



EUROPEAN COMMISSION
JOINT RESEARCH CENTRE

Institute for Reference Materials and Measurements
European Union Reference Laboratory for Polycyclic Aromatic
Hydrocarbons

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Work Programme of the European Union Reference Laboratory (EURL) for Polycyclic Aromatic Hydrocarbons (PAHs) 2014

1. Organisation of a proficiency test (PT) on PAHs in herbal food supplements. A PT on the determination of PAHs in herbal food supplements will be organised in 2014, as agreed with the National Reference Laboratories (NRLs) during the 2013 workshop. The PT will be conducted for the network of NRLs. EU official food control laboratories will get the possibility to participate in the study on a participation fee basis. Special focus will be given to the analysis of the four marker PAHs (benz[a]anthracene, benzo[a]pyrene, benzo[b]fluoranthene, and chrysene) that are defined by EU legislation. A report on the PT will be made available after results have been collected from the NRLs.

This activity comprises preparation of the test material, packaging, homogeneity, and stability testing of the test material. The homogeneity of the test material will be demonstrated by means of ANOVA of at least 10 randomly selected containers, with a method for which in-house method performance has been established.

2. Organisation of a PT on PAHs in smoked meat. This PT will be conducted for the network of NRLs, on special request of the NRLs, and serves for evaluating the performance of the NRLs over time. EU official food control laboratories will get the possibility to participate in the study on a participation fee basis. Special focus will be given to the analysis of the four marker PAHs that are defined by legislation. A report on the PT will be made available after results have been collected from the NRLs.

This activity comprises preparation of the test material, packaging, homogeneity, and stability testing of the test material. The homogeneity of the test material will be demonstrated by means of ANOVA of at least 10 randomly selected containers, with a method for which in-house method performance has been established.

3. Organisation of a workshop with the network of NRLs. The workshop will serve to strengthen the network structure and to identify the needs of the NRLs. Specific topics concerning the chemical analysis of PAHs will be addressed during the workshop. As agreed with the NRLs, the 2014 workshop will be held in the Netherlands at the facilities of the Dutch NRL. A report on the workshop will be made available.

4. Hands-on training on the determination of PAHs in food will be organised in the EU-RL premises for staff of the NRLs. The maximum number of invited participants is six. Priority will be given to staff from underperforming NRLs.
5. Development of an analysis method for the determination of PAHs at low levels. Staple foods provide due to the high consumption a major source of exposure to contaminants such as PAHs. However, the PAH content of many staple foods is low, and frequently below the LOD/LOQ specified in Commission Regulation (EU) No 836/2011. Hence, methods complying with the method performance criteria specified in legislation might not be sufficiently sensitive to determine the PAH content in food such as cereal products. Leading to a left censored occurrence data distribution. Therefore, the EU-RL will develop an analysis method for the determination of PAHs in staple foods with a target LOQ of about 0.1 µg/kg. As cereal products were identified by EFSA as significant contributors to exposure to PAHs, the method development will focus on this class of products. Up-to-date mass spectrometry will be employed for this analysis task. The outcome of this project will be presented to the NRLs in the subsequent workshop and the method protocol will be published.
6. Preparation of test materials for the 2015 PT, upon renewal of the EU-RL mandate. It is foreseen to focus on the determination of EU priority PAHs in food matrices for which maximum limits are set in Commission Regulation (EU) No 835/2011. The nature of the PT test material will be discussed and agreed with the NRLs during the 2014 workshop. However, priority will be given to food matrices recently included in legislation, such as coconut oil.
For that purpose suitable test materials have to be identified and a pilot study on the preparation of test samples has to be conducted. Since this is expected to be a challenging task, the activity will start already in 2014, after approval by the Commission of the work programme 2015.
7. Meeting with external Experts on analytical issues relevant for the NRL network. The meeting will focus on a relevant topic related to the implementation and/or accreditation of analytical methods in official control.
8. Providing support to DG SANCO in technical matters concerning analytical methodology for PAH analysis, if requested.
9. Providing support to standardisation bodies such as CEN for the standardisation of analytical methods for the determination of PAHs in food. The EU-RL acts as project leader in the standardisation of a GC-MS method to determine four marker PAHs in food. This will require a regular participation in the meetings of CEN TC 275/WG13 and CEN TC327/WG1.
10. Visit of NRLs: EU-RL staff will visit on request NRLs in order to provide training on the spot.
11. Representing the EURL and dissemination of information concerning the EURL activities on International Conferences such as AOAC annual symposium and ASSET 2014 conference.

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