

HRMS Centre of Excellence

Brief introduction of the HRMS laboratory



HRMS Centre of Excellence



Total capacity: 16 000 samples/year

Establishment of the HRMS Lab: February, 2002

• Total Working Area: 525 m²

Three separate laboratories for the sample preparation:

• Enviro Prep Lab (soil, water, waste): 95 m²

• Bio Prep Lab (food/feed/tissue): 100 m²

• Emission/Air Prep Lab: 100 m²

HRMS Laboratory



- Two instrumental rooms with environmental control systems:
 - Constant temperature
 - Dust decrease
 - Reduce Floor vibrations
 - Minimize electric interferences
 - Power back-up system

GC-MS modern instrumentation



4 HRMS instruments

Dual HRGC-HRMS

Finnigan MAT 95XP high resolution $(R > 10\ 000)$ with two gas chromatographs Agilent 6890N (HRGC) equipped with auto samplers CTC Total



HRGC-HRMS

ThermoElectron DFS- GC Trace Ultra equipped with a TriPlus autosampler



Two Dual HRGC-HRMS

Thermo Fisher Sci. high resolution (R > 10 000) DFS with two GCs Trace Ultra equipped with a TriPlus autosampler



HRMS Experts



One of the key differences of ALS is staff experience and stability of the team

- Number of employees: 21 (8 University degree)
- Experienced key staff: 13-23 years in the field of POPs
- Participation to Certification of Candidate Reference Material (USA, Canada, Belgium, Czech Republic)
- Project experience on very contaminated sites, as well as monitoring of background levels (health monitoring)
- Crisis Resolution with involvement of food/feed producers
- Participation to main international conferences on POPs problematic
- Organization of local seminars on POPs problematic



ALS offers the most comprehensive range of services including:

- Dioxins (PCDD/F)
 - Enviro matrices water, SPMD, soil, sediments, sludge, wastes, chemicals
 - Emission/Ambient air
 - Bio matrices-food, feed and human blood

Routine methodologies employed:

- Enviro and bio matrices US EPA 1613, US EPA 8290
- Emission US EPA 23, US EPA 23A, EN 1948
- Ambient air US EPA TO-9A



ALS offers the most comprehensive range of services including:

- PCBs, especially co-planar PCBs (dioxin-like PCBs)
 - Enviro matrices water, SPMD, soil, sediments, sludge, wastes, chemicals
 - Emission/Ambient air
 - Bio matrices-food, feed and human blood

Routine methodologies employed:

- Enviro and bio matrices US EPA 1668
- Emission JIS K 0311, EN 1948
- Ambient air US EPA TO–9A/EN 1948



ALS offers the most comprehensive range of services including:

- Polyaromatic hydrocarbons (PAH)
 - Enviro matrices water, SPMD, soil, sediments, sludge, wastes, chemicals
 - Emission/Ambient air
 - Bio matrices-food

Routine methodologies employed:

All matrices – US EPA 429, resp. ISO 11338 and IP 346



ALS offers the most comprehensive range of services including:

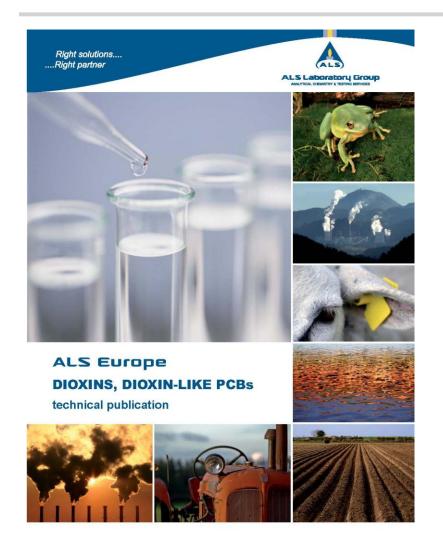
- Polybrominated diphenyl ethers (PBDE)
 - Enviro matrices water, SPMD, soil, sediments, sludge, wastes, chemicals,
 - Bio matrices-food, feed and human blood

Routine methodology employed:

Enviro and bio matrices – US EPA 1614

Excellence in HRMS analyses





ALS Europe summarised its analytical skills and competencies in the field of POPs analysis in this technical publication.

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