



### Key benefits

- Fast and automated searching and characterizing of gunshot residue (GSR) particles
- Classification according to user-definable classes up to 8 elements
- Automatic optimization of SEM and EDS system
- Automated multi-field and specimen run using predefined substage layouts with a maximum of 8 samples
- Dedicated sample holder kit with built-in GSR calibration sample
- Accurate revisiting possibilities needed for confirmation
- Fast report generation
- Built-in validation procedure

## GSR S50

### Scanning Electron Microscope for automated analysis and classification of Gunshot Residue (GSR)

The GSR S50 is a dedicated system with fully integrated software to analyze and classify GSR, designed to run 24/7.

The GSR S50 includes basic X-ray functionality using state of the art EDS Silicon Drift Detectors (SDD). The system offers both high vacuum and low vacuum operation modes and can, in addition to dedicated GSR analysis, also be used as a versatile system for all of the most common forensic applications.

The FEI Gunshot Residue Analysis (GSR Magnum™) package allows analysis of GSR to be carried out completely automatically and unattended. The software controls the SEM column, its motor stage, the EDS X-ray spectrometer and the backscattered electron detector (BSED), enabling samples to be scanned quickly and reliably for particles of compounds characteristic of GSR.

The high-precision motorized stage of the GSR S50 allows the user to revisit each detected particle, easily and accurately. The motorized stage will drive back to the field of interest and the selected particle will be automatically centered and magnified, allowing the user to confirm the presence of specific elements characteristic of firearms discharge residue. The unique 3-step wizard allows for consistent set-up of the software in order to obtain fast and reliable results from each run. A built-in validation procedure also helps to monitor the behavior of the system.

An advanced automatic calibration procedure, which allows complete set-up and dynamic readjustment of the microscope column, motorized stage, backscattered electron detector (BSED) and X-ray analysis system, is standard.

All data are stored in spreadsheet format to yield a complete results file. Automatic report generation meets the demands of time-to-result.

The GSR software is fully compliant with ASTM E 1588-2007 and the ENFSI best-practice guidelines for GSR analysis by SEM/EDX (2006).

