

Software

Cameca PeakSight 6.2

Calculation methods:

Detection Limit:

Ancey et al 1978, [details](#)

Matrix Corrections:

PAP: Pouchou & Pichoir (1987)

X-Phi, Merlet(1995)

Operation Manuals:

[Sample Exchange](#)

[Setup Analysis](#)

[Export Data and Images](#)

[Trace Elements](#)

Geology Application Software Suite This dedicated software suite contains the following programs:

1. MULTIPLE PHASE IDENTIFICATION PROGRAM (PHASE ID) Program for the mapping of phases using binary and ternary X-ray intensity plots. The phases are selected by the user on a binary or ternary diagram. The selected phase is then reconstructed in a dedicated image where modal analysis is available.
2. HIGH PERFORMANCE PHASE MAPPING PROGRAM (PHASE CLASS) Program for the classification of complex matrices (unlimited number of elements or phases). Provides fast modal analysis.
3. SAMPLE NAVIGATION SOFTWARE (SAMPLE NAV) Optical conversion of off-line optical images to display on PC workstation. SAMPLE NAV software assists operator in locating areas of interest by using a low magnification image of the specimen loaded on the workstation.
4. PROFILE RECONSTRUCTION PROGRAM (PROFILE OFF-LINE) Special software to reconstruct multiple qualitative profiles along lines or bands superimposed on previously acquired digital images.

5. **IMAGE OVERLAY PROGRAM (IMAGE OVERLAY)** This feature allows the user to easily produce so-called 'combination maps', i.e. images displaying simultaneously all the 'combination phases' (distinguished by specific colours) which can be obtained by combination of three different elements A, B and C. Input data are the three thresholded X-ray maps of elements A, B and C ; the resulting combination map is an image of the 8 possible 'phases' {A only, B only, C only, A+B, A+C, B+C, A+B+C and 'none of them'}.
6. **EXPERT ASSISTANT (ASSIST-QUANT)** (includes Spectrum Quant) Computer assistant to optimize the choice of every analysis parameters and to automate the stages of a quantitative analysis, for all kind of materials. It performs and uses the qualitative sample composition to suggest relevant instrument configuration for accurate quantification.
7. **AUTOMATIC DETECTION OF PARTICLES LOCATION (PARTICLES SEARCH)** This program enables, from an x-ray mapping, to detect the position of each particle present on the image. These positions are automatically transferred into the declaration of the quantitative analysis, and all the particles present in the image can be quantified. Particles search can be used on-line, during the image acquisition, the particles are detected then quantified when one cell of the image is acquired, or off-line, with an image already acquired.
8. **GEOLOGICAL QUANTITATIVE ANALYSIS PROGRAM (GEO QUANT)** Program for on-line and off-line mineral analysis with specific choice of analytical standards and structural formula for each analysis point.
9. **TRUE QUANTIFICATION OF X-RAYS MAPPINGS (MAPPING QUANT)** This feature allows to perform true quantification of X-rays mappings. Based on the images acquisition on peak and background, the Mapping Quant procedure requires from the user the definition of the calibration for each measured elements (measured or calculated calibrations). Those data will be processed in a true quantification procedure with a correction matrix applied pixel by pixel to the whole image. The results are displayed in quantitative weight% and atomic% images, and the concentration at each pixel or for a set of pixels is available and can be exported in quantitative data files.
10. **AGE DATING PROGRAM (GEOCHRONOLOGY)** (Includes Mapping Quant) This program is dedicated to calculate the ages of monazites particles. This option includes two specific software:
 - ❖ **Age Map:** program which calculate the age pixel by pixel from quantitative mapping of the elements U, Th, and Pb. The result is presented as an image, and the grey level of the pixel represents the age in Ma of the corresponding point
 - ❖ **Age Quant:** Program which calculates the age and the error on the age estimation from the quantitative measurements of the elements Y, U, Th and Pb.