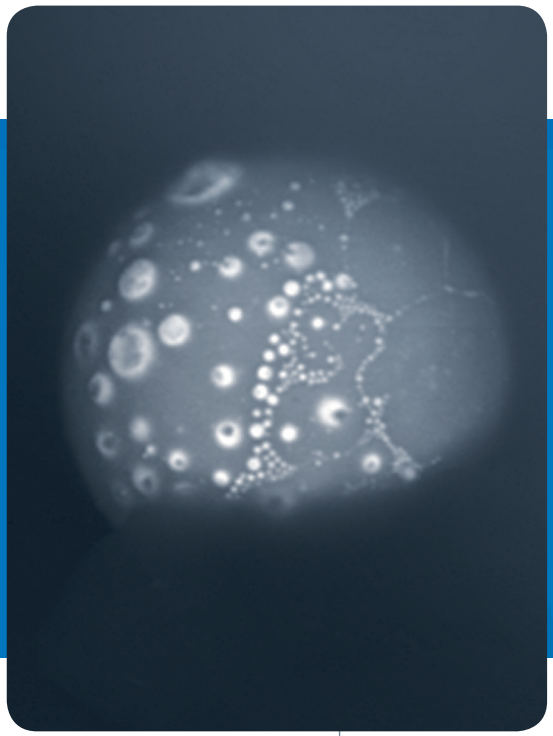
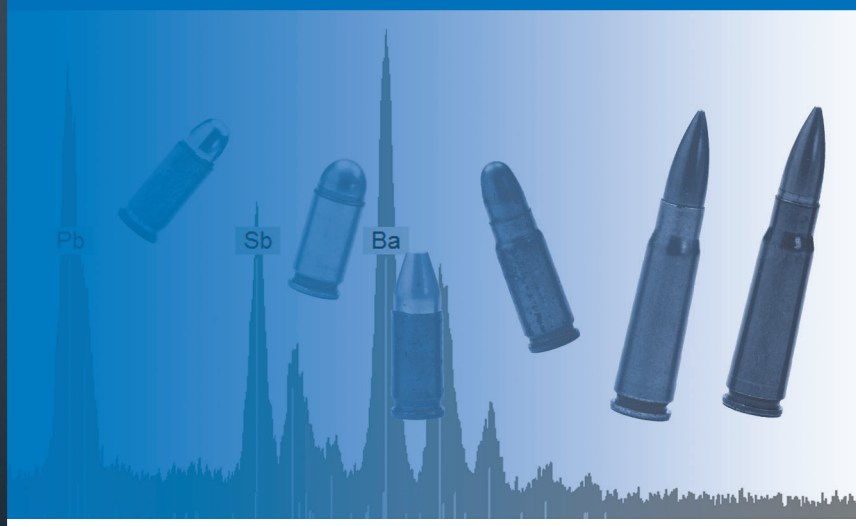




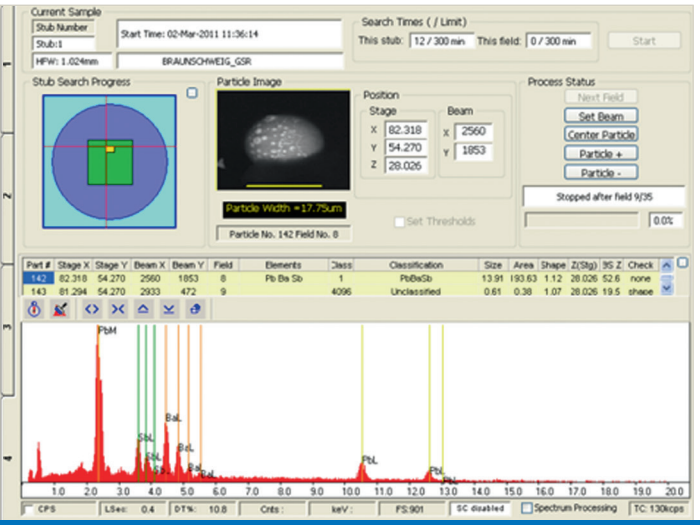
GSR Professional

- Automated Gunshot Residue Analysis

Innovation with Integrity

EDS

Efficiency and Flexibility in GSR Analysis



GSR Professional is an automatic gunshot residue analysis package that combines ease-of-use with full control over results. Set up in minutes, using a four-step wizard, it provides complete information in a short time. Analytical results can be efficiently checked using the review function to either revisit single particles or rerun whole analyses with different parameter sets.

The core piece of the Bruker GSR solution is the four-step wizard that allows fast and easy setup of the unattended analysis of up to 20 samples simultaneously. If desired, individual setups can be used for every sample.

Step 1 – Initial setup

This stage comprises
- Loading stored configurations
- Sample identification (sample name, job and case name, descriptive remarks)

Step 2 – Definition of search conditions

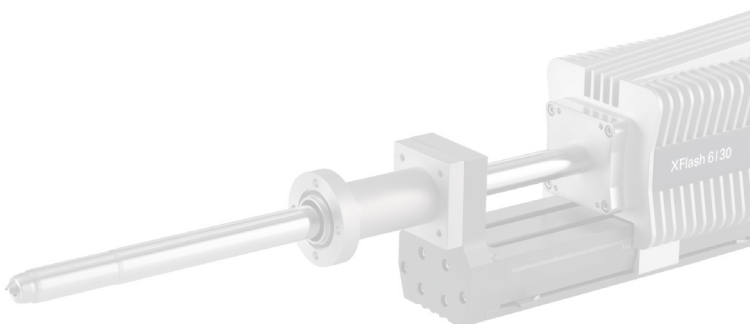
Conditions include
- Search area (circular or rectangular with dimensions)
- Minimum particle size to consider
- Maximum number of particles per field to consider
- Lower and upper element thresholds (range of atomic numbers to include in the analysis)
- Particle classification (loaded from file)

Step 3 – Search setup summary

Allows
- Review of all settings made
- Return to previous steps for corrections or start a measurement run.

Step 4 – Run measurement

Apart from allowing the user to pause or stop a measurement, this dialog provides
- Information on the current sample
- Search time display
- Sample search progress visualization
- Current particle data (image and spectrum)
- Particle list.



Flexible sample holder configuration

- Define maps of individual stages with sample holder sizes and positions
- Set stage limits in X and Y directions
- Load and save maps

EDS detector setup

- Supports single or dual detectors
- Detector type selection
- Shaping time definition

Automatic calibration options

- Auto beam current mode (calibration using X-ray counts or specimen current monitor, for selected SEMs supporting continuous probe current adjustment)
- Backscattered electron detector response curve calibration over 5 elements (standard included)
- Microscope magnification calibration
- EDS calibration

Simple revisiting and validation

- Drive stage directly to particle
- Validate by morphology and chemistry
- EDS reanalysis option

Manual or automatic reclassification

- Load new or modify existing classification
- "Non-destructive" reclassification (creates a new classification file so original data will not be overwritten)

Comprehensive Reporting

- Result overview screen with particle view and properties (all particles or selected classes only)
- Individual particle revisiting (image, spectrum, data, comments)
- Multiple particles and spectra (10 particles and spectra per page, all or selected classes)
- Raw data (list of all particles and positions)
- Summary of results
- Class setup
- Search conditions (SEM, EDS, termination conditions)
- ENFSI proficiency test support.

Result overview screen with validation functionality

1 Representation of stub with analyzed area

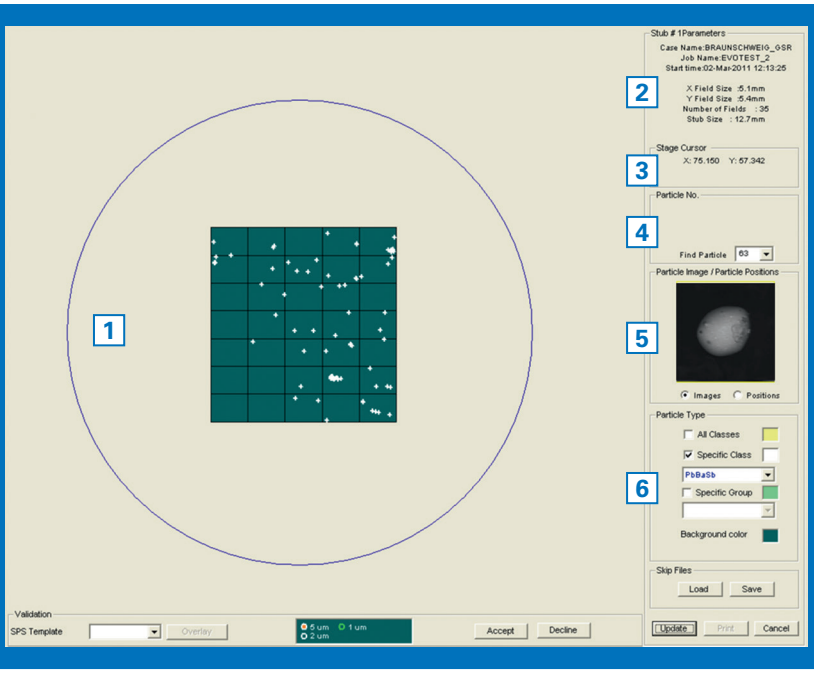
2 Stub parameters

3 Stage position

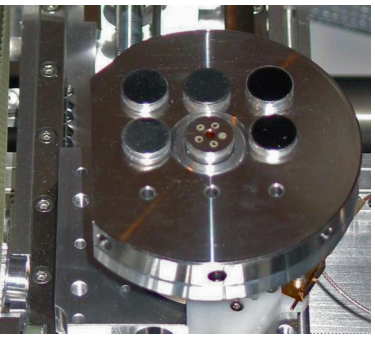
4 Search particle by number

5 Particle image

6 Particle classification



Technical Specifications



Features

- 4-step wizard to simplify routine GSR analysis
- Includes calibration standard on a 12.5 mm Al stub: Ge, Nb, Au, C, Si, and Cu Faraday cup
- Up to 20 samples can be analyzed automatically, each sample can be searched under individual conditions
- Customized sample holder configuration
- Automatic beam calibration using either X-ray excitation or built-in specimen current meter
- BSE response curve calibration using standards
- Supports the use of either single or dual XFlash® detector(s) with 10 mm², 30 mm², 60 mm² or 100 mm² active area, for tungsten or FEG source SEMs
- User configurable class definition, loaded from/saved to file, maximum 4,000 classes with up to 8 elements each
- Simple and fast revisiting of particles for validation
- Manual and automatic reclassification
- Extensive reporting capabilities
- Minimum particle size down to 0.1 µm (SEM dependent)
- Search area maximum 50 x 50 mm²

Standard configuration

- QUANTAX 200 with XFlash® 6 | 10 detector
- ESPRIT StageControl
- ESPRIT EMSA Export
- GSR Professional software

Recommended options

- XFlash® 6 | 30 detector
- ESPRIT HyperMap
- ESPRIT Jobs

For more information scan the QR code or visit www.bruker.com/quantax-eds-for-sem

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