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

TO BE A WORLD-LEADING ANALYTICAL TESTING SOLUTIONS PROVIDER !

Spectroscopy Chromatography Mass Spectrometry

Optech Solutions

A New Generation
The Leader of Handheld XRF

EXPLORER 9000

Environmental Soil Heavy Metal analyser

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115 countries&regions are using Skyray Instrument up to now

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XPLORER 9000

Environmental Soil Heavy Metal Analyser

Based on 10 years of research and development in handheld x-ray fluorescence, the Explorer handheld XRF sees the materialisation of many Independent Property Rights, incorporating the latest developments in photoelectron systems, microelectronics, semiconductor technology.

The Explorer 9000 handheld soil heavy metal analyser is the first to use a large high-resolution LCD screen and the new digital signal processor. The Explorer 9000 has been specifically designed for onsite testing and remediation analysis for soil pollutants and for effective testing for heavy metals including mercury, cadmium, lead, arsenic, copper, zinc, nickel, cobalt, vanadium, chromium, and manganese which can be further expanded to other incorporate other elements according to the client's requirements. With its small size, light weight and the lower detection limits making it as good as a desktop, the Explorer 9000 truly is the ultimate portable analyser for use onsite or in the laboratory.

EXPLORER 9000 Environmental Soil Heavy Metal Analyser

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 surveying and environmental assessment.
- Soil remediation.
- Soil pollution emergency treatment.
- …

Application advantages

Soil heavy metal survey

Carry out heavy metal environmental assessment on various types of agricultural, residential, commercial and industrial land. The built-in GPS identifies the location of the sampling site for each test enabling large areas in to be clearly identified and pollution maps to be established.

Soil pollution emergency treatment

Commonly used in emergency treatment after an area becomes polluted. Implement rapid onsite tracking of pollution and effectively scan the affected area to identify the boundary of the contaminated area in real-time.

Soil restoration in polluted areas

Classify regions of soil pollution, identifying the key polluted areas to enable areas to be targeted for governance to improve the screening and real-time monitoring of soil remediation.

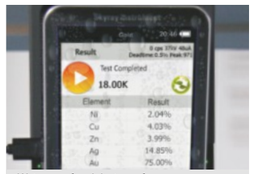
EXPLORER 9000

Environmental Soil Heavy Metal Analyser

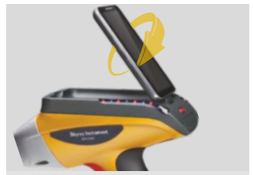
Six advantages

Easier Operation

Exclusive instrument bumper



Water proof and dust proof

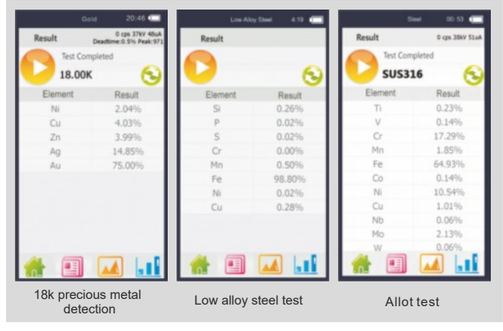


360° rotatable high-definition screen

Portable test bench

- Small, lightweight, more ergonomic design for more comfortable and balanced easier operation and a heavy duty instrument case for ensures safe transportation of the instrument.
- 5 inch high-definition screen with 360 degree rotation, clearly easily displays results in low visibility conditions.
- Waterproof and dust-proof design the for use in harsh environments.
- No need for sample preparation; the surface of samples can be tested directly. The instrument can be used in both handheld mode to quickly test a sample or be clipped into the desktop test-stand for more routine testing.

Better Performance



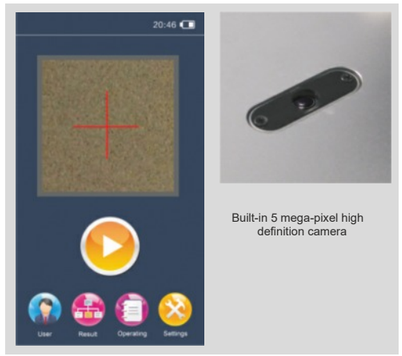
18k precious metal detection | Low alloy steel test | Allot test

- Rapid nondestructive detection and measurement with quick point and click operation giving results within two seconds and a performance comparable to that of a desktop machine.
- Simultaneous detection of Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Ga, Ge, Zr, Nb, Mo, Ru, Rh, Pd, Ag, In, Sn, Sb, Hf, Ta, W, Re, Pt, Au, Pb, Bi, Mg, Al, Si, P and; further elements can be added to meet the customer's requirements.
- Detection of light elements without helium gas due to the new optical path configuration.

Long Battery Life

- Rechargeable 9000 mAh lithium battery with up to 8 hours work time on a single charge.
- Optional large 27,000 mAh lithium battery giving up to 3 days operating time. Equipped with power adapter/charger and 12V car charger to ensure the analyser can be powered no matter where you are.

Higher Configuration



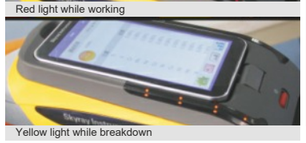
Built-in 5 mega-pixel high definition camera

- The four core components, which include the Miniature X-ray tube, SDD or optional Fast-SDD detector (the World's best detector), digital signal processor and micro multi-channel intelligent analysis module enable an accuracy comparable to a desktop machine to be achieved.
- Skyray patented digital multi-channel technology ensures up to 500k cps (spectral counts per second).
- Automatic collimator and filter system make the Explorer able to meet wide ranging testing requirements and applications.
- A built-in 5M pixel high-definition camera clearly displays the test point on the sample position increasing accuracy in results.

Safer Protection

Green light while power on

Red light while working



Yellow light while breakdown

Rubber radiation shields

Safety linkage locking device

- Intelligent 3 colour early warning system lets the user know the status of the instrument: Green to indicate power on, flashing red to indicate testing and flashing yellow for fault indication.
- Triple safety protection:
  a: Sample detection. X-ray tube shuts off if no sample is detected.
  b: Thicker wall structure preventing radiation leakage and scatter.
  c: Safety protection cover to prevent radiation scatter/back scatter.
- Security link locking device as a final safeguard if the software is unable to control switching off the instrument.

More intelligent software

- The Explorer 9000 environmental soil heavy metal analyser is equipped with a professional application software specifically designed for environmental testing and monitoring featuring an intelligent intuitive software interface for easier and quicker operation.
- Software featuring two operator modes 'user' and 'expert':
  User mode for quick one step day-to-day testing by inexperienced staff.
  Expert mode for experienced users wanting more detailed analysis and advanced parameters.
- Improved algorithms include an internal intensity correction method to correct deviations caused by uneven samples with different geometries, densities and structures.

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Performance technical data

Analytical Method	Energy dispersive X ray fluorescence analytical Method
Elements Measuring Range	Atomic number from 12 to 92 [elements from magnesium(Mg) to uranium (U)] can be measured
Simultaneous detector elements	Simultaneous analysis 40 elements
Microcomputer system	Customized system; CPU: 1G ; system memory: 1G ; extended stored maximum support 32G ; standard 4G for mass storage data
The content range	ppm~99.99%
The detection time	1 ~ 60 seconds (a second report results)
A built-in system	GPS, WIFI, Bluetooth
Power Supply	Rechargeable lithium battery; standard 9000mAh with sustainable work of up to 8 hours; optional 27000mAh superbattery and wide voltage 110V ~ 220V universal adapter for recharging power supply
Detection Objective	Solid, liquid, powder
Detector	SDD detector or Fast-SDD detector (optional)
Detector resolution	Minimum can reach 128eV
The excitation source	50KV/200uA- silver target end window integrated miniature X ray tube and high voltage power supply
Collimator and filter	Collimator diameters are 4.0mm and 2.0mm, 6 kinds of filters with automatic switching functions
Video system	5M pixel high resolution camera
Display screen	Brand new 5 inch transflective LCD touch screen, with resolution 1080×720
Detection limit	The minimum detection limits at 1 ~ 500 ppm
Safety	Multiple safety protection, no tests, no radiation, radiation levels at work are far below the international safety standards, and has no sample telemetry, automatic shut X light tube function. Standard radiation shields, thickened wall alloy test instrument
Specialty	Ore special edition analysis software, using intelligent one key test
Convenience of application	Key intelligent matching the best curve that no need to select curve
Data transmission	Digital multi-channel technology, SPI data transmission, quick analysis, the high count rate; waterproof mini USB, and can be connected with a desktop computer
Operating ambient humidity	≤90%
Operating environmental temperature	-20 ~+50
Instrument dimension	244mm(Length) x 90mm(Width) x 330mm(Height)
Instrument weight	1.7Kg
Intelligent warning Signal Indicator system	Green light means power on, red flashing means testing and yellow flashing indicates a fault
Accessories	Military grade sturdy lockable protective case; waterproof and shock absorption. Universal charger and car charger, 4G SD memory card and card reader Two lithium battery and charger, PDA accessories, radiation shield. Optional accessories: the large battery, desktop test-stand.

Exclusive accessories

Heavy duty high-strength protective box, for good moisture-proof and shockproof protection.

Battery and desktop charger: Battery capacity of 9,000 mAh (optional 27,000 mAh).

On-site printing via portable optional Bluetooth printer.

4-into-1 12V car charger and 12V power adapter for power in the field.

Optional Desktop test-stand.