

# SCANNING ELECTRON MICROSCOPE (SEM)

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MANUFACTURER : JEOL

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MODEL : JSM 7600 TFE

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## Samples

- Equipped with a Field Effect Gun (FEG) for the observation of non-conducting samples

## Analysis

- High resolution surface imaging
- Lateral resolution : 1.4 nm at 1 kV and 1.0 nm at 15 kV

## Characteristics

- Instrument unique in Canada allowing the analysis of non-conducting samples at high resolution

### VARIANTS

#### Detection of back-scattered electrons for phase analysis

- Lateral resolution : 3 nm at 1 kV
- Sample holder for non-conducting samples

#### Energy Dispersive Spectrometry (EDS) for chemical composition determination

- Semi-quantitative and quantitative (with standards)
- Mapping possible
- Lateral resolution : of the order of one micrometer (depending on the material and the accelerating voltage)
- Applications : Elemental mapping, quantification of the chemical composition of a given phase
- Detection limit: about 0.1% atomic

#### Wavelength Dispersive Spectrometry (WDS) for chemical composition determination

- Semi-quantitative and quantitative (with standards)
- Mapping possible
- Lateral resolution : of the order of one micrometer (depending on the material and the accelerating voltage)
- Applications : Elemental mapping, quantification of the chemical composition of a given phase
- Detection limit: about 0.1% atomic