

EDX-POCKET are designed for on-site analysis in the wild, featuring small, light, precise, rapid, beautiful, safe, convenient, waterproof & long-standby time. Equipped with digital multi-channel technology, it greatly improves the detection limit and stability of the instrument, expanding the application fields. The products has passed strict testing and inspection, and all index are accorded with the related technological requirements, reaching the international advanced level.



EDX-POCKET4-3

### Application Fields

- For RoHS & hazardous elements testing of super huge articles
- For on-site testing of electronic components and parts
- For on-site random testing of various kinds of toys, children's products, and gifts
- For packing material testing and verifying
- For various kinds of batteries hazardous substance testing and verifying
- For hazardous elements testing in cloth, shoes material etc.
- For hazardous elements testing in electroplate liquids
- For hazardous elements testing in jewelry, ornaments etc.

### Testing Advantages for Application

#### 1. Testing super huge articles

Due to the huge size of the specimen it can not be tested by common desktop instrument. This problem has been solved by this handheld instrument.

#### 2. Testing toys

Because of various kinds of toys, it is impossible for repeated sampling in labs. Now this handheld analyzer is applied for on-site testing. Thus it greatly reduces the production cycle.

#### 3. Testing package materials

Because of the large sizes and large amounts of printing ink, it is impossible for rapid & comprehensive testing with desktops. Now these problems can be solved by handheld analyzer.

### EDX-POCKET4-3, Handheld Hazardous Elements Analyzer

#### Performance Advantage

##### Perfect performance as desktop

Small power integral end-window miniature X-ray tube, large dimensional beryllium window Silicon Drift Detector (SDD, the best detector in the world), and miniature digital signal multi-channel processor, greatly reduce the testing time and testing deviation, & improve the testing precision, requiring similar performance as the desktop.

##### Small & light body, easy for carry

Operation of on-site and in-situ detection at anytime or anywhere.

##### Rapid & nondestructive detection

1-2secs for rapid detection, more than 10secs for precise detection, whose results are similar to the results gotten in lab. No destruction to samples.

##### Detection of light elements

Helium-charging system (optional) greatly expands measurable range (analyze elements from Mg), satisfying the requirements of customers for light elements detection.

##### HD camera for convenient observation

Observation of testing position at any time.

##### Direct testing

It can directly analyze on the surface of the analyses, without needing of preparing samples.

##### Simple deviation calibration

Built-in intensity calibration method ensures simple deviation calibration caused by different geometry shapes and none homogeneous structure density.

##### Professional software for easy operation

It is equipped with professional hazardous elements analysis software. Combining FP with EC software, it is easy for operation and acquiring wider application fields.

##### Faster data transmission

Built-in system, HD touch screen (resolution 640x480), digital multi-channel technology, and SPI data transmission technology, effectively accelerate the data transmission and improves the counting ability.

##### Multiple safety protection, caring for health

Automatically shut-down of X-ray light tube within 2 seconds with no sample in testing; the radiation level is far lower than the international safety standard; compliment away test safety cover.

##### Powerful battery & convenient charging

Compliment away two Lithium batteries (7800mAH), it can continuously work for 8 hours all together. It is convenient for charging because of wide voltage AC charger and Onboard charger.

##### Multiple protections

Waterproof and dust proof function provide the ability of working under high temperature and humidity. Its body is manufactured with high strength military material, which is moisture proof, shockproof, and pressure resistant.

##### Simultaneously testing elements

It can detect the elements such as Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As, Se, Cd, Sb, Hg, Pb. And it can detect more elements according to the customers' requirements.



### Application:

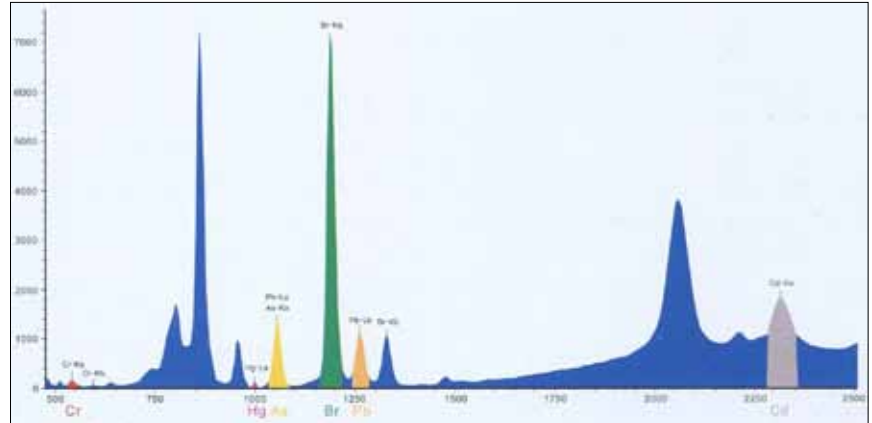
EDX-Pocket-III is widely used in toy safety testing, electrical and electronic and RoHS testing etc. After the issue of European Union toy statement, the instrument quickly finds its position in toy safety testing. It can be used for quantitative & qualitative testing for electronic components and parts; for third-party assessment to electronic components and raw material suppliers; for testing and verifying of packing material; for RoHS testing of various kinds of batteries; for testing of various kinds of toys, children's products, and gifts; for unlimited testing of big objects; for accurate positioning of precise components; for nondestructive testing of valuables.

### Application Advantages for RoHS:

- Equipped with newest SOD (minimum resolution < 139eV), it achieves more precise testing to trace hazardous elements.
- Equipped with HD camera, it supports more accurate positioning, achieving precise testing to tiny articles, such as pins.
- Newly software provides more effective algorithm & more functions, increasing testing precision of hazardous elements.
- Helium-charging system (Optional) greatly expands testing precision to halogen, especially Cl elements.

### Testing Data:

EC681 K Testing Result



Content Unit	PPM	EC681K					
Number	Working Curve	As	Br	Cd	Cr	Hg	Pb
1	PE	30.5568	775.628	140.4	24.194	103.15	100.973
2	PE	30.4782	770.526	140.08	24.764	100.52	99.2205
3	PE	31.5777	766.347	135.44	24.294	98.674	102.973
4	PE	29.9576	769.997	136.38	25.216	100.2	100.845
5	PE	30.3706	769.872	133.74	24.216	101.08	102.973
6	PE	30.6149	771.922	134.2	23.975	100.79	103.976
7	PE	30.391	771.009	135.32	24.5	100.99	101.487
8	PE	30.3195	768.284	136.61	25.167	99.502	99.5987
9	PE	30.6208	769.656	135.56	24.196	103.65	97.705
10	PE	30.8942	768.275	133.53	24.699	98.026	103.761
<b>True value</b>		29.1	770	137	23.7	98	100
<b>Average value</b>		30.5781	770.152	136.13	24.522	100.66	101.351
<b>Standard Deviation S<sub>n</sub></b>		0.40532	2.363	2.2759	0.4059	1.6701	1.9819
<b>Triple S<sub>n</sub> Value</b>		1.21595	7.08901	6.8276	1.2178	5.0104	5.94569
<b>Range R<sub>pm</sub></b>		1.62	9.28	6.87	1.24	5.62	6.27
<b>Relative Standard Deviation</b>		1.33%	0.31%	1.67%	1.66%	1.66%	1.96%
<b>Testing Deviation Σ (%)</b>		5.08%	0.02%	-0.64%	3.47%	2.71%	1.35%



## EDX-POCKET4-5, Handheld Alloy & Stainless Steel Analyzer

### Performance Advantage

#### Perfect performance as desktop

Small power integral end-window miniature X-ray tube, large dimensional beryllium window Silicon Drift Detector (SDD, the best detector in the world), and miniature digital signal multi-channel processor, greatly reduce the testing time and testing deviation, and improve the testing precision, requiring similar performance as the desktop.

#### Small & light body, easy for carry

Small body. Easy to carry. Convenient for wild work. Can operate on-site and in-situ analysis at anytime or anywhere.

#### Rapid & nondestructive detection

1-2secs for rapid detection, More than 10secs for precise detection, whose results are similar to the results gotten in lab, No destruction to samples.

#### Detection of light elements

Helium-charging system (optional) greatly expands measurable range (analyze elements from Mg), satisfying the requirements of customers for light elements detection.

#### Direct testing

It can directly analyze on the surface of the analytes, without needing of preparing samples.

#### Simple deviation calibration

Built-in intensify calibration method ensures simple deviation calibration caused by different geometry shapes and none homogeneous structure density.

#### HD camera for convenient observation

Observation of testing position at any time.

#### Professional software for easy operation

It is equipped with professional alloy analysis software. Combining FP with EC software, it is easy for operation and acquiring wider application fields.

#### Faster data transmission

Built-in system, HD touch screen (resolution 640x480), digital multi-channel technology, and SPI data transmission technology, effectively accelerate the data transmission and improve counting ability.

#### Multiple safety protection, caring for health

Automatically shut-down of X-ray light tube within 2 seconds with no sample in testing; the radiation level is far lower than the international safety standard; compliment away test safety cover.

#### Powerful battery & convenient charging

Compliment away two Lithium batteries (7800mAh), it can continuously work for 8 hours all together. It is convenient for charging because of wide voltage AC charger and Onboard charger.

#### Multiple protections

Waterproof and dust proof function provide the ability of working under high temperature and humidity. Its body is manufactured with high strength military material, which is moisture proof, shockproof, and pressure resistant.

### Application Field

EDX-POCKET-V is widely used for various kinds of alloy analysis. The analytical precision is 2 to 3 times more precise than common alloy analyzer. And testing samples include solid, debris, or any other tangible alloy objects.

It can accurately analyze all kinds of high & low alloy steel, stainless steel, tool steel, chromium/ molybdenum steel, nickel alloy, cobalt alloy, nickel/cobalt heat resistant alloy, titanium alloy, copper alloy, bronze, zinc alloy, tungsten alloy etc. Through determination of other alloy elements, it also can identify the light alloys such as Al, Mg and can be used for reliable identification and confirmation of material. It can be applied for incoming material determination in iron & steel smelting, boiler and other high-temperature and high-pressure industries, to ensure the quality of the material. It also can be used for alloy content analysis in shipbuilding, aerospace and other high-tech industries, to ensure the quality and safety of the product. It can be applied in power plant and other national economy and people's livelihood industries for components determination and safety of the devices. While according to scrap metals recycling and utilization industries, it can quickly analyze and categorize a large number of scrap metals, offering the necessary information for both sides in purchasing & selling. It is the powerful weapon for metal & steel identification in renewable and re usage of scrap metals resources industry, which greatly contributes to the development of resource recycling industry. It also can be applied for recovery of steel backlogged in warehouse, classification of various metals in salvage station, and cutting of turnery and debris.



## Application Case

### 1. Reliability Analysis

Simply trigger the instrument; the results of material contents will come out. Now you do not need the material reports, the only need that is to have our fourth generational handheld EDX-POCKET-V. With 10 seconds of nondestructive testing to the sample, you can know the quality and quantity of the material, which can prevent the cheat from the material provider.

### 2. Quality Guarantee/Quality Control

During the process of alloy material production and machinery equipment manufacturing, material identification and element testing is indivisible. To prevent the lost caused by the mixture of raw material, the fourth generational EDX-POCKET-V provides professional nondestructive testing, which effectively prevent the lost from mixture of raw material.

### 3. Recovery of Scrap Metal

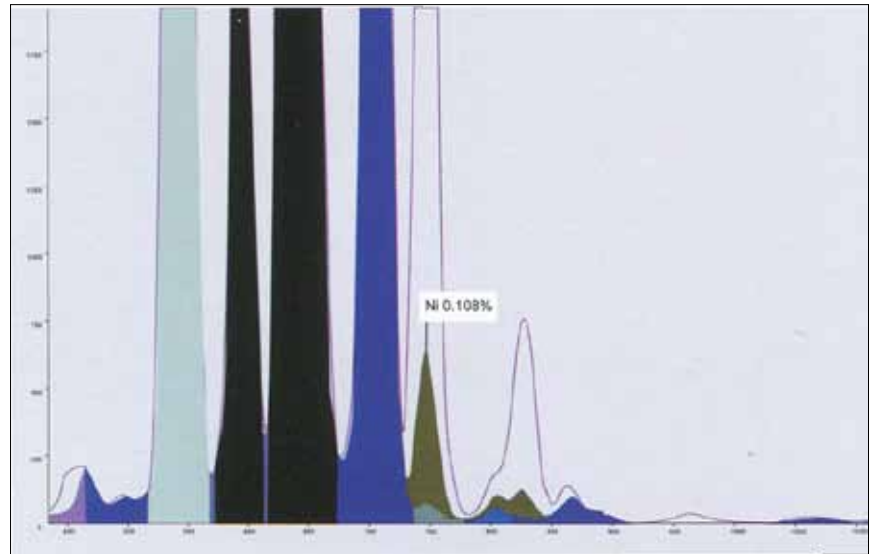
The fourth generational EDX-POCKET-V provides the immediate nondestructive testing from titanium alloy to nickel alloy, widely applied for classification of various kinds of alloy material.

## Core Application Field

Iron and steel Recovery of scrap metals  
Machinery manufacture & process Boiler pressure vessel.

## Analytical precision

Measurement Precision of Main Elements in Stainless Steel (304) Testing for 10 seconds.



Amplified Figure of Ni Content as 0.108% in Stainless Steel

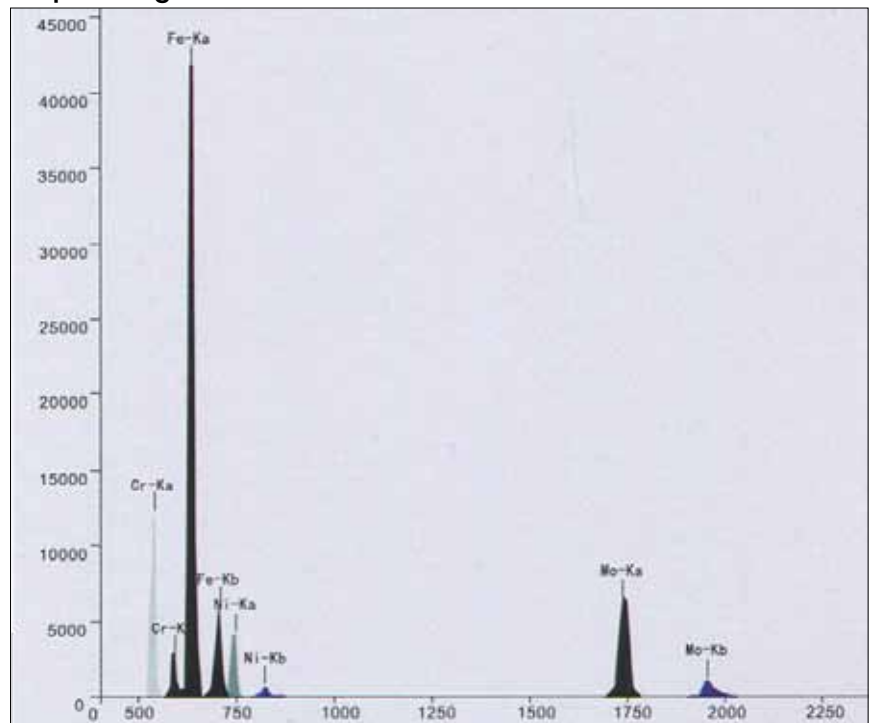


Figure of Stainless Steel (316) Sample

Sample	Cr	Mn	Ni	Cu	Mo
<b>Average value</b>	18.232	0.926	8.072	1.236	0.288
<b>Standard Deviation</b>	0.072	0.055	0.086	0.043	0.008
<b>Relative Standard Deviation (%)</b>	0.395	5.936	1.067	3.506	2.693

## Alloy Testing Advantages

- Rapid nondestructive testing. 1-2secs for rapid detection. More than 10secs for precise detection, whose results are similar to the results gotten in lab
- Professional alloy analysis software, which is easy for operation by commons. Free switch between Chinese and English interface.
- Multiple alloy analysis modes, including "quantitative analysis (ppm)", "qualitative analysis" etc. Built-in multi-calibration methods can calibrate deviation caused by different geometric states
- Unique adjustable fundamental parameter technology provides more analytical modes and more precise modes for customers.
- Dynamic information-match function displays testing results, sample numbers, and matching information on the interface simultaneously, which can be switched between each other.





EDX-POCKET4-9

## EDX-POCKET4-9, Heavy Metals in Soil Handheld Analyzer

### Performance Advantage

#### Perfect performance as desktop

Small power integral end-window miniature X-ray tube, large dimensional beryllium window Silicon Drift Detector (SDD, the best detector in the world), and miniature digital signal multi-channel processor, greatly reduce the testing time and testing deviation, and improve the testing precision, requiring similar performance as the desktop.

#### Small & light body, easy for carry

Operation of on-site and in-situ detection at anytime or anywhere.

#### Rapid & nondestructive detection

1-2secs for rapid detection, More than 10secs for precise detection, whose results are similar to the results gotten in lab, No destruction to samples.

#### Detection of light elements

Helium-charging system (optional) greatly expands measurable range (analyze elements from Mg), satisfying the requirements of customers for light elements detection.

#### HD camera for convenient observation

Observation of testing position at any time.

#### Direct testing

It can directly analyze on the surface of the sample, without needing of preparing samples.

#### Professional software for easy operation

It is equipped with professional alloy analysis software. Combining FP with EC software, it is easy for operation and acquiring wider application fields.

#### Simple deviation calibration

Built-in intensity calibration method ensures simple deviation calibration caused by different geometry shapes and none homogeneous structure density.

#### Faster data transmission

Built-in system, HD touch screen (resolution 640x480), digital multi-channel technology, and SPI data transmission technology, effectively accelerate the data transmission and improve counting ability.

#### Powerful battery & convenient charging

Compliment away two Lithium batteries (7800mAh), it can continuously work for 8 hours all together. It is convenient for charging because of wide voltage AC charger and Onboard charger.

#### Simultaneously testing elements

It can detect the elements such as Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As, Se, Cd, Sb, Hg, Pb. And it can detect more elements according to the customers' requirements.

#### Multiple safety protection, caring for health

Automatically shut-down of X-ray light tube within 2 seconds with no sample in testing; the radiation level is far lower than the international safety standard; compliment away test safety cover.

#### Multiple protections

Waterproof and dust proof function provide the ability of working under high temperature and humidity. Its body is manufactured with high strength military material, which is moisture proof, shockproof, and pressure resistant.

### Applications in Environmental Protection

EDX-POCKET-IX is applied for in-situ testing and repair analysis in soil pollution. It features the characteristics of small & light body, which can be held in hands by common people when measuring. It has been widely applied in various kinds of geologies. Testing samples include slag, rock, soil, mud, with forms of solids, liquids, dust, etc.

### Application Advantages for Heavy Metals

- Applied for soil pollution testing caused by mercury, cadmium, lead, arsenic, copper, zinc, nickel, cobalt, & vanadium
- Detecting & mapping pollution areas
- Rapid discovering and solving abnormal conditions
- Rapid tracing of abnormal pollution and effectively searching and circling pollution areas
- Rapid on-site & in-situ testing of heavy metals in soil
- Rapid classifying various kinds of residential lands, commercial lands and industrial lands into 3 levels, named level 1, level 2 and level 3
- Connection of PDA to GIS system for drawing maps
- Equipped with digital multi-channel technology, it operates more rapid qualitative and quantitative analysis. Designed with high statistical counting rate, it greatly improves the stability of the instrument which is much more important for heavy metals testing, because of the low content of heavy metals in soil.
- Outstanding resolution greatly reduces the interference of arsenic and iron to lead and nickel. Its extremely low detection limit perfectly fits to heavy metals detection for environmental protection.



### Application Cases:

**1. Heavy metals detection in soil**  
Simply trigger the instrument, and you will know the trace metal elements in soil.

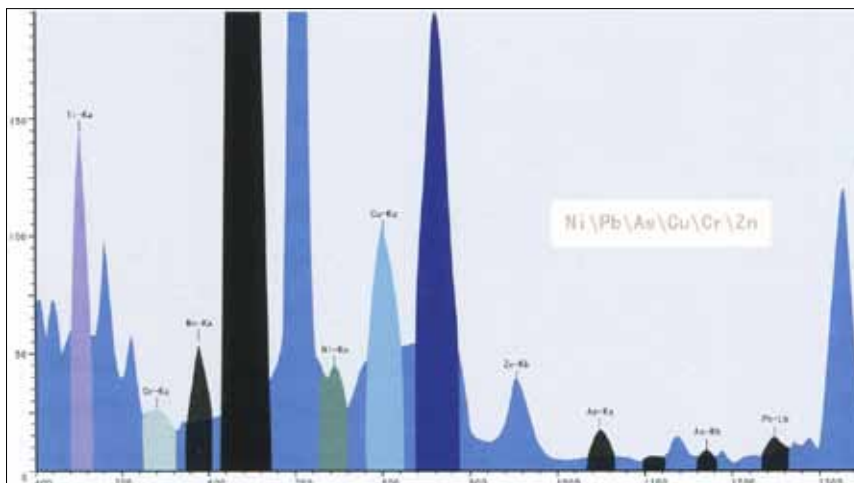
**2. Emergency treatment after heavy metal pollution**

Can quickly on-site trace the pollution and circle the polluted boundary.

**3. Screening of heavy metals polluted samples in large amounts**

The fourth generational handheld EDX-POCKET-IX can circle the key pollution areas in very short time, for key management.

Can rapidly distinguish the polluted areas and non-polluted areas .It improves the screening and productive rate integrally, & greatly reduces the cost of chemical examination and transportation.



The figure of sample testing for 30 seconds

### Analytical Precision: Measuring precision of main elements in GBW07425 testing for 30 seconds.

Sample	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	As	Se	Sb	Hg	Pb	Cd
07425_1	3811	73	52	566	2.95	10	26	25	63	6	0	1	0	26	0
07425_2	4056	72	54	541	2.95	9	28	18	72	5	0	0	0	28	0
07425_3	3724	68	45	555	2.92	11	28	25	69	8	0	1	0	20	0
07425_4	3980	51	65	602	2.94	12	29	27	70	7	0	0	0	26	0
07425_5	4036	62	51	580	2.95	10	28	29	75	5	0	0	0	27	0
07425_6	4044	75	55	564	2.95	14	25	16	64	5	0	0	0	25	0
07425_7	3794	63	58	575	2.97	14	30	26	70	5	0	0	0	24	0
<b>Average value</b>	3939	65	55	570	3.00	12	28	24	70	6	0	0	0	25	0
<b>Standard deviation</b>	144	9	7	21	0	2	2	5	4	1	0	0	0	3	0
<b>RSD/%</b>	3.64	13.14	12.28	3.72	0.51	17.71	5.98	22.32	5.19	22.79	0.00	244.95	0.00	11.31	0.00

### Performance index:

Models	EDX-Pocket-III/V/VII/IX
<b>Measuring range</b>	Mg to U
<b>Processor and RAM</b>	CUP: 667MHz RAM:256M Maximum expanded storage: 32G Standard configuration: 2G , for storage of large amounts of data
<b>Analytical Range</b>	ppm-99.99%
<b>Testing time</b>	3-30 seconds
<b>GPS, WIFI</b>	Built-in GPS & WIFI system
<b>Battery</b>	Chargeable lithium battery, with capacity of 7800mAh, continuously providing 8 working hours; Equip with wide voltage (110V-220V) general adapter
<b>Testing object</b>	Solid, liquid, powder
<b>Detector</b>	25mm <sup>2</sup> ,SDD
<b>Detector resolution</b>	Minimum resolution: 139eV
<b>Excitation source</b>	Target: Ag High voltage: 5-40kv Tube current: 1-100 μA
<b>Collimator and filter</b>	Collimator kinds: 2 (4.0mm & 2.0mm dia.) Filter types: 6 Automatic switch: YES
<b>Video system</b>	CMOS HD camera
<b>Screen</b>	Semi-transmission & semi-reflection LCD touch screen, resolution 640x480
<b>Detection limit</b>	Detection limit: ppm level
<b>Safety</b>	Self-contained password administration
<b>Testing window</b>	Ø12mm
<b>Gas charging system</b>	Optional Helium charging system
<b>Operational environment</b>	Humidity ~90%
	Temperature: -20°C~+50°C
<b>Size</b>	234x306x82mm(LxHxW)
<b>Weight</b>	Net weight:1.6kg Battery: 0.3kg



## EDX-POCKET4-7, Handheld Mineral Analyzer

The new generational EDX-POCKET-VII Series are designed according to the applications of on-site X-ray analysis in the wild, featuring small and light body, which can be held in hands by common people when measuring. It is super small, super light, super beautiful, super safe, super convenient, super long standby time, super waterproof, super precise and super fast. Digital multi-channel technology make the instrument have better detection limit, better stability, and wider application fields.

This Series of products has passed strict testing and inspection, and all index are accorded with the related technological requirements, reaching the international advanced level.

### Performance Advantage

#### Perfect performance as desktop

Introducing three core technology of small power window integrated miniature X-ray tube, large dimension beryllium window electric-cooling SDD detector (the best detector in the world), and miniature digital signal multi-channel processor, greatly reduce the testing time and test deviation, and improve the detection precision, which make it have the similar performance as the desktop.

#### Small body, easy to carry and operate

Small body. Easy to carry. Convenient for wild work. Can operate on-site and in-situ analysis at anytime or anywhere.

#### Nondestructive detection

No destruction to samples.

#### Fast detection

Instrument not only can operate fast detection with handheld type within 1-2 seconds, but also can operate longtime precise detection with desktop type, having the similar precision as the laboratory detection after 10 seconds.

#### Newly added light elements detection function

Compared to handheld X-ray fluorescence analyzer of the third generation ,it is added the gas charging system, which can charge helium at ordinary pressure .Thus it can detect the elements from Mg, greatly expanded the detecting range of elements, satisfying the requirements of customers according to light elements detection.

#### Direct testing

It can detect the sample directly, no need of samples. It can analyze various kinds of samples, including electronic products, alloy samples, geological and mining, soil, rock, residues, small solid particles, liquid sediments etc.

#### HD camera, more accurate testing

Built-in HD camera, can observe the testing position at any time, which is very important of mineral sample testing.

#### Easy for calibration of deviation

Multi-testing modes installation & free adding of infinite modes, coordinating with automatic testing mode matching functions, it achieves the easy test for one key. Built-in intensify calibration methods, it can calibrate the deviation caused by different geometry shapes & none homogeneous structure density.

#### Professional software, easy to operate

RoHS elements analyzer, alloy analyzer, mineral analyzer, & heavy metals in soil analyzer all are installed with professional software. Brand new software interface and core, combined FP with EC, it has wider application fields.

#### The collimator filter, improving 3 times of efficiency

On the basis of the combination of collimator and filter, increase them from 4 groups to 12 groups, increasing 3 times.

#### Faster data transmission

Embedded Window CE system, HD touch screen (resolution 640x480), digital multi-channel technology, and SPI data transmission, effectively improve the data transmission ability and counting ability, mastering testing data in every environment.

### Radiation protection, care for health

Triple safety protection function, automatic sensation, automatically shut-down of X light pipe within 2 seconds with no sample in testing; The radiation level is far lower than the international safety standard when working, with no radiation leakage; accompanied with test safety cover.

### Strong power, convenient to charge

Lithium battery, with maximum capacity of 7800mAH, can continuously work for 8 hours, whose endurance are 2 times longer compared to last three generations .And equip with wide voltage ac charger or vehicular charger ,which ensure the test at any place or any time.

### Warning instructions prevent for mistaken operation

Equipped with warning instruction system, green light flashes when the power is on and the yellow light flashed when testing, which prevent for mistaken operation.

### Multiple protection and durable

The instrument has waterproof and dust proof function and can continuously work under high temp. and humidity. Its protection boxes are manufactured with high strength military material, which enjoy with well moisture proof, shockproof, and pressure resistant functions.

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## Performance index:

Index	Description
<b>model</b>	The 4 th generation EDX analyzer-EDX-POCKET Series
<b>Analysis method</b>	Energy dispersive X-ray fluorescence analysis method
<b>Measuring range of elements</b>	Mg to U
<b>Simultaneously detect elements</b>	Simultaneously detect tens of elements
<b>Processor and RAM</b>	CUP: 667MHz, RAM:256M , Maximum expanded storage: 32G, Standard configuration: 2G , can store large amounts of data.
<b>Content range</b>	ppm~99.99%
<b>Testing time</b>	3-30 seconds
<b>GPS, WIFI</b>	Built-in system
<b>Battery time</b>	Lithium battery, which can be charged, with maximum capacity of 7800mAH, can continuously work for 8 hours; Equipped with wide voltage (110V-220V) general adapter, can work under alternating current
<b>Testing object</b>	Solid, liquid, powder
<b>Detector</b>	25mm <sup>2</sup> 0.3mil, SDD detector
<b>Detector resolution</b>	Lowest resolution can be 139eV
<b>Excitation source</b>	40KV/100uA-Ag anode window miniature X light tube and high voltage source
<b>Collimator and filter</b>	Collimator of 4.0 or 2.0 diameter, automatic switch of 6 types filter groups. 12 kinds of groups, world's most compound mode, can satisfy various kinds of samples testing
<b>Video system</b>	HD camera
<b>Screen</b>	TFT-LCD touch screen, resolution 640x480
<b>Detection limit</b>	Lowest detection limit accounts to ppm level
<b>Testing window</b>	12mm
<b>Safety</b>	Self-contained password manager mode
<b>Gas charging system</b>	Helium charging at ordinary pressure system
<b>Data transmission</b>	Digital multi-channel technology, SPI data transmission, quick analysis, high counting rate, waterproof miniature USB, which can be connected to desktop computer
<b>Humidity</b>	≤90%
<b>Temperature</b>	-20°C ~ +50°C
<b>Size</b>	234×306×82mm (L×H×W)
<b>Weight</b>	1.9Kg (with battery), 1.6Kg (without battery)

Mineral exploration industry is at the stage of low successful investing rate, upmost risks, & uncertainly profit returns, which brings high risks to investment. With the changes of China's mineral resources detection and mining work strategy from denotative development in the past to connotative development, the government begins to attach importance on effective investment of mineral exploration, promoting the diversification of investment, and reduces the financial investment while encouraging commercial mineral exploration and development.

The framework of China's commercial mineral resources exploration industry has been formed primarily, and the mining right system has been improved gradually .The market is forming and the commercial mineral exploration activities are beginning, which greatly strengthen the exploration and investigation on

mineral industry. However, to these mineral companies, unlike the national geology exploration bureau, the tools for exploration are not that complete, which restrict the development of these companies if chemical titration method is still used for sample testing, which are with low efficiency and many errors because of human operating.

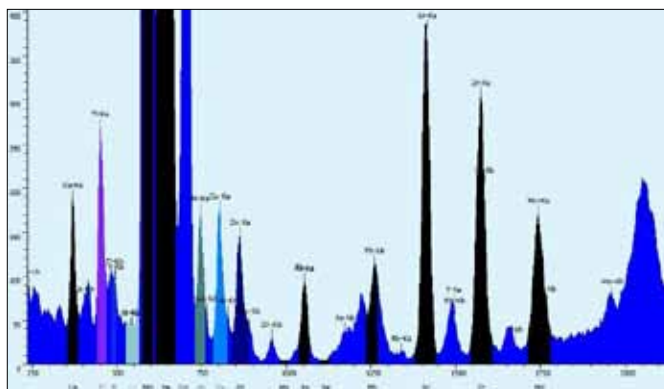
However, the various analyzers produced by MRC can help the mineral exploration for these companies, improving efficiency, precision, and reducing testing time, which greatly promote the development of mineral exploration.

EDX-POCKET-VII is applied for mineral exploration, in situ testing analysis, & soil content analysis. With the features of small, light, quick analysis, high precision and handheld, it has been widely applied for element sample testing and analysis of various ores and slag. Samples include all natural ores, slag, rocks, soil, slurry from sulfur to uranium, with forms of solid, liquid, and powder.



- Quick category of ore samples.  
Auto multi-element qualitative and quantitative analysis. Various ore samples choosing and free adding of infinite samples
- Built-in intensified calibration methods, can calibrate the deviation caused by different geometric states and uneven structure density.
- With GPS function, applied in geological exploration and mineral in-situ testing, it can record the data into GPS. In the wild, it can search the satellite signal at any time, recording the longitude, latitude, altitude, and satellite number when testing, and save these data accompanied with the test report.
- It can quickly test a big range of mining area, effectively detect the land belt mode, and survey and map the distribution of ores and mines, doing help for mining rich mineral area in primary.
- Test raw ore, concentrate, and tails when washing the ores.
- Determination of the raw ores & concentrates when purchasing
- Determination of light elements, such as Mg, Al, Si, P, S etc
- Equipped with HD camera, can directly visual requested detection of mineral vein and mineralized points.

- **Geological soil detect**  
Simply trigger the instrument, knowing the trace metal element content.
- **Application of finding ores in the wide**  
Can quickly on-spot follow the abnormalities of mineralization and circle the boundary of ore body. According to the low grade industrial requirements, it can simply get the grade conclusion of boundary. It also can scan and analyze the rock core samples.
- **Mine project analysis**  
The fourth generational handheld Genius 7000 can circle the core mineral vein in very short time for key mining and can quickly tell the grades of ores, sub prime ores, and non-ores .It also can improve the productive rate of the mine and greatly reduce the expenses of chemical examination & transportation.



### Analytical Precision:

Measuring Precision of the Main Elements in International Polymetallic Nodule Sample Testing for 30 Seconds.

Sample	Ti	V	Mn	Fe	Co	Ni	Cu
07249-1	1.027	0.055	20.85	18.75	0.352	0.347	0.267
07249-2	1.052	0.053	20.85	18.76	0.351	0.350	0.249
07249-3	1.066	0.055	20.89	18.72	0.347	0.354	0.265
07249-4	1.024	0.054	20.89	18.74	0.347	0.337	0.280
07249-5	1.035	0.058	20.85	18.71	0.359	0.346	0.261
07249-6	1.032	0.053	20.86	18.76	0.350	0.344	0.273
07249-7	1.056	0.057	20.85	18.70	0.353	0.353	0.275
<b>Positive Value</b>	1.043	0.059	20.92	18.71	0.350	0.360	0.280
<b>Average Value</b>	1.042	0.055	20.862	18.734	0.351	0.347	0.267
<b>Standard Deviation</b>	0.0161	0.0018	0.0195	0.0244	0.0039	0.0059	0.0104
<b>RSD/%</b>	1.55	3.35	0.09	0.13	1.12	1.71	3.88

Sample	Zn	As	Pb	Ca	Sr	Zr	Mo
07249-1	0.056	0.018	0.097	2.020	0.122	0.064	0.037
07249-2	0.056	0.018	0.096	2.063	0.122	0.064	0.037
07249-3	0.055	0.018	0.097	2.050	0.123	0.064	0.037
07249-4	0.054	0.018	0.100	2.074	0.121	0.065	0.038
07249-5	0.055	0.018	0.098	2.040	0.120	0.063	0.037
07249-6	0.055	0.018	0.096	2.062	0.122	0.064	0.037
07249-7	0.056	0.017	0.083	2.072	0.122	0.063	0.037
<b>Positive Value</b>	0.057	0.018	0.095	2.010	0.120	0.065	0.037
<b>Average Value</b>	0.055	0.018	0.095	2.054	0.122	0.064	0.037
<b>Standard Deviation</b>	0.0007	0.0003	0.0058	0.0193	0.0010	0.0005	0.0005
<b>RSD/%</b>	1.29	1.89	6.05	0.94	0.80	0.79	1.45