Trace analyses of polychlorinated dibenzo-p-dioxins and dibenzofurans (PCDD/Fs), including 2,3,7,8-substituted PCDD/F congeners, polychlorinated dioxin-like PCBs and polyaromatic hydrocarbons (PAHs) are performed in accordance with international methods, using the technique of high-resolution gas chromatography/high-resolution mass spectrometry (HRGC/HRMS). The procedures used to determine these analytes are accredited under ISO/IEC 17025 international standard.

**Right Focus - Matrices**
- PUF, XAD, absorbents
- Glass fiber filters
- Condensates
- Rinsate, swabs of sampling train
- Ash

**Right Instrumentation - 4 HRMS**
- 1 HRMS Finnigan MAT 95 XP / double GC 6890N
- 1 HRMS Thermo Electron DFS / Trace GC Ultra
- 2 HRMS Thermo Fisher Scientific DFS/dual Trace GC Ultra

**Right Methodologies**
We use HRGC/HRMS and a wide scale of methods for the preparation and extraction of samples and for the cleaning of sample extracts.

- EN 1948-2,3
- EN 1948-4
- US EPA 23
- JIS K 0311
- ISO 11338
- US EPA 429
- US EPA 1613
- US EPA 1668
Right Expertise in HRMS Analyses

The laboratory is specifically designed to provide effective service for the highly specialized analytical field of HRMS analyses with a central focus on strong communication between the field and the laboratory bench. Accreditation is recognized through mutual Recognition Agreements / Arrangements with international organizations (ILAC, IAF, EA, APLAC, IAAC) and other international certification bodies.

Right Services - Dioxins, PAHs and dioxin-like PCBs

<table>
<thead>
<tr>
<th></th>
<th>LOQ for I-PCDD/F-TEQ</th>
<th>LOQ for WHO-dl-PCB-TEQ</th>
<th>PAH Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample</td>
<td>0,02 ng/sample</td>
<td>0,007 ng/vzorek</td>
<td>500 ng/sample</td>
</tr>
<tr>
<td>For the volume of 10m3</td>
<td>0,002 ng/m3</td>
<td>0,0007 ng/m3</td>
<td>50 ng/m3</td>
</tr>
</tbody>
</table>

The sum of selected PAHs is calculated from the following parameters: fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-c,d)pyrene, dibenzo(a,h)anthracene and benzo(g,h,i)perylene.

Right Procedure

- Fractionation type 1
  - PCDD/F determination
- Clean Extract
- Extraction
  - PCDD/F, PCB, PAH extraction standard
- Sample
  - PCDD/F, PCB, PAH sampling standard
- Sampling
- Final extract PCDD/F
  - PCDD/F, PAH syringe standard
- Final extract PAH
  - PAH determination
  - PCDD/F and dl-PCB determination
- Fractionation type 2
  - PCDD/F, PCB syringe standard
- Final extract PCDD/F and non-ortho PCB
  - Final extract mono-ortho PCB
- HRGC-HRMS analysis PCDD/F
  - HRGC-HRMS analysis PAH
  - HRGC-HRMS analysis mono-ortho PCB

Right Technical Support - Emission Sampling

In addition to our own analytical determination of PCDD/Fs, dioxin-like PCBs and PAHs, the laboratory also provides technical support for entities that deal with sampling. The support consists in the preparation and supplies of standardized sorption cartridges, pre-cleaned sorbents (PUF, XAD-2) and filters. Upon the client’s wish, the laboratory applies sampling standards to a filter or sorbents in accordance with method specifications, or supplies the required number of doses of sampling standards for the given type of analytes observed.

To beneficiate from this service, either fulfill the specific chain of custody or order online at:
http://sampling.alsglobal.eu

In case of any questions do not hesitate to contact us:

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