



Advanced XRF equipment and solutions

**PORTABLE XRF ANALYZER  
FOR MINING AND EXPLORATION**

**ElvaX  
GEO**



Instant on-site elemental analysis is one of the necessities of the modern mining industry. ElvaX Geo offers you accurate data and ease of operation during geo exploration or quality assurance. The instrument is designed specifically for long non-stop convenient operation. The unique 800 mm<sup>2</sup> analytical spot analysis increases averaging of inhomogeneous samples.

A composite pole helps you keep a comfortable body position during operation and enables you to analyze hard-to-reach places. This form factor allows for uninterrupted measurement during slow walking while measurement results are communicated to the operator through headphones.

## ACCURACY

ElvaX Geo offers excellent repeatability and low limits of detection with a unique 800 mm<sup>2</sup> analytical spot that greatly increases the averaging of inhomogeneous samples

## TIME

The instrument is designed specially for long non-stop convenient operation

## ANALYSIS

ElvaX Geo software uses both the Fundamental Parameters and the Empirical Calibration Methods

ElvaX Geo is operated through a PDA in a protective enclosure, which can be put underneath outer garment in case of extreme climatic conditions. The Li-Ion Battery can be hidden as well. ElvaX Geo software uses both the Fundamental Parameters and the Empirical Calibration Methods.

Fundamental parameters analysis of unknown samples without empirical calibration is remarkably accurate. However every instrument is calibrated for the basic mineral types with NIST or NIST traceable samples. ElvaX Geo demonstrates excellent limits of detection and repeatability.



## TYPICAL LIMITS OF DETECTION

Element	Limits of Detection, ppm
Ti, V, Cr, Mn, Fe	5-10
Co, Ni, Cu, Zn, Pb	15-20
As, Se	15-17
Rb, Sr, Zr, Nb, Pd, Ag, Au	2-5
Cd, Sn, Sb	3-5

- ✓ Excellent repeatability
- ✓ Low limits of detection
- ✓ Unique 800 mm<sup>2</sup> analytical spot

With the help of a laboratory stand ElvaX Geo is transformed into a desktop instrument working with ElvaX software. It allows you not only to perform in-depth analysis of XRF spectra but enables you to create calibrations of your own.



ElvaX Geo supports integration with an external GPS module via Bluetooth. The Acquired data can then be used in a GIS.



The analyzer comes with a watertight case, holster for carrying, composite pole, Laboratory stand.



Unauthorized turning on is prevented by a key lock and password.

## Digital X-Ray Source

### digiX-50

Anode: W

Voltage: 50 kV

Current: 200

Power: 10 W

Spot size: 800  $\mu\text{m}^2$

## X-Ray Detector

Type: Fast SDD

Active area: 25  $\text{mm}^2$  (option 70  $\text{mm}^2$ )

Energy resolution:  $<145\text{eV}$  @ 5.9keV

Count rate: 500 000 cps

## Electronics

DPP: proprietary DAS (Dynamically Adaptive Shaping) type,  
80 MHz sampling rate

MCA: 4096 channels

Display: 4.3inch

## General

Dimensions: 242 x 236 x 90 mm

Weight: 2 kg

Protection: IP67

## Software

Operating system: Windows EC7

Analysis algorithms: Fundamental parameters (FPA),

Empirical (regression) calibrations

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