

Krefeld, December 20th 2023

MANUFACTURER'S DECLARATION

To purchasing committee of
Eesti Geoloogiateenistus (Geological Survey of Estonia)
For procurement of Portatiivse spektromeetri ostmine (Buying a portable spectrometer)
Reference number: 273148

We SciAps Inc. hereby confirm these specifications of SciAps Z-903 GeoChem Analyzer manufactured by SciAps Inc.:

1. SciAps Z-903 GeoChem Analyzer is a portable hand-held Laser-Induced Breakdown Spectrometer (LIBS) for rapid on-site elemental analysis. Instrument is compatible for on-site and real-time elemental analysis of rock and sediment samples in field and laboratory conditions.
2. Elemental Range: Instrument measurements cover the entire range of elements from lithium (Li) to uranium (U).
3. Elemental Range for quantification: Elements included in factory Geochem calibration: Li, Be, C, Na, Mg, Al, Si, S, K, Ca, Ti, Cr, Mn, Fe, Ni, Cu, Zn, Ba, Pb
4. Detection Sensitivity: High sensitivity, capable of detecting trace elements in rocks and minerals down to ppm or lower concentrations. Lithium detection limit 0.005%
5. Laser Source: A high-energy 1064 nm (3-6mJ), pulsed laser

6. Atmosphere: the system uses fluxing with inert gas (Argon) for improved performance; in offered configuration 30 canisters of gas is included for working with LIBS for 30 days in 8 h shifts.
7. Spectral Range: Spectral range of installed spectrometers 190-950 nm.
8. Spatial Resolution and Rastering: Adjustable spot size (focus) for analysing specific features or minerals within a sample is available. Instrument allows rastering (mapping) of elements over a custom area with 100 μm diameter beam.
9. Analysis Software: User-friendly software with spectral libraries included. It is possible to install software on an external device (PC). Pre-processing/chemo-metrics software for user-added Elements/Calibrations included.
10. Quantification Models: Robust quantification models for accurate determination of elemental concentrations in geological samples. Quantification algorithms specifically designed for mineralogical and geological analysis included.
11. Default model building: The system allows calibrations and matrix-specific quantification models build-up by the user.
12. Data Storage: 32 GB SD internal data storage capacity for storing multiple spectra and analysis results, including spectral libraries for future reference.
13. Real-Time Analysis: Rapid data acquisition and real-time analysis capabilities for efficient fieldwork or geological exploration are provided by instrument.
14. Power Source: Portable power source (rechargeable Li-Ion battery) with extended operation time for remote geological surveys, a battery charger (220 VAC, EU AC adapter) and one spare battery are included.
15. Weight and Portability: 2.24 kg with battery, compact design for easy transport to remote field locations. Ruggedized safety case for transportation is included.
16. Environmental Resistance: Robust construction with resistance to environmental factors such as dust, humidity, and temperature variations encountered in geological fieldwork.
17. Safety Features: Safety interlocks, eye protection, and emission control mechanisms to ensure safe operation in various geological settings are included. Laser Safety Glasses; 2 additional SciAps Blast Shields included.
18. Calibration Standards: Compatibility with certified reference materials for accurate instrument calibration ensured. Calibration check standards included.

19. Reporting Capabilities: Reporting software with customizable templates for generating detailed reports included.
20. Data transfer: data transfer capabilities for integration with geological mapping and analysis software included. Data are transferable via Bluetooth; Wi-Fi and USB-C (2.0) port.
21. Maintenance Requirements: Low maintenance requirements, with easy access to critical components for servicing in the field.
22. Warranty: 24-month extended warranty for any repairs/replacement of defective parts. Maintenance, cleaning and calibration included.
23. Training: Training includes onsite training (one day) for 3 persons.

Best regards

SciAps Inc.

Zweigniederlassung Deutschland

Campus Fichtenhain 46

47807 Krefeld

Tel. +49 2151/8936333 info@sciaps.de

Vito Angona



Sales Director EMEA

SciAps Inc. Deutschland

Campus Fichtenhain 46

47807 Krefeld

Germany

www.sciaps.com