Waipapa Taumata Rau University of Auckland

Hitachi tabletop scanning electron microscope



Introduction

Our SEM system features an ultra-variable pressure secondary electron detector (SE) for high-quality imaging in low vacuum, along with a high-sensitivity back-scattered electron detector (BSE). It is also equipped with an energy dispersive X-ray spectrometer (EDX) for detailed elemental analysis.

Camera

- *DEBEN SEM Chamberscope*

Applications

- *Provides information on surface structure, topography and composition*
- *Elemental analysis*
- *Suitable samples include bone, lipid microbubbles, peritoneum, bacterial biofilms, fungal mycelium*

Software

- *TM3030Plus Image acquisition software*

- *ESPRIT Compact – Bruker Microanalysis package*
- *3D-Image Viewer*

Specifications

- *Accelerating voltage - 5kV, 15kV*
- *Magnification - 5x - 30,000x or up to 120,000 with digital zoom*
- *Tilt & Rotate stage at -15° to 60° angles*
- *Observation Modes: Secondary electron (***SE***), Back scattered electron (***BSE***),* **Mix***: Standard/Charge-up Reduction*
- *Charge Up Reduction Mode: This means that gold coating to make the sample conductive is not usually necessary.*
- *Maximum Sample Size: 70mm diameter, 50mm high*
- *Energy dispersive X-ray spectrometer (EDX) - Bruker Quantax 70*

Sample preparation equipment

- *Sputter coater - Nanostructural Coatings Ltd DSIR*
- *Critical point dryer - Tousimis Autosamdri -815 Series A*

Contact person

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