

Quick and High Performance Surface Observation Equipments

Purpose:

It is sometimes necessary to observe and analyze very quickly quite a few specimens obtained from drilling samples or so for research activities such as geological CO₂ storage projects and assessment of active faults. Some specimens should be analyzed without any pre-treatments such as carbon coating. The equipments are suitable for quick observation and elemental analysis for solid surfaces at the micro level without requiring any pre-treatments.

Main Specifications:

- 1) Surface observation and elemental analysis with magnification of 100 - 10,000 by environmental scanning microscope (ESEM) and energy dispersive spectroscopy (EDS) x-ray microanalyser.
- 2) Surface observation with 3D imaging and shape measurement under magnification of 100 - 10,000 by laser microscopy.

Principal Features:

- 1) Compact-size ESEM (Keyence© VE-7800) equipped with EDS x-ray microanalyser (EDAX© Genesis2000)
Ready for sample analysis in just 10 minutes after setting a sample to a sample holder
Sophisticated surface observation and elemental analysis without carbon coating
Surface observation and elemental analysis under magnification of 100,000 with carbon coating
- 2) Laser microscopy (Keyence© VK-8500) with image connection software (Mitani© Virtual View3D)
Sophisticated surface observation, 3D imaging and shape measurement without any pre-treatments
Shape measurement with resolution of 0.01 μm
Seamless 3D images with image connection technology

Location and Date of Installation

Abiko Campus, December 2004



Compact-size ESEM equipped with EDS x-ray microanalyser



Laser microscopy