

TrueX Handheld XRF Analyzer



TrueX GOLD/TrueX GOLD+



TrueX 800/TrueX 860



TrueX 700/TrueX 760



TrueX 900/TrueX 960



Manufacturer: CDOCAST MACHINERY CO LTD

Add: 1/F, 14 Building, Minpengcheng Industrial Zone, Danping Community, Nanwan Street, Longgang District, Shenzhen

Tel.: 0086-151-6876 5707

Fax: 0086-577-64201-343

Email: sales@cdocast.com

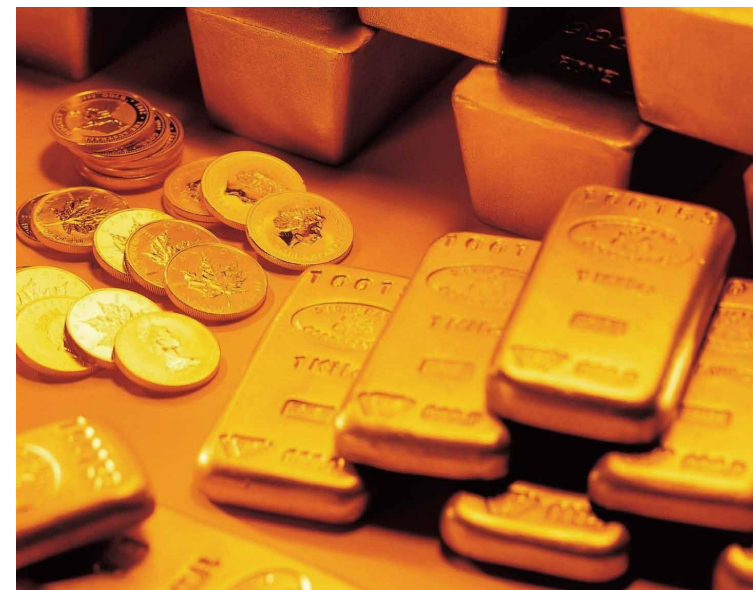
Website: www.cdocast.com



Do high-performance X-ray fluorescence spectrometer leader Quality patented technology of casting TrueX

Technical parameters and specifications

Weight	1.6Kg (with battery) .
Dimensions	254 x 79 x 280 mm (L x W x H) .
Excitation source	Up to 50KV/200μA. tube pressure and tube flow can be adjusted freely, Target Ag (standard), Au(optional), W(optional), Rh(optional).
Detector	BOOST Si-PIN detector.
Range of detection	All elements between Mg and U.
Display system	Industrial resistive touch screen with screen size of 4.3".
	Professional operating system and software.
	Multiple languages including English and Chinese. And it automatically adjusts display brightness according to the environment brightness.
Data processing	32GB memory.
	USB, Bluetooth, wifi can connect the device to the Internet, repair and setup can be done remotely.
	Data can be exported as EXCEL or PDF. Users can customize the reports by adding their company logos, addresses, test results, spectrum and others (such as product description, origin and batch number).
Heat dissipation	Equipped with a dedicated T-shaped radiator to dissipate the heat: no need to wait for cooling of detector.
	Built-in double beam technology can automatically sense whether there is a sample at the measurement window. This is also a safety and protection feature.
Safety	Waterproof, dust-proof and shockproof suitcase.
	Safety Band.
Power supply system	Intelligent battery with MSBUS bus, real-time monitoring battery, spare battery can directly check the remaining capacity of the battery, the battery complies with air dangerous goods transport regulations.
	A single battery can work for about 8 hours..



TrueX GOLD/GOLD+ HANDHELD XRF GOLD ANALYZER



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CDOCAST MACHINERY CO LTD

Company Profile

CDOCAST is a manufacturer of gold, silver, jewelry precious metals melting and casting machinery, X-ray fluorescence spectrometers with passion and dedication. Our products include custom induction melting furnaces for gold, silver and platinum casting. Jewelry casting machinery, high temperature heat treatment furnaces for jewelry manufacturing. Metal element analyzer for soil, ores, alloys, precious metals, etc. We are committed to providing the best precious metal furnaces, casting machines and analyzers. After more than 20 years of dedicated development, CDOCAST products have been installed in more than 120 countries around the world, providing more than 100 precious metal turnkey solutions.

CDOCAST has developed a business value that meeting customers' needs and providing them with advanced and cost-effective solutions is their first priority. As CDOCAST is expanding its market horizon across the globe, we believe the portable spectrometers will meet more customers' needs in even broader areas in the future.

Performance Features

1. Small, light and easy to carry.
2. High-speed processing chip, advanced algorithm and high-responsive software, resulting in even faster analysis.
3. High-performance X-ray Tube, Ultra-high Resolution Detector combined with Digital Multi-channel Processing Technology, yielding super-high detection resolution.
4. Industrial resistive touch screen, superior to capacitor screen in back-light and clearer against sunlight in the field. At the same time, people don't need to take off gloves when they are operating machine in some particular environment.
5. Intelligent battery management exerts a real-time monitoring of the residual capacity of battery and backup battery through MSBUS bus.
6. Automatic switch to standby mode when not used and recovery after the machine is picked up, which saves power and extends working time; moreover, TrueX has a gravity sensing system which shuts down instrument automatically when it accidentally falls down, another safety consideration; TrueX will also give out alarm when ambient temperature or humidity exceeds the scope of application.
7. On TrueX, users can customize the reports by adding their company logos, addresses, test results, spectrum and others (such as product description, origin of products and batch number).
8. TrueX is built with double beam technology which can automatically sense whether there is a sample at the measurement window. This is also a safety and protection feature. The brightness of the display of TrueX is automatically regulated according to environment brightness.
9. TrueX can be configured and maintained in a remote way via Internet.
10. TrueX's new algorithm optimizes the spectral resolution, so lower detection limits can be achieved, which are comparable with even large-scale lab instruments.
11. TrueX Ultra-short optical™ path design can significantly improve light element excitation effects, without the fall/fill condition.
12. TrueX has a built-in environmental sensing system covering conditions such as temperature, dust humidity and others.

Application fields

- Nondestructive, rapid and accurate analysis of Precious Metals
- Precious Metals Grade identification
- Precious Metals elements and contents analyze
- Pawn broking, jewelry industry, banking industry, jewelry testing center, mining industry, precious metal recycling, precious metal materials researching laboratory., etc.
- Precious metal. Such as gold, Karat gold, platinum, silver.
- Mixed metal or other alloy metal.
- Jewelry materials. Such as ring, necklace, bracelet, watchband, belt fastener, gold ingot, gold bar, statue, coin., etc.



Elements to be Analyzed and Test Modes

Test modes of TrueX and elements covered	
Analysis mode	Scope of elements in standard test mode can be extended if there is such a need.
TrueX Gold	can analyze Au,Ag,Pt,Ni,Cu,Zn,Fe,Co,Pb,Pd,Rh,Re,Ir
TrueX Gold+	can analyze Fe,Co,Ni,Cu,Zn,Ru,Rh,Pd,Ag,Cd,In,Ir,Pt,Au,Pb

Usage

- (1) karat value, percentage content for gold
 - (2) PT value, percentage content for platinum
 - (3) S value, percentage content for silver
 - (4) Percentage content for other alloy.
- Wide karat value for gold display from 9K to 24K and % percentage content.
 - Wide PT value for platinum display from PT600 to PT1000 and % percentage content.
 - Wide S value for silver display from S600 to S1000 and % percentage content.



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Quality patented technology of casting TrueX

Technical parameters and specifications

Weight	1.6Kg (with battery) .
Dimensions	254 x 79 x 280 mm (L x W x H) .
Excitation source	Up to 50KV/200μA, tube pressure and tube flow can be adjusted freely, Target Ag (standard), Au(optional), W(optional), Rh(optional).
Detector	TrueX 800 with BOOST Si-PIN detector TrueX 860 with SDD detector
Range of detection	All elements between Mg and U.
Display system	Industrial resistive touch screen with screen size of 4.3". Professional operating system and software. Multiple languages including English and Chinese. And it automatically adjusts display brightness according to the environment brightness.
Data processing	32GB memory. USB, Bluetooth, wifi can connect the device to the Internet, repair and setup can be done remotely. Data can be exported as EXCEL or PDF. Users can customize the reports by adding their company logos, addresses, test results, spectrum and others (such as product description, origin and batch number).
Heat dissipation	Equipped with a dedicated T-shaped radiator to dissipate the heat; no need to wait for cooling of detector.
Safety	Built-in double beam technology can automatically sense whether there is a sample at the measurement window. This is also a safety and protection feature. Waterproof, dust-proof and shockproof suitcase. Safety Band.
Power supply system	Intelligent battery with MSBUS bus, real-time monitoring battery, spare battery can directly check the remaining capacity of the battery, the battery complies with air dangerous goods transport regulations. A single battery can work for about 8 hours..



TrueX 800/860 HANDHELD XRF ALLOY ANALYZER



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Do high-performance X-ray fluorescence spectrometer leader

Quality patented technology of casting

Typical customers

- Daqing Oilfield Company, CNPC Jangsu Provincial Special Equipment Safety Inspection Institute Yangzhou Branch
- Hunan Hengyang Steel Pipe (Group) Corporation
- University of Science and Technology Beijing
- Connell Chemical Industry LLC
- China National Offshore Oil Corporation
- Jiuquan Iron@Steel Group
- Ningxia JinYuyuan Chemical Group Co.,Ltd.
- Guangzhou University
- Fushan Group





Application Features

Application fields

- Iron-based alloy series (stainless steel, chromium/molybdenum alloy steel, low alloy steel, tool steel, seamless steel)
- Nickel-based alloy series (nickel alloys, nickel/cobalt superalloys)
- Cobalt-based alloy series
- Titanium-based alloy series
- Copper-based alloy series (bronze, brass, copper-nickel alloy, etc.)
- Superalloy (Molybdenum Tungsten Alloy)
- Aluminum base alloy
- Other alloys



TrueX handheld alloy analyzer (XRF) is an important means for material reliability identification (PMI) in the production process of boilers, vessels, pipes, manufacturing and other high temperature and high pressure industries. Identify metal materials in the production process of key engineering industries in military and civilian countries such as iron and steel smelting, non-ferrous metals, aerospace, weapons manufacturing, submarines and ships. In the process of installation and construction of petrochemical refining, fine chemical, pharmaceutical, power station, aerospace and other projects, metal materials are identified to ensure equipment acceptance, material acceptance, and meet the specified requirements of the project. It is a powerful tool for metal identification in the scrap metal recycling industry.

Application fields

- Nondestructive, rapid and accurate analysis of alloy elements and alloy grade identification on the site
- Metal identification /scrap metal sorting
- QA/QC management in metal production, processing, casting, etc
- Medicine and biological medicine
- Identification of positive materials, oil refining and petrochemical industry
- Thermal power plant, hydroelectric power station, nuclear power plant
- Accurate element analysis of raw material and PMI identification so as to meet production needs and ensure security of equipment and materials used in the process.

Excellent Performance

TrueX shows element symbols in both English and Chinese. With high precision, high testing speed and comparable results to even that of laboratory equipment, TrueX displays alloy grade and elements percentage content (up to three decimals) and ppm content in an apparent way.

One-touch operation

TrueX test lasts only a few seconds and identification of alloy grades takes only 1 or 2 seconds. This facilitates operation by non-technical users.

Nondestructive testing (NDT)

TrueX test does not damage or have any adverse effect on the use of samples. No damage is foreseen in the entire test process.

Analysis software

Analysis software is a professional analysis software which enables the users to easily configure passwords, customize analysis reports attached with company LOGO and implement remote control of machine; users can edit alloy grade library, add their own grade number or define their own company's alloy brands; the software also allows automatic calibration of instrument and diagnosis of problems in a remote way; the software can be updated via Internet.

Scrap metal recycling and sorting

Scrap metal recycling, reuse, and on-site analysis and sorting. TrueX offers a rapid and reliable identification of the scrap metals when scrap metals are transacted between buyers and sellers. TrueX delivers quantitative element analysis of iron alloy, copper alloy, aluminum alloy, copper-iron alloy, lead-tin alloy, mixed alloys, etc., and rapid identification and sorting of these alloys on the site.

Application fields, safety and standards

TrueX is suitable for alloy material identification (PMI) for incoming inspection; material inventory management; re-inspection of construction materials in petrochemical construction, metal smelting, pressure vessel, power plant, petrochemical industry, fine chemical, pharmaceutical, aerospace and other industries to avoid serious safety accidents resulting from mixed or unqualified materials. TrueX is in compliance with ANTM standard, China National Standard (GB), UNS, electric industry standard (DL), API, JIS, GMP, TSG, Mechanical Industry standard (JB), etc.

Quality Control, Quality Assurance (QC/QA) and Error-proofing (PKKA - YOKE)

In metal processing and manufacturing industry, quality control and quality assurance (QC/QA) and error proofing (PKKA - YOKE) of materials (raw materials), semi-finished products and finished products is indispensable. Use of mixed or unqualified materials will bring losses to the company. This is true to companies ranging from small metal processing plants to large aircraft manufacturers.

Data Processing and Enterprise Resource Planning (ERP)

Data can be transferred via USB, WIFI and Bluetooth and stored in excel, pdf or other formats. Users can customize the reports by adding their company logos, addresses, test results, spectrum and others (such as product description, origin of goods and batch number); i-cloud data storage service is optional. Data can transport to Enterprise Resource Planning (ERP) system.



Performance Features



1. Small, light and easy to carry.
2. High-speed processing chip, advanced algorithms and efficient software, the analysis speed is faster.
3. The selection of imported high-performance X-ray emission tubes and ultra-high-resolution detectors, combined with digital multi-channel processing technology, enables the TrueX handheld X-ray fluorescence spectrometer to have ultra-high analytical accuracy.
4. Users can customize the creation of professional reports.
5. Built-in all-round environment sensing system. It senses changes in the surrounding environment in real time, and automatically adjusts parameters for accurate elemental analysis under extreme conditions such as high and low temperature, dust, darkness and humidity.
6. The built-in DoubleBeam™ technology automatically senses whether there is a sample in front of the instrument, improving the safety and protection level of rays.
7. It can be connected to the Internet for remote setting and maintenance.
8. The new net intensity fitting algorithm built in TrueX optimizes the spectral analysis process, enabling TrueX to have a very low detection limit comparable to large laboratory equipment.
9. The built-in Ultrashort™ optical path design of TrueX significantly improves the excitation effect of light elements Mg, Al, Si, S, and P without nitrogen filling.
10. Intelligent battery with MSBUS bus, real-time monitoring battery, backup battery can directly check the remaining capacity of the battery.
11. The industrial resistive touch screen has better backlight performance than the capacitive screen, and it is still clearly visible under strong light in the field, and at the same time avoids the danger of taking off gloves in special outdoor environments.



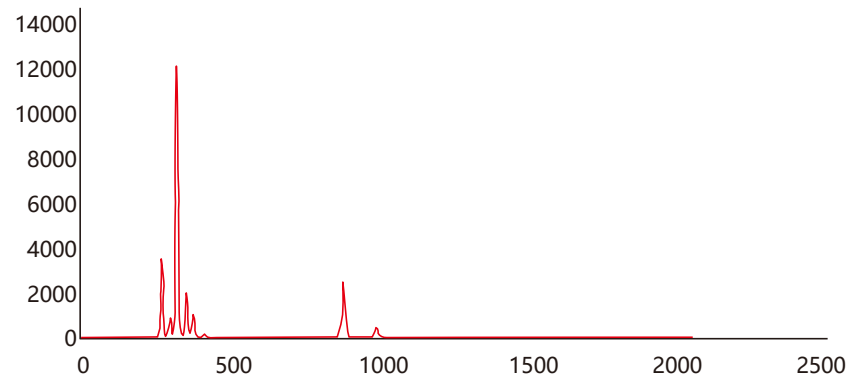
Elements to be Analyzed and Test Modes

Test modes of TrueX and elements covered	
Model	Scope of elements in standard test mode can be extended if there is such a need.
TrueX 800	can analyze Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Se, Zr, Nb, Mo, Rh, Pd, Ag, Cd, Sn, Sb, Hf, Ta, W, Re, Pb, and Bi, totaling 25 elements.
TrueX 860	can analyze Mg, Al, Si, P, S, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Se, Zr, Nb, Mo, Rh, Pd, Ag, Cd, Sn, Sb, Hf, Ta, W, Re, Pb, and Bi, totaling 30 elements.

316SS stainless steel standard sample block 30 seconds of the main elements of the test accuracy

Reading	Mode	V%	Cr%	Mn%	Fe%	Ni%	Cu%	Mo%
No1	ALLOYS	0.13	16.56	1.22	69.558	10.18	0.322	2.03
No2	ALLOYS	0.132	16.66	1.29	69.438	10.15	0.32	2.01
No3	ALLOYS	0.13	16.61	1.2	69.645	10.05	0.315	2.05
No4	ALLOYS	0.128	16.62	1.19	69.701	10.03	0.331	2
No5	ALLOYS	0.126	16.68	1.18	69.489	10.15	0.325	2.05
No6	ALLOYS	0.132	16.67	1.22	69.57	10.1	0.318	1.99
No7	ALLOYS	0.134	16.62	1.25	69.474	10.16	0.322	2.04
No8	ALLOYS	0.14	16.5	1.16	69.655	10.2	0.315	2.03
No9	ALLOYS	0.132	16.7	1.19	69.472	10.17	0.326	2.01
No10	ALLOYS	0.128	16.63	1.2	69.611	10.08	0.321	2.03
average value		0.131	16.625	1.210	69.561	10.127	0.322	2.024
standard value		0.128	16.68	1.22	69.5	10.11	0.32	2.03
standard deviation		0.004	0.057	0.035	0.086	0.055	0.005	0.020
RSD/%		2.83	0.34	2.93	0.12	0.54	1.47	0.97

316SS test spectrum



Alloys	#110	30SEC	
316SS			0.019 Exact
Elem	%	+/-	SPEC
V	0.126	0.001	
Cr	16.68	0.102	[16.0-19.0]
Fe	69.49	0.202	[63.0-72.0]
Mn	1.18	0.081	[0.0-2.21]
Cu	0.325	0.002	[0.0-1.0]
Ni	10.15	0.121	[10.0-14.0]
Mo	2.05	0.075	[1.9-2.8]



XRF-TrueX radiation safety

Radiation Safety Guarantee

Low power (4W) X-ray tube, mini collimator reduce radiation quantity effectively.

X-ray tube radiation protection shield avoids X-ray escape.

The structure producing radiation is all in equipment interior, you don't need to align or calibrate X ray, then ensure not detect any measurable radiation in equipment operation process.

X ray indicator light alarms user the radiation production.

Independent safe circuit and DoubleBeam interlock tool can protect user safety effectively.

Conform to dosage limit requirement in <Radiation protection standards for X-ray diffraction and fluorescence analysis equipment> (GBZ115-2002).

Conform to valid annual dosage limit requirement for workers and public in<Ionizing Radiation Protection and Safety of Radiation Sources basic standards> (GB18871-2002).



Monitoring results

Point No.	Point Discription	Testing Results (μSv/h)					Average	Device State
		1	2	3	4	5		
1	5cm above the surface of the device	0.10	0.11	0.12	0.10	0.09	0.10	Turn On
2	5cm the surface left of the device	0.10	0.12	0.10	0.11	0.12	0.11	Turn On
3	5cm the surface right of the device	0.10	0.12	0.10	0.11	0.13	0.11	Turn On
4	5cm below the surface of the device (holding place)	0.12	0.10	0.10	0.11	0.12	0.11	Turn On
5	5cm back the surface of the device	0.09	0.08	0.10	0.12	0.08	0.09	Turn On
6	Operation place	0.10	0.09	0.11	0.08	0.09	0.09	Turn On
7	Public Distance Zone	0.09	0.05	0.07	0.08	0.06	0.07	Turn Off

Note: the testing result doesn't deduct radiation background value.



Technical parameters and specifications

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Dimensions	254 x 79 x 280 mm (L x W x H) .
Excitation source	Up to 50KV/200μA, tube pressure and tube flow can be adjusted freely, Target Ag (standard), Au(optional), W(optional), Rh(optional).
Detector	BOOST Si-PIN detector for TrueX 900. SDD detector for TrueX 960.
Range of detection	All elements between Mg and U.
Display system	Industrial resistive touch screen with screen size of 4.3". Professional operating system and software. Multiple languages including English and Chinese. And it automatically adjusts display brightness according to the environment brightness.
Data processing	32GB memory. USB, Bluetooth, wifi can connect the device to the Internet, repair and setup can be done remotely. Data can be exported as EXCEL or PDF. Users can customize the reports by adding their company logos, addresses, test results, spectrum and others (such as product description, origin and batch number).
Heat dissipation	Equipped with a dedicated T-shaped radiator to dissipate the heat; no need to wait for cooling of detector.
Safety	Built-in double beam technology can automatically sense whether there is a sample at the measurement window. This is also a safety and protection feature. Waterproof, dust-proof and shockproof suitcase. LANScientific Safety Band.
Power supply system	Intelligent battery with MSBUS bus, real-time monitoring battery, spare battery can directly check the remaining capacity of the battery, the battery complies with air dangerous goods transport regulations. A single battery can work for about 8 hours..



TrueX 900/960
HANDHELD MINERAL ANALYZER



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Clients

- Daqing Oilfield Company, CNPC
- Jangsu Provincial Special Equipment Safety Inspection Institute Yangzhou Branch
- Hunan Hengyang Steel Pipe (Group) Corporation
- University of Science and Technology Beijing
- Connell Chemical Industry LLC
- China National Offshore Oil Corporation
- Jiuquan Iron@Steel Group
- Ningxia JinYuyuan Chemical Group Co.,Ltd.
- Guangzhou University Fushan Group



中国核工业地质局



华菱集团
VALIN GROUP



中国海油
CNOOC



北京科技大学
University of Science and Technology Beijing



康乃尔
Connell Chemical



傅山集团



酒钢集团



宁夏金昱元化工集团有限公司
Ningxia Jinyu Yuan Chemical Group Co., Ltd.



江苏省特种设备安全监督检验研究院扬州分院
JIANGSU PROVINCE SPECIAL EQUIPMENT SAFETY SUPERVISION INSPECTION INSTITUTE-BRANCH OF YANGZHOU





Application and Usage

- Iron ore (hematite, titanium, iron, etc.)
- Copper (chalcopyrite, cuprite, malachite etc.)
- Chromium (chromium spinel, chromite, chrombismite etc.)
- Molybdenum (copper molybdenum, molybdenum, tungsten and molybdenum ore etc.)
- Tungsten (tin tungsten scheelite, wolframite, etc.)
- Tantalum ore (tantallite columbite, pyrochlore, etc.)
- Lead-zinc ore (galena, sphalerite, cerussite etc.)
- nickel laterite ore, copper nickel sulphide etc.
- Gold in ore or alluvial gold detection



Exact grade evaluation for high grade and beneficiated ores, then provide value foundation for ore trade, processing and recycling.

The relict ore element analysis in slag and tails to rejudge the value.

Conduct QC in ore mining, boring, grinding, concentration and smelting, then confirm grade, make analysis to filter weld pool, storage pool and steel tank liquor.

Quick census for superlarge range mine area to determine zone mode, draw mine map and timely prospect effectively.

Site quickly trace mineralized abnormality, seek hotspot zone and delineate ore boarder effectively.

Accurate analysis for millhead, concentrated ore and slag to build high efficiency mining and gathering process.

Through site analysis, mine field and grade control on material delivery, ore concentrate and slags, you can confirm or track the procedure validity of refining or concentration.

By time analysis several samples on the spot, you can guide exploration plan then manage excavation and explosion effectively.

Determine the geological composition of soil, sediment or drilling sample locally to control prospecting cost.

Apply with GIS/GPS to make detailed decision then can save much time and labor cost.

Multi-elements site fast analysis can be used in procedures in census and sift, then track mineral content abnormality and expand survey range. It can decrease samples amount sending to lab then save transportation and analysis cost.

Judge ore vein trend and mineral boundary then manage and control mining to detect mineral grade at any time.

Analyze rock core and other drilling samples quickly, then establish mine 3D graph to analyze composition, which can enhance site decision efficiency largely.

Analyze and test mine surrounding environment, slags, dust and soil pollution, then evaluate mine mountain condition renovation effect.



Performance Features



- 1.Small, light and easy to carry.
- 2.High-speed processing chip, advanced algorithm and high-responsivesoftware, resulting in even faster analysis.
- 3.High-performance X-ray Tube, Ultra-high Resolution Detector combined with Digital Multi-channel Processing Technology, yielding super-high detection resolution.
- 4.Industrial resistive touch screen, superior to capacito screen in back-light and clearer against sunlight in the field. At the same time, people don't need to take off gloves when they are operating machine in some particular environment.
- 5.Intelligent battery management exerts a real-time monitoring of the residual capacity of battery and backup battery through MSBUS bus.
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Elements to be Analyzed and Test Modes

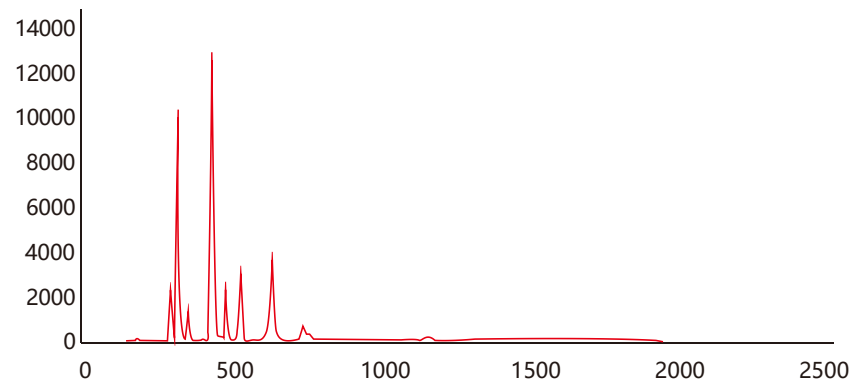
Analysis patterns and elements of TrueX	
Analysis mode	Scope of elements in standard test mode can be extended if there is such a need.
TrueX 900	Standard configuration mode analysis range, such as special elements, can be added K,Ca,Ti,V,Cr,Mn,Fe,Co,Ni,Cu,Zn,As,Se,Rb,Sr,Y,Zr,Nb,Mo,Ag,Cd,Sn,Sb,Hf,Ta,W,Au,Hg,Pb,Bi.
TrueX 960	Standard configuration mode analysis range, such as special elements, can be added Mg,Al,Si,P,S,Cl,K,Ca,Ti,V,Cr,Mn,Fe,Co,Ni,Cu,Zn,As,Se,Rb,Sr,Y,Zr,Nb,Mo,Ag,Cd,Sn,Sb,Hf,Ta,W,Au,Hg,Pb,Bi.

Test data of standard samples for 80 seconds

Serial number	Pattern	Fe2O3%	Mn%	Zn%	As%	Pb%
No1	Mining	20.340	5.060	13.220	0.022	4.095
No2	Mining	20.810	5.170	13.180	0.031	4.160
No3	Mining	20.850	5.110	13.210	0.009	4.206
No4	Mining	20.050	5.060	13.050	0.012	4.205
No5	Mining	20.060	5.080	12.980	0.031	3.950
No6	Mining	19.970	4.860	12.890	0.016	3.910
No7	Mining	20.650	4.800	12.990	0.029	4.006
No8	Mining	20.260	4.850	12.910	0.015	4.120
No9	Mining	20.310	4.910	12.990	0.027	4.090
No10	Mining	20.430	4.840	12.850	0.019	4.010
average value		20.373	4.974	13.027	0.021	4.075
standard value		20.440	4.960	13.120	0.021	4.060
standarddeviation		0.313	0.135	0.135	0.008	0.103
RSD/%		1.536	2.711	1.034	38.402	2.531

Note: This is the laboratory test data, different instruments slightly different.

Lead zinc ore test spectrum



Mineral	#110	30SEC
Elem	%	+/-
Fe	14.24	0.209
Fe2O3	20.34	0.299
Mn	5.06	0.022
Cu	0.071	0.011
Zn	13.22	0.075
As	0.022	0.011
Pb	4.095	0.013
Cd	0.055	0.016
Ca	1.055	0.091
Ti	0.161	0.014



XRF-TrueX radiation safety

Radiation Safety Guarantee

Low power (4W) X-ray tube, mini collimator reduce radiation quantity effectively;

X-ray tube radiation protection shield avoids X-ray escape;

The structure producing radiation is all in equipment interior, you don't need to align or calibrate X ray, then ensure not detect any measurable radiation in equipment operation process;

X ray indicator light alarms user the radiation productiton;

Independent safe circuit and DoubleBeam interlock tool can protect user safety effectively;

Conform to dosage limit requirement in <Radiation protection standards for X-ray diffraction and fluorescence analysis equipment> (GBZ115-2002);

Conform to valid annual dosage limit requirement for workers and public in<Ionizing Radiation Protection and Safety of Radiation Sources basic standards> (GB18871-2002);



Monitoring results

Point No.	Point Discription	Testing Results (μSv/h)					Average	Device State
		1	2	3	4	5		
1	5cm above the surface of the device	0.10	0.11	0.12	0.10	0.09	0.10	Turn On
2	5cm the surface left of the device	0.10	0.12	0.10	0.11	0.12	0.11	Turn On
3	5cm the surface right of the device	0.10	0.12	0.10	0.11	0.13	0.11	Turn On
4	5cm below the surface of the device(holding place)	0.12	0.10	0.10	0.11	0.12	0.11	Turn On
5	5cm back the surface of the device	0.09	0.08	0.10	0.12	0.08	0.09	Turn On
6	Operation place	0.10	0.09	0.11	0.08	0.09	0.09	Turn On
7	Public Distance Zone	0.09	0.05	0.07	0.08	0.06	0.07	Turn Off

Note:the testing result doesn' t deduct radiation background value.

