



## Work program of the European Union Reference Laboratory (EU-RL) for Polycyclic Aromatic Hydrocarbons (PAHs) 2013

1. Organisation of a proficiency test (PT) on PAHs in bivalve molluscs. A PT on the determination of PAHs in mussels will be organised in 2013, as agreed with the National Reference Laboratories (NRLs) during the 2012 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 edible oil. This PT will be conducted for the network of 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 2013 workshop will be held in Prague at the facilities of the Czech 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 in the 2014 PT test material. The first PT in 2014 will focus on food matrices for which new maximum limits are set in Commission Regulation (EU) No 835/2011. The activity will comprise method development and in-house validation of a suitable analysis method to determine PAHs in the PT test material. A report on the method validation will be made available.
6. Preparation of test materials for the 2014 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 new

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 2013 workshop. However, priority will be given to new food matrices 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 2013.

7. Conducting a survey on the contents of the four EU marker PAHs in food supplements. Concerns about the reliability of analytical data on PAH contents of food supplements have been raised with DG SANCO. In view of possible forthcoming discussions on PAH contents of food supplements, DG SANCO requested the EU RL to conduct a survey. Therefore, the EU-RL will conduct in 2013 a survey on the PAH contents of at least 100 commercial food supplements. The analyses will be performed under a stringent quality control regime. Priority will be given to food supplements that include drying processes during production, e.g. herbal products. Special focus will be given to matrix effects, and further method development needs will be identified and brought to the attention of DG SANCO.
8. Meeting with external experts: Recent developments in analytical instrumentation led to a shortening of measurement times. Ultra-high performance liquid chromatography and fast gas chromatography became available in many food control laboratories. However, the gain in speed at the instrumental measurement step was not realised in sample preparation. Hence, sample preparation became the bottleneck for sample throughput. The aim of the meeting with external experts is to discuss how sample preparation can be shortened without compromising the fitness-for-purpose of analysis results. A maximum of three experts will be invited to the EU-RL premises. The outcome of the discussions will be presented to the NRLs in the subsequent workshop.
9. Providing support to DG SANCO in technical matters concerning analytical methodology for PAH analysis, if requested.
10. Providing support to standardisation bodies such as CEN for the standardisation of analytical methods for the determination of PAHs in food. The EU-RL will act 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.
11. Development of web based communication tools for PTs. The communication tool for PTs will be further developed and request from the NRLs will be implemented. It is planned to set up a platform for information exchange between NRLs and the EU-RL.
12. Visit of NRLs: EU-RL staff will visit on request NRLs in order to provide training on the spot.
13. Participation in the 2013 conference of the International Society for Polycyclic Aromatic Compounds (ISPAC). One representative of the EU-RL will participate in the ISPAC 2013 conference and disseminate there information on the work of the EU-RL PAHs.