TRADESNABEXPORT

Handheld XRF Analyzer MetExpert

Analyzer of elemental composition of substances and materials

APPLICATION

Measurement of the mass fraction of chemical elements

- in metals and alloys
- aluminum products
- magnesium products
- stainless products
- structural products
- special products

Identification of chemical elements from **SODIUM (Z=11)** to **AMERICIUM (Z=95)** in substances

- in the solid state
- in the liquid state
- in the powder state

ADVANTAGES

Working with samples in solid, powdery and liquid state

Designed to work in field and workshop conditions, as well as permanently in the laboratory

Identification of 80 chemical elements from sodium to americium

A tablet computer running under Windows OS is supplied with the analyzer.

Operating temperature range from -35 to 45° C

Continuous operation time with a standard set of batteries is at least 8 hours

Communication with the PC is carried out wirelessly

APPLICABLE SCOPE

Customs control

Analytical laboratories
of industrial enterprises

ore analyzer at mining and
processing plants

Assay supervision

Analytical laboratories of research
institutions

Sampling according to the work plan

Crushing, drying, binding to the place of selection

Packaging, labeling of samples

Laboratory analysis of samples

Processing of analysis results

Development of work plans for the next field season

Task: operational analysis of the chemical composition of geological samples at their sampling sites or in the immediate vicinity of their sampling site (in the field).

Scope of application: geological exploration and mining enterprises.

Objective: Operational adjustment of the directions and volume of exploration, stripping works based on the analysis of data on the composition and content of geological samples.

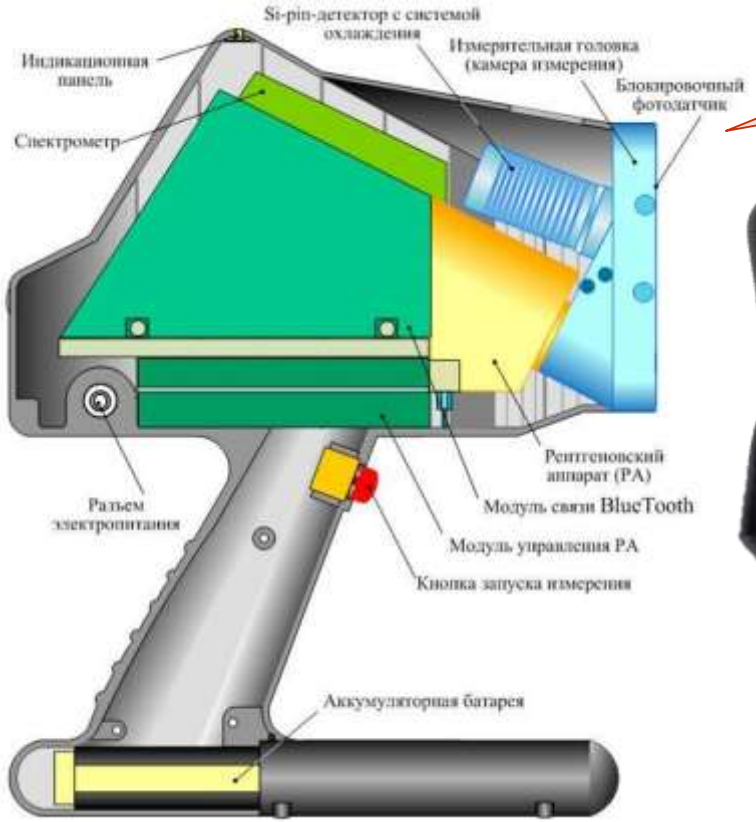
Scope of delivery of the device

CHARACTERISTICS

The number of chemical elements to be determined (search and identification), including simultaneously	80 (Na, Mg, Al, Si, P, S, Cl, K, Ca, Sc, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Ga, Ge, As, Se, Br, Rb, Sr, Y, Zr, Nb, Mo, Ru, Rh, Pd, Ag, Cd, In, Sn, Sb, Te, I, Cs, Ba, La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Hf, Ta, W, Re, Os, Ir, Pt, Au, Hg, Tl, Pb, Bi, Po, At, Ac, Fr, Ra, Ac, Th, Pa, U, Np, Pu, Am)
Element detection threshold mass fraction % max	Na, Mg, Al, Si - 0,2 from P to Mo - 0,02 from Ag to Am - 0,05
Absolute measurement error in the "All elements" mode mass fraction % in measurement ranges	from 0,2 to 1,0% inclusive - ± 0,10 Above 1,0 to 10,0% inclusive - ±0,50 Above 10,0 to 100,0% - ± 0,70
Absolute measurement error in the "Nickel-containing and stainless steels" mode (Ti, V, Cr, Co, Ni, Mo, W), mass fraction, %, in the measurement ranges	From 1,0 before 40,0 inclusive ± 0,50 Above 40,0 before 80,0 inclusive - ± 0,70
The equivalent dose rate under normal operating conditions of the analyzer, at any accessible point at a distance of 0.1 meters from the surface of the analyzer, mk^3 v/ h, no more	1,0
Overall dimensions (LxWxH), mm	200x95xx260
Weight with battery, kg	2
Battery life from one battery, hour	before 8

THE PRINCIPLE OF OPERATION

The spectrometric complex, which is part of the analyzer, is designed to receive, accumulate and process incoming spectrometric information with transmission information on wireless technology using Bluetooth into a tablet computer.



The tablet computer is designed to control the operation of the monoblock, accumulate measured and calculated information, archive data, output analysis results to the display screen and/or printing device.

Structurally, the analyzer is made in the form of a monoblock, which houses the nodes and blocks of the X-ray emitter (high-voltage converter, control unit), a spectrometric complex with a detection unit based on a silicon pin detector, a preamplifier and a detector cooling system.