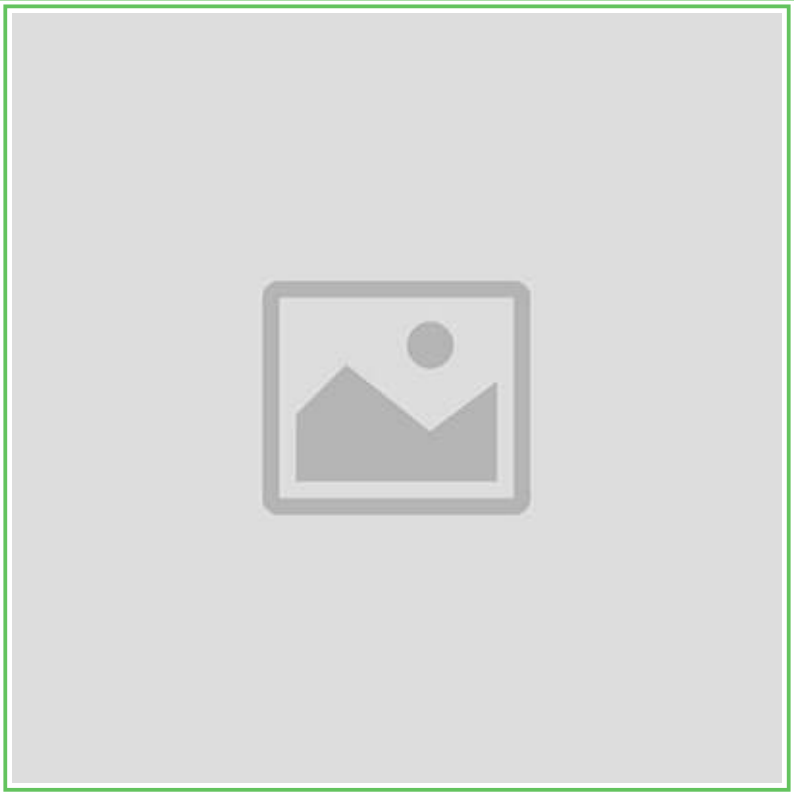
XRF Soil Analyzer



Portable XRF Soil Analyzer

The MS**Compass200SWISS Portable XRF Soil Analyzer** is a powerful field lab designed for rapid, non-destructive elemental analysis of soil. With a bench-top design for enhanced precision, this analyzer is simple to operate with minimal training and is ideal for in-situ soil testing. It uses X-ray fluorescence spectrometry to detect heavy metals and other elements, making it suitable for environmental, agricultural, and construction applications.

Key Features:

- **Portable, Field-Ready Lab**: Conduct elemental analysis anywhere with minimal

MASTER SCIENCE, Dinkelbergstrasse 14, 4127 Birsfelden, Switzerland
E-mail: support@themsci.com, Website: www.themsci.com

preparation.

- **Non-destructive Testing**: Accurate and consistent results in minutes.
- **Easy Operation**: Load-and-start functionality requires little operator training.
- **Stable Bench-Top Design**: Ensures precision and repeatability in test performance.
- **Minimal Sample Prep**: Suitable for in-situ soil screening and site remediation.
- **Advanced Software**: Uses fundamental parameters (FP) algorithms and empirical calibrations for traceable, accurate results.
- **Data Management**: Multiple data transport options including USB, Wi-Fi, Bluetooth, and GPS, with no need for a PC.

Typical Applications:

- In-situ soil surveys and environmental assessments.
- Detection of hazardous metals in contaminated land.
- Site remediation validation.
- Testing of Pt, Pd, and Rh in catalysts.
- Consumer goods testing (e.g., Pb and Cd in toys, jewelry, packaging).

Technical Specifications:

- **Detector**: High-resolution silicon detector.
- **Excitation Source**: 4-watt high-efficiency micro X-ray tube (50 kV max, 200 µA max).
- **Working Temperature**: -20°C to 50°C.
- **Measuring Time per Sample**: 30-200 seconds.
- **Element Range**: Magnesium (Mg) to Uranium (U).
- **Sample Types**: Liquid, powders, solids.
- **Factory Calibration**: Metals in soil.

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- **Instrument Dimensions**: 270mm x 320mm x 230mm (L*W*H).
- **Sample Chamber Dimensions**: 170mm x 110mm x 17mm (L*W*H).
- **Weight**: 9.4 kg.
- **Display**: 8-inch touch screen (1280x800) running on Windows 10.
- **External Connections**: USB, Bluetooth, Wi-Fi, GPS.
- **Test Report Output**: Excel and PDF formats.

Soil Contaminants Detected:

- The Compass 200 can detect a range of heavy metals including vanadium (V), chromium (Cr), cobalt (Co), nickel (Ni), copper (Cu), zinc (Zn), arsenic (As), lead (Pb), and cadmium (Cd). Its performance has been validated with soil standard samples, providing highly precise results with little deviation.

Precision and Performance:

- The analyzer offers high precision with repeatability for elements like Ni, Cu, Zn, Pb, and As, as demonstrated in test results with relative standard deviations (RSD) as low as 0.7%.

Conclusion:

The MS**Compass200SWISS Portable XRF Soil Analyzer** is an efficient and reliable tool for on-site quantitative analysis of soil elements. Its high detector resolution, coupled with advanced software and calibration models, provides accurate analysis for environmental, agricultural, and industrial needs, especially for heavy metals in contaminated lands.

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