Inorganic and organic (small molecules) characterisation platform	**Category:** **C. Particle Characterisation in and ex-situ** **Institute: VITO** **Location: Boeretang 200, 2400 Mol, Belgium** **Contact Details of Technology Expert:** **Guy Vanermen** **Phone: +32 (0)14 335018** **Fax: +32 (0)14 319472** **E-mail: guido.vanermen@vito.be**

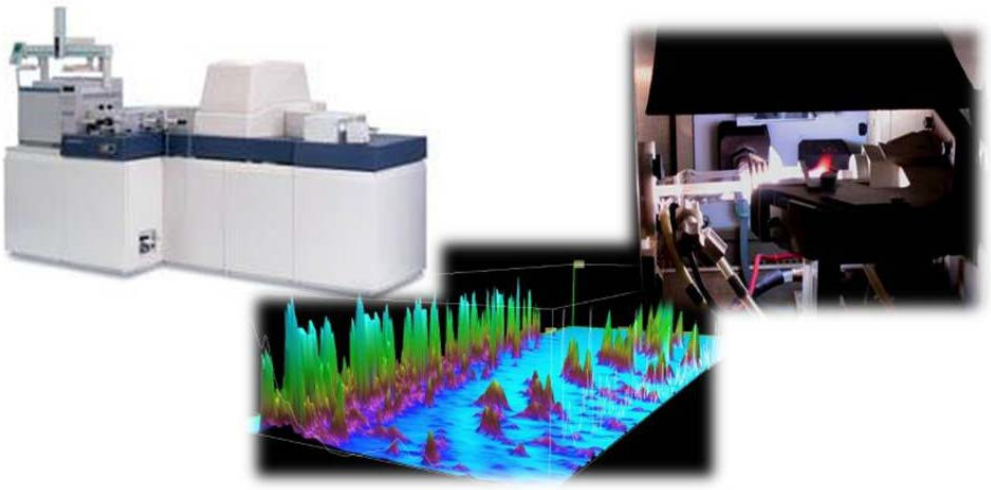
Short technology description/Overview:

The characterisation platform at VITO comprises a vast range of state-of-the-art analytical tools that enable characterization of the inorganic and organic constituents of nanoparticles. Chromatographic techniques form the basis of the platform, while various complementary techniques, such as µ-XRF, fill up the gaps in the analytical spectrum.
In the field of organic (small molecule) analysis, the showpiece is definitely the accurate-mass spectrometer (am-MS), which can be coupled to a UPLC or a DART interface (Direct Analysis in Real Time). The latter facilitates non-destructive mass spectrometric analysis, while UPLC combines speed of analysis with unprecedented resolution. For volatile organic constituents, basic GC-tools are amended with hyphenated techniques such as GC x GC coupled to a time-of-flight MS. This technique combines 2-dimensional chromatographic resolution with a high scan speed MS-detector. High resolution ICP-MS instruments are the core of the inorganic part of the analytical platform. Unprecedented mass resolution gives access to high quality data that you can trust.

Main Features (Equipment Capabilities):

- GC-MS (various ionisation and detection techniques are available)
- UPLC-am-MS
- DART-am-MS
- UPLC-QqQ-MS
- GC x GC-TOFMS

Typical Samples & Images:



Any further Information: