

Announcement

ILS Pyr-02 (2024)

Interlaboratory study on the quantification of pyrethroids in a standard solution

Pyrethroids

February 2024

**European Union Reference Laboratory for Pesticides in Food of Animal
Origin and Commodities with High Fat Content**

Björn Hardebusch
Sarah Obermeier

Approved by Björn Hardebusch
02 February 2024
Version 1.0

EUPT-Coordinator:

Björn Hardebusch

Head of EURL-AO (Food of Animal Origin and Commodities with High Fat Content)
CVUA Freiburg
Department of Residues and Contaminants
Bissierstrasse 5
D-79114 Freiburg

Phone: +49-761-8855-137

E-Mail: Bjoern.Hardebusch@cvuafr.bwl.de
eurl-pesticides@cvuafr.bwl.de

Organisation Team at the EURL AO Freiburg:

Björn Hardebusch	Head of EURL AO	CVUA Freiburg	phone: +49-761-8855-137
Sarah Obermeier	Food Chemist	CVUA Freiburg	phone: +49-761-8855-134

EUPT Scientific Committee:

Michelangelo Anastassiades (AG)	Head of EURL SRM, CVUA Stuttgart, Fellbach, Germany
Amadeo R. Fernández-Alba (AG)	Head of EURL FV, University of Almería, Spain
Carmen Ferrer Amate	EURL-FV, University of Almería, Spain
Magnus Jezussek (AG)	Bavarian Health and Food Safety Authority, Erlangen, Germany
André de Kok (AG)	Wageningen Food Safety Research, Wageningen, The Netherlands
Marine Lambert	ANSES, French Agency for Food, Environmental and Occupational Health & Safety, Maisons-Alfort, France
Ralf Lippold (AG)	CVUA Freiburg, Freiburg, Germany
Hans Mol (AG)	Wageningen Food Safety Research, Wageningen, The Netherlands
Paula Medina Pastor (QCG)	European Food Safety Authority (EFSA), Parma, Italy
Patrizia Pelosi (AG)	Istituto Superiore di Sanità, Roma, Italy
Stephan Radim (AG)	Czech Agriculture and Food Inspection Authority, Prague, Czech Republic
Finbarr O'Regan (AG)	Pesticide Control Laboratory, Department of Agriculture, Fisheries and Food, Kildare, Ireland
Tuija Pihlström (AG)	National Food Agency, Uppsala, Sweden
Mette Erecius Poulsen (AG)	Head of EURL CF, DTU National Food Institute, Lyngby, Denmark
Hermann Unterluggauer (AG)	Austrian Agency for Health and Food Safety (AGES), Innsbruck, Austria
Antonio Valverde (QCG)	University of Almería,

QCG: Quality Control Group

AG: Advisory Group

Introduction

The European Union Reference Laboratory for Pesticides in Food of Animal Origin and Commodities with High Fat Content (EURL AO) in Freiburg, Germany, announces its 2nd Interlaboratory study on pesticides.

Experience has shown that the analysis of **pyrethroids** is a challenge. Different standard substances from different suppliers, the assumption of different isomer ratios, the influence of analyte protectants (AP) etc. can have an influence on the result, regardless of the matrix. The objective of the interlaboratory study is to identify challenges in the analysis of pyrethroids. For this purpose, the same standard solution will be quantified by different laboratories.

The test solution will be a standard solution in which 10 different pyrethroids are dissolved in acetone. These pyrethroids are selected by the EURL AO. The selection of pyrethroids was also approved by 18 participants from EU-NRLs taking part in a survey. The selection of pyrethroids and the approximate concentration range of the respective pyrethroids will be known in advance.

The test solution will be dispatched on Monday, 06 May 2024. Participating laboratories may use any analytical method of their choice. Results are to be reported to the EURL AO within the stipulated deadline. After receipt of the results, the EURL AO will carry out a statistical evaluation of the submitted data. Thereafter, a report will be sent to the participating laboratories together with a certificate of participation.

Objectives

The objectives of this proficiency test are

- to assess the inter laboratory consistency of results from the analyses of pyrethroids and
- to identify challenges in the analysis of pyrethroids
- to compare their standard solutions with this certified solution

Participants

Participation is voluntary for all laboratories.

Laboratories are requested to enrol for participation within the EUPT-registration website (www.eupt-registration.eu) which is going to be used for all EUPTs performed by the EURLs for pesticide residues. The registration period will last from **15 December to 01 April 2024**. Participants will be able to re-enter the registration website and change/update the entries (e.g. addresses for shipment and invoice, contact data). Deadline for these changes is **26 April 2024**.

After the shipping of the test solutions, the participants will receive a EU Survey link.

Important: EUPT 19 and the ILS F-01 results will be submitted using the EU webtool. The results for this pyrethroid study will be submitted via **EU Survey!** I link will be provided to a later stage.

Test solution

The test solution consists of one ampoule with pyrethroids dissolved in acetone with a concentration range of 50-250 µg/ml. The test solution is custom made solution provided externally. The test material is stored under the conditions specified by the manufacturer and will be provided to the participants. Test solutions will be shipped under ambient conditions. Approx. 1 ml of the test solution will be supplied.

Analytical parameters and reporting of results

The test solution contains any pyrethroid from the list given in advance. Single results of each analyte detected shall be reported in µg/mL rounded to three significant figures (e.g. 0.0581, 0.251 or 1.35). More information will be provided in the specific protocol.

EURL recommendation for analysis and reporting

Laboratories should

- store the test solution cooled (at 4 - 7°C) until analysis,
- dilute the test solution promptly before measurement,
- use their own standard operating procedures for analytical measurement,
- use their own reference standards for identification and quantification,
- provide a detailed method description and any additional information.

Reporting forms will be accessible after the receipt of the test solution has been confirmed. There will be **no extension of the deadline**. Results should be submitted by using the provided EU Survey link before the deadline.

Statistical evaluation of results

The procedure will follow the General Protocol for EU proficiency Tests for Pesticide Residues in Food and Feed and the IUPAC/ISO/AOAC International Harmonised Protocol for the Proficiency Testing of Chemical Analytical Laboratories (see also ISO 13528). The evaluation will be performed in close cooperation with the Scientific Committee for EUPTs.

Actor	Activity	Date
EURL	Preliminary announcement at Joint Workshop in Stuttgart	20 October 2023
EURL	First information supplied to laboratories and call for participation	Beginning of February 2024
Participant	Registration via EUPT website (EURL-Datapool)	15 December 2023 – 01 April 2024
Participant	Proof of shipment address in EURL-Datapool	Ending 26 April 2024
EURL	Dispatch of test material	06 May 2024
Participant	Confirmation of test material receipt via EU Survey	07 – 13 May 2024
Participant	Deadline for reporting of test results via EU Survey	02 August 2024*
EURL	Dispatch of the final report as pdf-file	Approx. end of 2024

* Please make sure to report your results on time as there will be **no extension of the deadline**.

Participation fee

There is a **fee of EUR 100.00** for shipping and handling to participants within the European Union and EFTA countries (**including NRLs**). Fees for participants from **other countries** are **EUR 400.00**. An invoice will be sent together with the samples.

The EURL AO is conducting three studies in 2024. Participation in all three studies will result in one shipment (also if you take part in two studies). You always have to pay the full fee for EUPT AO 19. If participating in other studies you will be charged with extra costs (50 Euro for labs from EU and EFTA countries and 100 Euro for other countries per study). The maximum costs will be 300 Euro for labs from EU and EFTA countries and 500 Euro for labs from other countries participating in all three studies.

Contact information EURL AO

EURL AO
 c/o Chemisches und Veterinäruntersuchungsamt Freiburg
 Bissierstrasse 5
 DE-79114 Freiburg
 E-mail: eurl-pesticides@cvuafr.bwl.de

Annex 1

ILS Pyr-02 pyrethroids list

Table A1: List of **pyrethroids** analytes in ILS Pyr-02. Results shall be rounded to three significant figures (e.g. 0.0581, 0.251 or 1.35)

Analyte
Resmethrin
Fenvalerate
Cypermethrin
Permethrin (cis & trans)
Deltamethrin
Cyfluthrin
Tetramethrin
lambda-Cyhalothrin
Bifenthrin
tau-Fluvalinate