



# EURL Proficiency Test on the Determination of PCDD/Fs, PCBs, PBDEs and HBCDDs in Bentonite 2024

EURL-PT-DPB\_2402-BT

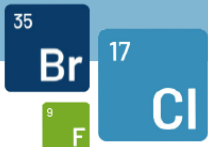
## Announcement

01 July 2024



## Summary

Test sample	<b>FEED:</b> Bentonite [2402-BT]
Analytes of interest	<p><b>PCDD/Fs</b> (17 2,3,7,8-substituted PCDD/Fs)</p> <p><b>Mandatory</b> for NRLs: <b>PCBs</b> (12 DL-PCBs, 6 NDL-PCBs)</p> <p><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>
Participants	NRLs, OFLs, other official laboratories, commercial laboratories performing the analysis of samples taken by feed business operators
Statistical evaluation	ISO 13528:2022, IUPAC Protocol
Participation fee	Participation fee for OFLs, other official and commercial laboratories
Registration	Online registration until <b>31 July 2024</b>
Shipment of samples	<b>06 August 2024</b>
Deadline for reporting of results	<p>PCDD/Fs and PCBs: <b>25 October 2024</b></p> <p>PBDEs and HBCDDs: <b>07 November 2024</b></p>



## 1. Introduction

This proficiency test (PT) on the determination of **PCDD/Fs**, **PCBs**, **PBDEs** and **HBCDDs** in **Bentonite** is organized by the EURL for halogenated POPs in Feed and Food to be performed between July and November 2024. The objective is to assess analytical performance of laboratories and inter-laboratory comparability of results from analyses of PCDD/Fs, PCBs, PBDEs and HBCDDs in one sample of **Bentonite**.

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 2024. 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 EURL/NRL online workshop in November 2024.

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 mineral feed and fortified with some analytes of interest using analytical standards or technical mixtures of PCBs, 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)

### 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 and HBCDDs

All analyses must be performed in the participant's own laboratory with its own personnel and equipment.



## 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. A coordination of the participation of OFLs through NRLs is required. The EURL will send the samples only to the NRLs, including the samples for the OFLs in the respective member state, if applicable. For the shipment of the sample by these NRLs to the OFLs a written agreement between EURL and respective NRLs concerning responsibility for forwarding of samples will be provided.

## 6. Statistical evaluation of results

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

- ISO 13528:2022, 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

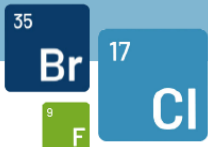
The Deutsche Akkreditierungsstelle GmbH attests that the provider of proficiency testing Chemisches und Veterinäruntersuchungsamt Freiburg, EU Reference Laboratory (EURL) for halogenated persistent organic pollutants (POPs) in Feed and Food is competent under the terms of DIN EN ISO/IEC 17043:2010 to 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, ND-L-PCBs
- 150 € for determination of PCDD/Fs, DL-PCBs using bioanalytical screening methods only
- 150 € for determination of ND-L-PCBs only
- 150 € for determination of PBDEs, HBCDDs only

In case of analysis of different groups of analytes (PBDEs, HBCDDs) in the same sample the additional costs per group are 50 € (e.g. for additional analysis of PBDEs and/or HBCDDs 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, ND-L-PCBs
- 250 € for determination of PCDD/Fs, DL-PCBs using bioanalytical screening methods only
- 250 € for determination of ND-L-PCBs only
- 250 € for determination of PBDEs, HBCDDs only

In case of analysis of different groups of analytes (PBDEs, HBCDDs) 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-DBP\\_2402-BT\\_Registration](https://ec.europa.eu/eusurvey/runner/EURL-PT-DBP_2402-BT_Registration)

**Please register using the online registration form linked above until 31 July 2024.**

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	01 July 2024
Participants	Registration	until 31 July 2024
EURL POPs	Shipment of test samples, sending of instructions and laboratory code	06 August 2024
Participants	Confirmation of receipt of test sample	within 7 days
Participants	Reporting of results	
	PCDD/Fs and PCBs	25 October 2024
	PBDEs and HBCDDs	07 November 2024
EURL POPs	Evaluation and preparation of a preliminary report	November 2024
EURL/NRLs	Discussion at EURL/NRL workshop	26/27 November 2024
EURL POPs	Sending of final report to all participants	June 2025

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