

Capabilities

1. Analysis of all elements from Be
2. Additional to instrumental control software, a standard, high-level software package provides qualitative and quantitative X-ray microanalysis. High-level software with access to all instrumental control functions for complete automated analysis.
3. Qualitative analysis program including the following :
 - ❖ real-time display of wavelength spectral scan data acquisition from all spectrometers
 - ❖ real-time display of linear step scan data acquisition off-line display and plot of raw or processed scan data
 - ❖ automatic peak identification
 - ❖ screen manipulation of recorded data
4. Quantitative analysis program including the following :
 - ❖ entry of the composition and position of analytical standards
 - ❖ acquisition of standard calibration data
 - ❖ declaration of the analytical conditions
 - ❖ acquisition of data from unknowns
 - ❖ multiple experimental conditions (up to 4 in the same analysis protocol)
 - ❖ “multicollection counting” for optimum trace elements detection
 - ❖ reduction of data including appropriate corrections for up to 40 elements without limitation of elements number
 - ❖ off-line reprocessing of stored data allowing change of standards or correction routine
 - ❖ summary reports of multiple analyses
 - ❖ acquisition of peak intensities by top peak measurement or peak area measurement
 - ❖ quantitative analysis of overlapping peaks by peak deconvolution
 - ❖ peak shift correction software
 - ❖ analysis routines for layered or coated samples (optional)
 - ❖ on-line or off-line exportation of data to Excel™
5. Standard intensity data collected with minimal operator intervention. This intervention is linked to the entry of:
 - ❖ standard names
 - ❖ elements to be measured
 - ❖ selection of measurement location
6. Storage of positional and compositional data for an unlimited number of blocks of standards and modification of the standard block assignments as the blocks are repositioned in or removed from the sample holder.
7. Corrections to the X-ray intensity data for quantitative analysis made with a choice of two different models which expresses the X-ray emission distribution over depth and density (ϕ (ρ - z)).
8. Correction routine capable of computing an element by difference or stoichiometry.

9. On-line geological calculations (cations number calculations) (optional).
10. Image acquisition and processing software including the following :
 - ❖ acquisition of electron images by beam scanning
 - ❖ acquisition of X-ray images by beam and stage scanning
 - ❖ acquisition of X-ray maps on polygon (irregular shape)
 - ❖ X-ray image quantification
 - ❖ multi-element line profile reconstruction (optional)
 - ❖ analysis point selection from acquired image
 - ❖ modal analysis
 - ❖ morphologic functions
 - ❖ smoothing
 - ❖ thresholding
11. Data formats (ASCII, TIFF, JPEG, BMP) compatible with all PC software. Data output in black and white or color onto continuous or single sheet stationary, routine or very high quality, via ink jet or laser video printers/copiers (various options).