



**Alloy Application**

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



**Mineral Application**

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.



**Soil Application**

Analyze K, Ca, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As, Se, Rb, Sr, Y, Zr, Nb, Mo, Ag, Cd, Sn, Sb, W, Re, Pd, Au, Hg, Pb, Bi, Cs, Ba, Th, U, totaling 34 elements.

Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.



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### 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. Indicator lights flash on both sides for safety purposes during measurement, i.e., the built-in double beam technology will automatically sense whether there is a sample at the measurement window.
5. 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.
6. TrueX utilizes anti-slip, abrasion resistance and streamlined design, which is light and easy to carry. It also integrates the new high speed digital multi-channel technology, the new library grade base identification system and the super-FP algorithm. These features allow it to measure elements faster, with higher accuracy and greater repeatability.
7. Intelligent battery management exerts a real-time monitoring of the residual capacity of battery and backup battery through MSBUS bus.
8. 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.
9. TrueX adjusts air pressure factor automatically based on altitude it has detected. This function increases excitation effect of light elements by 40% and that of rare earth elements by 30%.
10. TrueX is supportive to battery hot plug, hence battery can be replaced without powering off the machine.
11. On TrueX, users can customize the reports by

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adding their company logos, addresses, test results, spectrum and others (such as product description, origin of products and batch number). 12. 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. 13. TrueX can be configured and maintained in a remote way via Internet. 14. TrueX can build a three dimensional element content distribution graph allowing for a fast estimate of mineral reserves or the extent of geological disaster with the built-in GPS for latitude and longitude reading combined with a 3rd party GIS analysis software. 15. TrueX's new algorithm optimizes the spectral resolution, so lower detection limits can be achieved, which are comparable with even large-scale lab instruments. 16. TrueX Ultra-short optical™ path design can significantly improve light element excitation effects, without the fall/fill condition. 17. TrueX has a built-in environmental sensing system covering conditions such as temperature, dust humidity and others.

### Application Features

1. 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. 2. 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. 3. 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. 4. Zinscien analysis software Zinscien 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. 5. 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. 6. 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. 7. 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

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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. 8 . 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.

### 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.

### Instrument specification

The ARM architecture Cortex-A8 1 GHZ System Processor: The Android 4.2 operating system/80MHZ ADC digital pulse processor/4096 MCA channel , 32GB memory Display: Industrial resistive touch screen with screen size of 4.3" Data storage: Built-in 32gb memory, 300,000 spectral data and spectrum can be stored Operating Temperature: -20°C~+50°C Operating Humidity: ≤90%Limit of Library of extensible and customizable alloys Ability to make measurements on pipes, flat surfaces, surface integrals and welds Method of analysis: the x-ray energy dispersive method for analysis of fluorescence Simultaneously detect elements: simultaneously detect dozens of elements Processor and RAM: CPU: 1GB RAM: 1GB The standard configuration: 32G Range content: ppm ~ 99.99% 15 seconds reading time GPS, WIFI: integrated into the system Battery: lithium battery, which can be loaded with a maximum capacity of our 6800Ah can operate continuously for 8 hours; Equipped with high voltage (110V-220V) adapter, can work under current alternative Sensor resolution: solid, liquid, powder Sensor resolution: low resolution can be 139eV Excitation source: 40KV / 100mA-Ag window miniature tube anode X of light and high voltage source Collimator and filter: sights of 4.0 or 2.0 of diameter, automatic switch of 8 filter. 12 kinds of groups, plus mode consisting of world, can satisfy different types of tests of samples Display: touchscreen TFT - LCD, resolution of 640 \* 480. Protection against water, dust and shock Test window: 12mm. Charging system gas: Helium charging system of ordinary pressure. Security: standalone password manager mode. data transmission: digital multi-channel technology, the transmission of data SPI, a quick scan, count rate, waterproof miniature USB, which can be connected to the desktop computer.

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Elements analyzed	Scope of elements in standard test mode can be extended if there is such a need.
TrueX 800	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	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.

Technical parameters and specifications	
Model	TrueX 800 <span style="float: right;">TrueX 860</span>
Weight	1.6Kg (with battery).
Dimensions	254 x 79 x 280 mm (L x W x H) .
Excitation source	50KV/200µA maximum pipe pressure pipe flow can be adjusted freely. Ag target (standard). Au, W, Rh target (optional).
Detector	BOOST Si-PIN detector <span style="float: right;">SDD detector</span>
Range of detection	All elements between Mg and U.
Display system	Industrial resistive touch screen with screen size of 4.3". Proprietary operating system software and sound waves. Multiple languages including English and Chinese. And it automatically adjusts display brightness according to the environment brightness.
Data processing	32GB memory USB, bluetooth, WIFI, or linked to the Internet; instrument can be configured and repaired remotely. Data can be exported via 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 time again.
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 Drawell Safety Band;

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Power supply system Intelligent battery management through MSBUS bus, real-time monitoring of the residual capacity of battery and backup battery. The battery complies with air transport regulations of dangerous goods. A single battery can last 8 hours.

**Real-test Values of 316 samples**

Reading	Mode	Cr%	Mn%	Mo%	Ni%
No1	ALLOYS	16.56	1.22	2.03	10.18
No2	ALLOYS	16.66	1.29	2.01	10.15
No3	ALLOYS	16.61	1.20	2.05	10.05

No4	ALLOYS	16.62	1.19	2.00	10.03
No5	ALLOYS	16.68	1.18	2.05	10.15
No6	ALLOYS	16.67	1.22	1.99	10.10
No7	ALLOYS	16.62	1.25	2.04	10.16
No8	ALLOYS	16.5	1.16	2.03	10.20
No9	ALLOYS	16.7	1.19	2.01	10.17
No10	ALLOYS	16.63	1.20	2.03	10.08
Standard value		16.68	1.22	2.03	10.11

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