| | |
|---|---|
| **µ-XRF** | **Category:**<br>**C. Particle Characterisation in and ex-situ**<br><br>**Institute name: VITO**<br>**Location: Boeretang 200, 2400 Mol, Belgium**<br>**Contact Details of Technology Expert:**<br>**Kristof Tirez**<br>**Phone: +32 (0)14 335036**<br>**Fax: +32 (0)14 319472**<br>**E-mail: kristof.tirez@vito.be** |

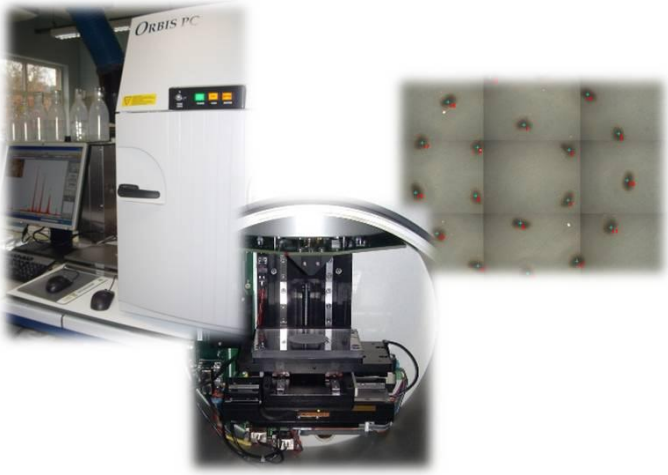
**Short technology description/Overview:**

Energy dispersive X-ray fluoresence (ED-XRF) allows for simultaneous analysis of various elements in a fast and non-destructive manner. Recent developments in the field of X-ray optics and the possibility of creating high energetic X-ray beams have led to the development of the micro-XRF technology. This non-destructive technique facilitates characterisation of individual microparticles (down to 30 µm). All elements from 23 (Na) to 238 (Ur) amu are covered by this technique. Not only can the exact constitution of individual particles be investigated, but also detailed element mappings are possible (e.g. nanoparticles loaded onto a filter).

**Main Features (Equipment Capabilities):**

- Orbis PC µ-XRF
- Apollo 40 Silicon Drift Detector – excellent peak resolution at high countrates (no detector saturation)
- Multiple elements are analysed at the same time
- Fast and non-destructive
- Complete range of sample size: 30 µm – 10 mm
- Dual vacuum mode
- Turret with multiple optics – collimators of 1 and 2 mm combined with a polycapillary lens of 30 µm

**Typical Samples & Images:**




*Any further Information*: