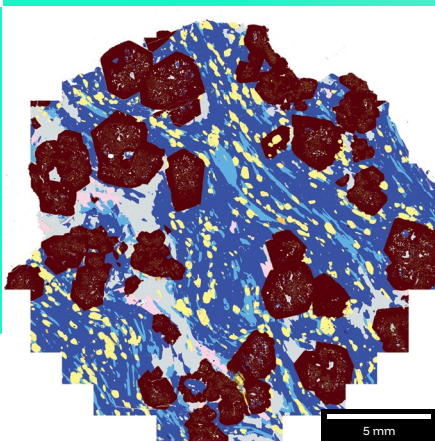


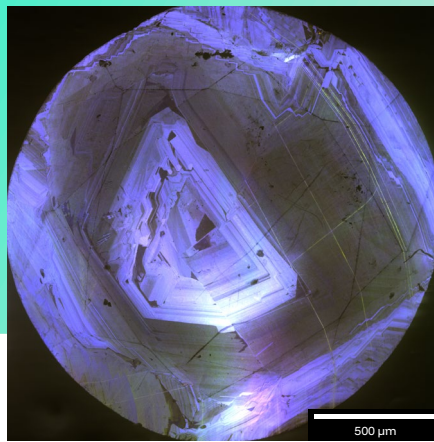
Tescan TIMA

for Earth Science

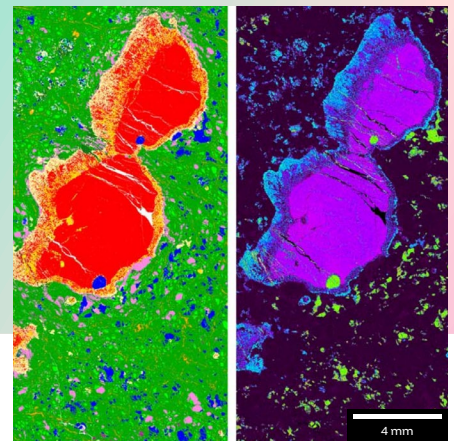
The combined Automated Petrography and Microanalysis solution for Geoscientists



Automated mineralogical map of an eclogite.



Cathodoluminescence image of a diamond.



TIMA phase (left) and Ca distribution maps (right) of Iherzolite.

Key benefits

Identify and quantify minerals automatically—even without extensive experience—using algorithm-generated, or user-defined rules and the built-in mineralogical database

Analyze thin-section scale samples and obtain reproducible data thanks to the 4 EDS detector system and Tescan's unique, high sensitivity spectral summing algorithm to detect low abundance elements

Correlate high resolution BSE images, elemental maps and cathodoluminescence in a single run

Pinpoint the locations of specific minerals using TIMA's automated search for minerals of interest

Free-up instrument time for interactive microanalysis by taking advantage of the offline data processing capability with access to all elemental maps

Understand chemical variability within entire grain populations as well as the bulk chemical sample composition using built-in EDS batch quantification

Estimate the presence of elements undetected by EDS (e.g. Li, Be) using TIMA's data processing software to identify phases based on the proportions of other elements and stoichiometric re-calculation

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Applications

Mineral microanalysis: resolve and identify fine grains using high spatial resolution imaging and elemental analysis

Thermobarometry: obtain the coordinates of minerals or mineral pairs selected for further analysis using EPMA

Geochronology: automated identification of minerals suitable for dating and automated, detailed cathodoluminescence imaging

Rock classification: use volumetric proportion of minerals to calculate the chemistry of rock—even fine-grained or glass-containing rocks

Automated search for petrogenetically significant phases based on their EDS signature or BSE brightness (REE, PGM, precious metals)

Provenance studies applicable to, for example, garnet or spinel group mineral chemistry, in sedimentary rocks or archaeological artifacts

Screening to select samples for further analysis with other advanced techniques (EPMA, LA-ICP-MS)

Porosity quantification and pore association

