and reporting of results/method information is **only** possible using the supplemented online forms. Please contact us directly in case of technical difficulties.



## 11. Time schedule

Who	What	When
EURL POPs	Announcement	18 July 2022
Participants	Registration	until 19 August 2022
EURL POPs	Shipment of test samples, sending of instructions and laboratory code	30 August 2022
Participants	Confirmation of receipt of test sample	within 7 days
Participants	Reporting of results	
	PFASs	04 November 2022
	PCDD/Fs and PCBs	11 November 2022
	PBDEs and HBCDDs	18 November 2022
EURL POPs	Evaluation and preparation of a preliminary report	November 2022
EURL/NRLs	Discussion at COM/EURL/NRL workshop	29/30 November 2022
EURL POPs	Sending of final report to all participants	March 2023

EURL for halogenated POPs in Feed and Food  
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