Mining Division

AGAT Laboratories

Quantitative Evaluation of Materials by Scanning Electron Microscopy (QEMSCAN)

QEMSCAN is a sophisticated Automated SEM technology for mineralogical micro-mapping, allowing detailed information to be extracted from this data. QEMSCAN stands for Quantitative Evaluation of Minerals by SCANning electron microscopy.

QEMSCAN is a highly integrated particle or whole rock mapping system which produces high resolution detailed particle imaging, modal mineralogy, and textural analysis. It provides data for strategic decisions at the acquisition, exploration, feasibility and plant levels. Its flexible technology has been successfully employed for diverse commodities including:

- Precious and base metals
- Rare earth elements minerals
- Mineral sands
- Diamond indicator mineralogy
- Industrial minerals

QEMSCAN Technology

- ✓ Mineralogy
- ✓ Mineral Mapping
- ✓ Mineral Association
- ✓ Grain Size by Phase
- ✓ Phase or Element Search
- ✓ Mineral Liberation

QEMSCAN data can be integrated and reconciled with other data from XRD, chemical, electron microprobe, and petrographic studies, into one complete report, or presented as a stand-alone report. Data analysis and configurations include:

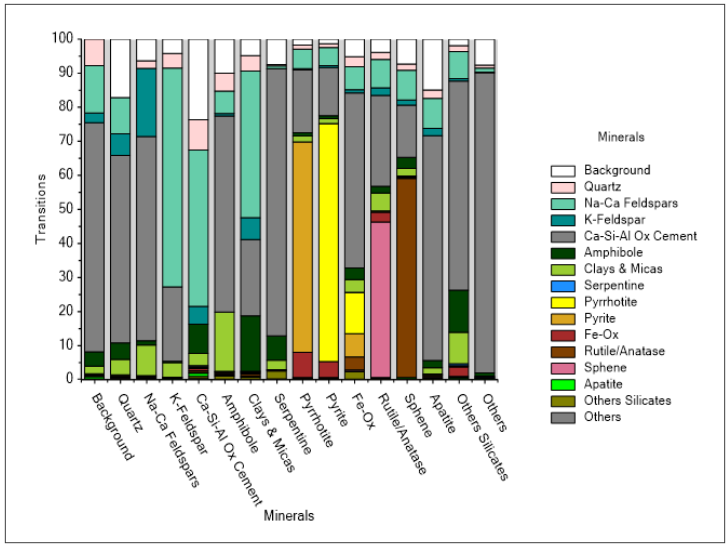
- Configured to measure mineralogical variability based on chemistry at the micrometer-scale.
- Analysis of loose particles, sediments, crushed/ milled rock in epoxy polished sections or whole rock slices in thin section form.
- Provides detailed mineralogical data, textural data, statistics, and mineral maps.
- Colorful stimulating images, graphs and tables with legends for individual minerals and mineral groups.

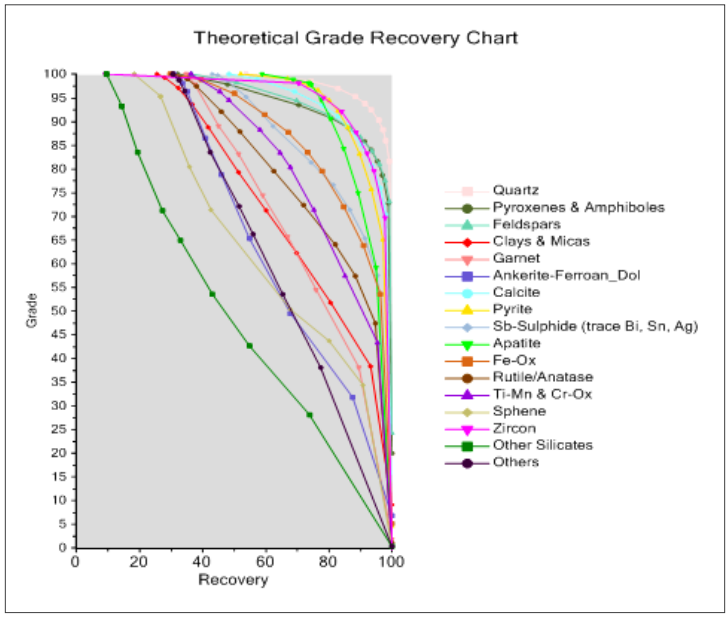
Depending on the purpose of a project, any number or combination of measurement modes can be chosen to achieve the desired results. QEMSCAN is equipped with a number of different measurement modes:

- BMA (Bulk Mineral Analysis)
- PMA (Particle Mineral Analysis)
- SMS (Specific Mineral Search)
- TMS (Trace Mineral Search)
- Field Image

Ore Mineralogy & Textural Analysis (Particle Imaging, Mineralogy, Texture, Grain Size)

Modal Mineralogy - Mineral Mass % (Map/Legend/ Graphic/Tabular) Mineral List Development
Liberation-Association (Data & Image Grids)
Elemental Deportment (Carrier Minerals for Target Elements)
Assay Reconciliation (QEM vs. Assay/Whole Rock Analysis)
Grain Size Analysis
Grade Recovery (Compare/Contrast Diff. Samples or Fractions Locations)





Full service laboratories for the **Mining, Environmental, Energy, Transportation, Industrial, Agri-food** and **Life Sciences** sectors.