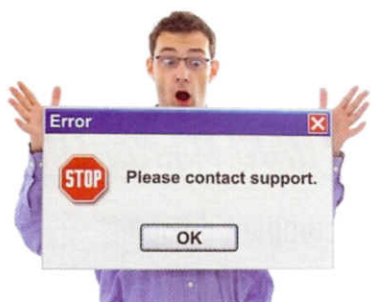


SEMINAR PROGRAMME LABORAMA

Scientific Innovation and the challenges in modern analysis.

Below is the programme of the lectures during Laborama in the seminar room in hall 1. All presentations will be in English.

PROGRAMME THURSDAY, MARCH 24



10.30-11.20 Complexity of analytical instruments: a bless or a curse for official control laboratories?

The Federal Agency for the Safety of the Food Chain (FASFC) relies on laboratories which have a clear mission: to produce reliable and accurate results within an agreed short term and at a reasonable price. Therefore the laboratories who execute the analysis for the FASFC, need to be well equipped with high tech instruments whose sensitivity meets the requirements stated in (European) legislation.

With high tech instruments, technical problems are more likely to occur. And it is at that point that the quality of the service after sales can make the difference between discomfort and severe inconvenience for the lab. This session focuses on some practical cases and solutions to overcome these kind of problems.

Geert De Poorter, Director-General Laboratories, Federal Agency for the Safety of the Food Chain

11.30-12.20 Research, development and innovation of vaccines and immunotherapy

Philippe Denoel, Director Scientific Affairs & Bacterial Projects Advisor R&D GlaxoSmithKline Biologicals

13.30-14.20 Emerging Hyphenated Analytical Techniques for POPs

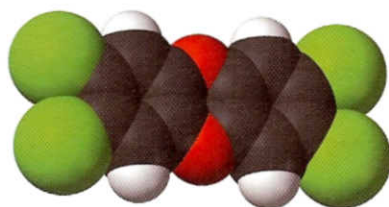
The 'Quest for the Holy Grail' in the 'dioxin' analysis area is dedicated to the

development of reliable procedures that can offer congener-specific results on a short time scale, at a low cost, while avoiding down time issues. Such a procedure obviously has to fulfil strict QA/QC requirements such as those listed in Eurachem analytical guidelines and EU or other Directives, but also has to comply with ISO17025 and/or GLP procedures. Each part of such a procedure, from extraction to measurement, has to be finetuned to its optimum capabilities.

Whatever the measurement method used, either physico-chemical or biological, the sensitivity has to be at the parts-per-quadrillion (ppq, 10⁻¹⁵) level. This represents an extreme case of ultra-trace analysis and a real challenge in terms of analytical chemistry. Large sample sizes have to be processed and extremely large amounts of matrix-related interferences have to be removed before one can even consider measurement.

Automated solid-liquid adsorption chromatographic separations are often used to ensure high sample throughput, but also fractionation into sub-analyte groups that fit the peak capacity of the chromatographic instrument used for congener separation. The presentation will highlight various aspects of some recent investigations of alternative methods to the standard gas reference such as comprehensive GC (GCxGC) using various types of MS analyzers for the measurement of dioxins, PCBs, OCPs, and PBDEs in biological matrices.

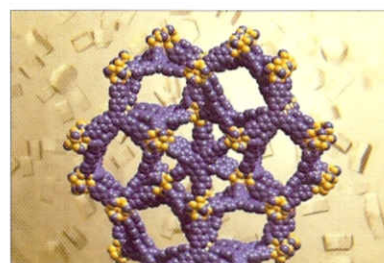
Jef Focant, professor of Organic and Biological Analytical Chemistry, University of Liège



14.30-15.20 Materials science: from nano via super to rare

At the department of Inorganic and Physical Chemistry of Ghent University, we develop all sorts of new and innovative materials. Some of these materials are already well known by the general public, such as

superconductors. And these days, everybody talks about nanoparticles or nanotubes. Most people will know the rare earths, which will become even rarer in the future. Van der Voorts' topics are the Metal Organic Frameworks (MOFs), the Periodic Mesoporous Organosilicas (PMOs) and the Ordered Mesoporous Polymers (OMPs). Some of these materials are only made at milligram scale in our labs, but might cause a next technological revolution. MOFs can have surface areas of 5000 m²/g and are highly crystalline. They are so-called hybrid materials: a combination of an inorganic and an organic part. They are possibly the solution for the hydrogen storage problem. But they might be excellent catalysts as well.



A metal organic framework (MOF).

As the materials have special optical, electrical or magnetic properties, a wide range of analysis techniques is needed. This can go from very heavy equipment (NMR, TEM) via a simple UV-VIS machine to relatively 'rare' techniques, such as vibrational circular dichroism and high-end fluorimeters. For analysis, every inorganic department has FTIR, TGA, XRD and nitrogen sorption. But we also have FT-Raman, dispersive Raman, CHNS/O analyzers, chromatographs, etc. The combined use of several of these techniques yields a very complete image of these new nano, super and rare materials.

Prof. Pascal Van Der Voort, University of Ghent

PROGRAMME FRIDAY, MARCH 25

10.30-11.00 Peter Dockx, Van Looy Group nv

11.15-11.45 Davy Petit, Waters nv/sa

12.00-12.30 Achrom nv

13.30-14.00 High speed lc ms/ms, Johan Scholtens, Shimadzu Benelux,

14.15-14.45 Frank Hubrechts, Metrohm Belgium nv