

ENVIRONMENTAL ASSESSMENT LABORATORY

The Environmental Assessment Laboratory was founded in 2006, within a project financed by the INFRA TECH Program, administrated by the Ministry of Education and Research.

The laboratory operated as a part of Tehnopolis Science and Technology Park Iasi – a consortium having our Technical University “Gh. Asachi” of Iasi as partner.

The laboratory is staffed by some members of the Environmental Engineering and Management Department of the Faculty of Chemical Engineering and Environmental Protection (“Gheorghe Asachi” Technical University of Iasi).

With a rich expertise in environmental engineering and management, the staff is especially competent in:

- *Environmental monitoring*, which involves complex environmental analysis such as the identification and quantification of organic pollutants (VOC, POPs, pesticides, PCBs etc.) from air, water and soil;
- *Environmental impact assessment*;
- *Risk assessment*
- *Environmental consulting* (Environmental permitting, Quality management certification for ISO 14.001, Emission reduction plan for VOC; Solvent management plan);

The research activity of the group members is illustrated by:

- More than 100 scientific articles, published in well-known national and international (ISI);
- More than 45 national and international patents;
- Books published in Romania (publishers accredited by CNCSIS) and abroad;
- PhD thesis approaching new and original topics in environmental engineering and management;
- Centers of excellence in research
- International collaborations (within programs such as PHARE, EcoLinks, or financed by German Ministry for Education and Research, Swiss Science Foundation, Swedish Institute Stockholm etc)

During the last decade of activity, the members of the laboratory have participated in more than 200 research contracts with the industry, on different activities:

- Environmental permitting;
- Integrated pollution prevention and control;
- Technical Inspection Certificates for VOC (according to H.G. 568/2001), being one of the six accredited laboratories in the country);
- VOC emission reduction schemes (H.G. 699/2003)
- Other projects concerning the cleaning or depollution of different industrial effluents and streams.

Facilities and Equipments

The laboratory is being organized according to the requirements of the Quality management system ISO /IEC 17025:2000 “General requirements regarding the competence of the testing and calibration laboratories”.

The main equipments used in the laboratory, fully compliant with international standard methods, are:

- High resolution GC-MS with hyperbolic quadrupole mass analyzer (Agilent)
- Thermal desorber (Markes International)
- High precision analytical balances
- Ovens, automatic pipettes etc.

In addition to the classical GC-MS/FID methods, our laboratory is especially interested in using the analytical thermal desorption methods for the measurement of trace level volatile and semi-volatile organic chemicals (VOCs and SVOCs). It is the technique of choice for air monitoring (indoor, outdoor, workplace, automobile interior, breath, etc.) and is an invaluable tool for the analysis of soil, polymers, packaging materials, foods, flavors, cosmetics, tobacco, building materials, pharmaceuticals, and consumer products. Indeed, virtually any sample containing volatile organic compounds can be analyzed using some variation of this technique.

In this context, we are opened for collaboration with scientific institutions in the areas covered by our laboratory.

Cezar Catrinescu

*Department of Environmental Engineering
and Management*

Faculty of Chemical Engineering

*“Gheorghe Asachi” Technical University of Iasi,
Romania*