

The ISO 9001:2008 international quality certification system is adopted by our company

ANALYTICAL TESTING SOLUTION PROVIDER

Spectroscopy

Chromatography

Mass Spectrometry

**A New Generation
of Handheld XRF
EXPLORER 9000**

Environmental Soil Heavy metal Analyzer



Globe and near



140 countries®ions are using Skyray Instrument up to now

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E A New Generation of Handheld XRF

XPLORER 9000

Environmental Soil Heavy metal Analyzer

The Explorer 9000 is a light weight hand held XRF multi element analyser designed for screening toxic elements in the soil. These elements include, Mercury, Lead, Arsenic, Copper, Zinc, Manganese, Cobalt, Vanadium, Chromium, Nickel and many more. They often originate from mining operations but also often just happen to be part of the local ecological landscape.

EXPLORER 9000 Environmental Soil Heavy metal Analyzer

Able to carry out effective testing about heavy metals including mercury, cadmium, lead, arsenic, copper, zinc, nickel, cobalt, vanadium, chromium, manganese in polluted soil, and also add testing elements according to clients' requirements.

» Application field in environmental protection soil industry

- Soil pollution survey and environmental assessment
- Soil pollution emergency treatment
- Soil restoration
-

» Application advantages

Heavy metal survey in soils

The instrument features a high definition GPS that allows the user to map geological features and locations where toxic materials or elements are to be found. Wi-Fi facilities allow data to be accurately recorded and transmitted to third parties. assessments can be quickly made to determine the suitability of land for industrial; or residential use and determine the likely cost on any reclamation.



Emergency Soil treatment

As part of a cleanup operation, by determining the extent of soil pollution and the concentration of toxic elements present, it becomes possible to design suitable treatments that will enable the area to be used and so improving its intrinsic value.



Soil restoration

Pollutants often occur in zones whereby some areas are more toxic than others. By carefully monitoring the cleanup operation land can be brought into use quickly and re used with minimum delay.



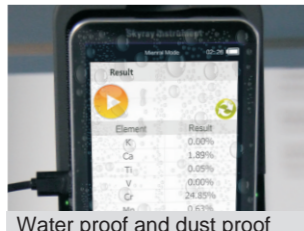
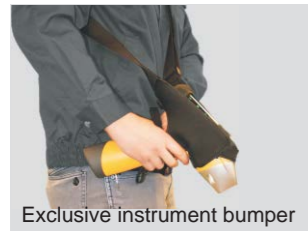
A new generation of hand held XRF

EXPLORER 9000 Harmful Elements Analyzer



» Six Advantages

Easier Operating



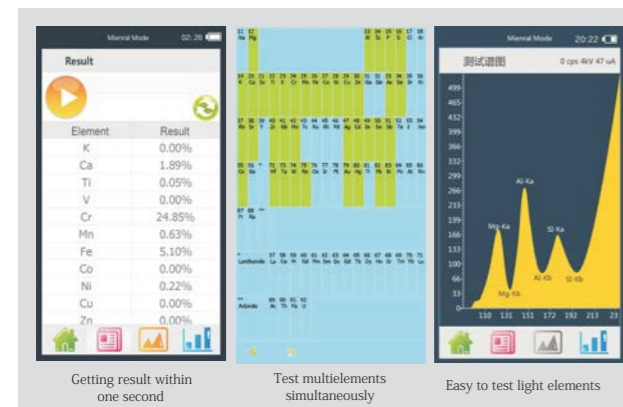
- Light weight, small size, ergonomic handle design and equipped with a purpose designed instrument case which is easier to hold and more convenient for use in the field.

- Employs a high contrast 5 inch high-definition color screen, providing a clear display at all light levels. The screen has 360 degree rotation.

- The Integrated seal design is waterproof and dust proof ensuring that the instrument can be used continuously in any location including harsh environments.

- No need for sample preparation, Explorer directly measures and analyses the front surface of any material or object. The handheld design ensures simple operation and fast measure times. Accuracy and concentration can be monitored at any time using the test sample provided with the instrument.

Better Performance



- Rapid nondestructive detection of all elements is achieved simply by placing a sample in front of the Explorer. One button operation can provide results within a period of around one second. Using the unique combination of our X-ray source and SDD detector the performance of Explorer is comparable to that of a large bench-top EDXRF and analysis is both fast and accurate

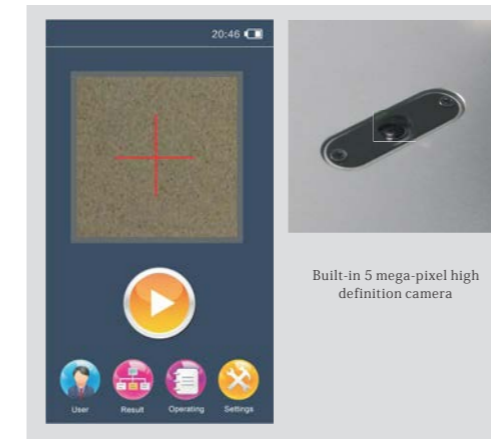
- Designed for the simultaneous detection of Titanium, Vanadium, Chromium, Manganese, Iron, Cobalt, Nickel, Copper, Zinc, Gallium, Germanium, Molybdenum, Zirconium, Niobium, Ruthenium, Rhodium, Palladium, Silver, Indium, Tin, Antimony, Hafnium, Tantalum, Tungsten, Rhenium, Platinum, Gold, Lead, Bismuth, Magnesium, Aluminum, Silicon, Phosphorus and Sulfur. Other elements can be added when required.

- The very short optical path between the sample and the detector allows for the analysis of light elements without Helium purge. Even very light elements including Mg can be measured with ease.

More powerful Battery

- The large capacity lithium battery provides 27000mAh hours allowing up to three days of continuous operation and comes with a mains and car / truck charger to ensure enough power.
- A Built-in memory battery is included which ensures that power is maintained even when changing or charging the main batteries.

Higher Configuration



- The four core parts of each Explorer are the miniature high power X-ray tube, a Fast-SDD detector (this is now the world's best detector), a digital signal processor and a micro multi-channel intelligent analysis module. These four core components ensure an accuracy which is as good as a large bench top EDXRF

- The large data storage provided is by way of an ultra-high frequency memory and mass storage device and our new independently researched digital multi-channel technology ensures an effective count rate up to 500K cps and is unique to the Explorer design.

- The combined collimator and energy filter system ensures optimum performance for 12 sample groups meeting the needs of different users. This unique system which includes 3 selectable collimators of 1, 2 and 4 mm diameter and the six automatically selected filters, ensure "best performance" for all types of sample.

- A built-in high definition camera can monitor the exact testing position of any sample at any time, ensuring the repeatability of each measurement made.

Safer Protection



- An intelligent tricolor early warning system provides a 360 degrees view without dead angle using a 3 color LED display. Each color determines an instrument operating status. Green light means power on, a red flashing light means testing is under way and a yellow flashing light means a fault condition or error.

- Triple safety protection features:
 - a: Automatic sample detection. Instrument does not work without a sample in position ensuring no leakage of radiation.
 - b: A thicker metal alloy screen around the testing area can effectively prevent unwanted X-ray scattering.
 - c: Safety protection cover prevents the scattering of X-rays from a light element matrix.

- Security linked locking protects operator security; providing extra safety should the software fail to control instrument switch off.

Intuitive , intelligent software

- EXPLORER 9000 soil analyzer is equipped with professional applications software specifically designed for the soil toxicity analysis. Programs are intuitive and intelligent, ensuring high sensitivity with a fast measure time plus easy operation.
- Unique design provides for a one key dual mode operation (user mode and expert mode). The User mode is great for recognizing categories of sample using the one key operation. The Expert mode is used when a greater number of elements are to be measured and when an in-depth analysis of the operating working curve is required.
- The internal intensity correction (ITC) method can correct for deviations caused by uneven sample surface or samples with different geometries, densities or structure.



» Features

Analytical Method	Energy Dispersive X-ray Fluorescence
Range of Elements	Atomic number from Mg(12) to U(92)
Range for Simultaneous Detection	Maximum 40 elements
Measurable Range	ppm-99.99% according to sample
Typical Detection time	1 - 60 seconds according to sample
Communication	GPS, Wi-Fi, Blue tooth
Data transmission	SPI fast data transmission. USB connectivity
Memory	Storage of up to 100,000 readings.
Warnings	Green light indicates on. Flashing Red light on during measurement, flashing yellow light indicates an error
Power	Li-ion battery 9000 mAh standard , 27000 mAh optional
Samples	Any solid, liquid, powder, Gel
Detectors & Resolution	SDD standard ,Fast SDD Optional ,128eV
X-Ray source	50KV / 200uA,4W Ag target standard, Rh target optional.
Collimators	4.0mm and 2.0mm
Filters	X6 Auto switching program controlled
Camera	CMOS, 5 Mega pixels
Touch screen	5 inch CCD screen,resolution 1080*720 pixels
Software includes	EC Experimental Coefficient and FP fundamental parameter software
Standard calibrations	Programs are available for most XRF applications. The standard programs supplied with the Model 9000 are empirical programs specific to mineral ore analysis. Others on request
Operation	One key auto selection of best working calibration curve
Ambient conditions	Humidity: < 90 % Temperature:-20 ~ +50
Dimension	24cm(L)*9cm(W)*33cm(H)
Instrument weight	1.7Kg
Options include	Test stand, bluetooth printer, Sample press, sample cups etc.

» Accessories

Optional high power 27000mAh battery for extending measure time by X3

Optional compact portable Blue tooth printer for "At site" printing

Multifunction battery charger

Rugged moisture , impact and shock proof carry case

Optional rigid instrument mount for hands free operation

Other options are available to suit all applications