

EURL Interlaboratory Study on the Determination of Brominated Contaminants and PCNs

in Cod Liver Oil

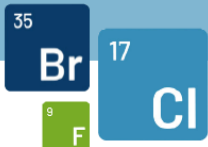
2021

EURL-ILS-BC_2104-CLO

Announcement

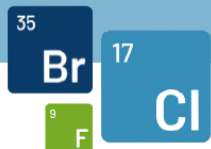
11 June 2021





Summary

Test sample	Fortified cod liver oil [2104-CLO]
Analytes of interest	<p>PBDEs (BDE-28, -47, -49, -99, -100, -153, -154, -183, -209)</p> <p>eBFRs (PBB, HBBz, PBT, PBEB, BTBPE, DBDPE, TBX)</p> <p>HBCDDs (α-HBCDD, β-HBCDD, γ-HBCDD or total HBCDD)</p> <p>TBBPA</p> <p>PCNs (PCN 27, 28, 31, 36, 42, 46, 48, 49, 50, 52, 53, 59, 60, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75)</p>
Methods	Any kind of method (on request information on sample preparation and measurement methods can be provided)
Participants	NRLs, OFLs, other official laboratories, commercial laboratories performing the analysis of samples taken by food business operators
Statistical evaluation	ISO 13528:2020, IUPAC Protocol
Participation fee	Participation fee for OFLs, other official and commercial laboratories
Registration	Online registration until 30 Juni 2021
Shipment of samples	06 July 2021
Reporting of results	Deadline for reporting of results: 30 September 2021



1. Introduction

This interlaboratory study (ILS) on the determination of brominated contaminants (BCons) and polychlorinated naphthalenes (PCNs) **in cod liver oil** is organized by the EURL for halogenated POPs in Feed and Food to be performed between July and September 2021. The objective is to assess the interlaboratory comparability of results from BCons and PCNs in a **fortified food sample**.

Official laboratories, research laboratories and **commercial laboratories** performing the analysis of samples taken by food 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 2021 in Berlin, Germany or an equivalent online venue.

Participating laboratories will receive the evaluation of the ILS 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 food and fortified with analytes of interest.

Each participant will receive about **20 g** of the test sample in a PTFE bottle. Additionally a standard mixture of eBFRs will be sent to all participants registered for analysing the listed eBFR group.



3. Analytes of interest

Participants are asked to determine at least one of the following parameters (as many analytes as possible from each group):

- **PBDE group**
 - Individual congeners: BDE-28, -47, -49, -99, -100, -153, -154, -183, -209
 - Sum of 8 PBDEs (without BDE-209)
 - Sum of 9 PBDEs (with BDE-209)

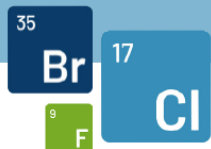
- **eBFR group**
 - PBBz (1,2,3,4,5-Pentabromobenzene; CAS 608-90-2)
 - HBB (1,2,3,4,5,6-Hexabromobenzene; CAS 87-82-1)
 - PBT (1,2,3,4,5-Pentabromo-6-methylbenzene; CAS 87-83-2)
 - PBEb (1,2,3,4,5-Pentabromo-6-ethylbenzene; CAS 85-22-3)
 - BTBPE (1,1'-[1,2-Ethanediy]bis(oxy)] bis[2,4,6-tribromo]benzene; CAS 37853-59-1)
 - DBDPE (1,1'-(1,2-Ethanediy]bis[2,3,4,5,6-pentabromo-benzene]; CAS 84852-53-9)
 - TBX (1,2,4,5-Tetrabromo-3,6-dimethylbenzene; CAS 23488-38-2)

- **HBCDD and TBBPA group**
 - α -HBCDD, β -HBCDD, γ -HBCDD stereoisomers
 - Sum of α -, β -, γ -HBCDD (using HPLC methods)
 - Total HBCDD (using GC methods)
 - TBBPA

- **PCN group**
 - PCNs 27, 31, 42, 46, 48, 49, 50, **53**, 59, 63, 65, **69**, 70, **73**, **74**, **75**
 - PCNs 28/36, **52/60**, **66/67**, 64/68, **71/72** (difficult to separate chromatographically)
*[It is recommended to focus at least on the 12 main congeners (in **bold**) when starting method development]*

4. Methods

All kinds of detection and quantification methods may be applied. On request information on sample preparation and measurement methods can be provided by the EURL.



5. Statistical evaluation of results

If possible, a statistical evaluation of the results of the interlaboratory study are 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).

6. 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).

7. Confidentiality

The identity of participating laboratories will be kept confidential.

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.

8. Participation fee

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

For **OFLs of EU member states (in cooperation with NRLs)** a participation fee of 150 € applies.

The participation fee for **other official laboratories and commercial laboratories** is 250 €.

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.



9. 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-ILS-BC_2104-CLO)

Please register using the online registration form linked above until 30 June 2021.

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.

10. Time schedule

Who	What	When
EURL POPs	Announcement	11 June 2021
Participants	Registration	until 30 July 2021
EURL POPs	Shipment of test samples, sending of instructions and laboratory code	06 July 2021
Participants	Confirmation of receipt of test sample	within 7 days
Participants	Reporting of results	until 30 September 2021
EURL POPs	Evaluation and preparation of a preliminary report	October 2021
EURL/NRLs	Discussion at CWG BCons/PCNs meeting	October 2021
EURL/NRLs	Discussion at COM/EURL/NRL workshop	23/24 November 2021
EURL POPs	Sending of final report to all participants	January 2022

EURL for halogenated POPs in Feed and Food
c/o State Institute for Chemical and Veterinary Analysis of Food Freiburg

Theresa Zwickel, Alexander Schächtele
Phone: +49 761 8855 500 E-Mail: eurl-pops@cvuafr.bwl.de