Electron Probe MicroAnalyser	**Category:** **C. Particle Characterisation in and ex-situ** **Institute: VITO** **Location: Boeretang 200, 2400 Mol, Belgium** **Contact Details of Technology Expert:** **Rosita Persoons** **Phone: +32 (0)14 335730** **Fax: +32 (0)14 321186** **E-mail: rosita.persoons@vito.be**

Short technology description

The electron probe microanalyser JEOL JXA-8621MX is comparable to a scanning electron microscope in terms of the electron microscopy, but it has more possibilities for identifying the characteristic X-rays and thus for determining the elementary composition of a material. Besides an energy-dispersive analyser (EDXA), there are also wavelength-dispersive analysers (WDXA) available. These give better spectral resolution and moreover they can be equipped with special crystals for detecting soft X-rays.
EPMA is highly suitable for determining the elementary composition of materials containing so-called ultra-light elements (B,C,N,O).

Main Features (Equipment Capabilities):

- Ddetectors for secondary electrons (SE) and back-scattered electrons (BSE)
- Energy-dispersive detector with beryllium window
- Three wavelength-dispersive detectors with six crystals, two of which specifically for the ultra-light elements (B, C, N, O);
- Automated sample platform
- Quantitative element mapping and line scans via beam scan or platform scan
- $\phi(\rho z)$ correction software for light elements and thin coatings on a substrate

Typical Samples & Images:

Any further Information: