



TESCAN TIMA

FOR MINERAL PROCESSING

The Automated Mineralogy solution for particle-by-particle measurement of mineralogy, grind size, liberation, and separation











Key benefits:

- Understand complex mineral relationships at the size-by-size and particle by particle level – and optimize processing plant performance using the built-in metallurgical distribution analysis system
- Collect high speed, detailed measurements on more types of samples, with better mineral chemical resolution, increased sensitivity for low abundance elements and good sampling statistics using the 4 EDS detectors and TIMA's unique spectral summing algorithm
- Maintain continuous operation, rapid turnaround with a minimal number of laboratory operators using the options for remote, multi-user off-line analysis with automation software to support unattended operation
- Analyze base metals, precious metals, and other commodities using built-in quantification and the comprehensive mineral identification, mineral composition, and grain/particle textural classification with user-defined scripts
- Process samples in large batches and maintain high efficiency data collection using continuous unattended operation
- Free instrument time for interactive microanalysis or automated measurement and by taking advantage of TIMA's offline data analysis and reporting capability

Applications:

- Recovery: discover the proportion of recoverable losses, the proportions of hazardous elements (e.g. arsenic and antimony), and diluents in concentrates
- Flotation: differentiate the recovery of multiple minerals containing the same element e.g. copper in chalcopyrite, chalcocite, and covellite
- Comminution: predict target grind size in future feed ores to optimize mineral liberation for flotation and leaching
- Leaching: quantify the degree of carbonaceous minerals to predict the degree of "preg-robbing"
- Smelting: plan concentrates with similar smelting properties
- Geometallurgy: link geology and metallurgy for optimal mine planning and mineral processing
- Plant surveys: add detailed mineralogical and liberation values to mass flow and chemical assay data
- Plant monitoring: analyze daily, weekly, and monthly plant samples with multiple size fractions from multiple streams
- Metallurgical modelling: populate your models with customized particle-by-particle data (morphological, mineralogical and chemical composition, liberation degree, etc...