Mikrosize®

iSpectro-T5100

Portable XRF Spectrum Analyzer

Video



Contact us

Mikrosize Precision Instrument Co.,Ltd
A-4035 RuiFeng Business Expo, Wuhu City, China , 241000.
Web:www.mikrosize.com
Email: mikrosize@mikrosize.com

Feature and Application

Product Feature

- One-button startup and testing, reducing human error
- Ultra-high precision
- Integrated power supply with an extra-large-capacity battery
- Service life of over 720,000 uses
- Ergonomic design
- Automatic shutdown when idle/standby to reduce component wear
- 5.5-inch high-resolution capacitive touchscreen with automatic light sensing for clear visibility
- Portability and high efficiency
- IP65 water-resistant rating
- One-third of the housing is made of lightweight aluminum alloy, providing excellent radiation shielding and heat dissipation
- Latest FP algorithm for fast testing and grade identification within 2–3 seconds
- Accurate and rapid result feedback
- Non-destructive testing
- Versatility for a wide range of needs





Product Application

- Metal recycling and unknown materials: on-site testing and rapid sorting; alloy grade and composition can be measured in 1–3 seconds, with accuracy up to 0.01%
- Stainless steel and mold steel grade identification:
  *Rapid identification of stainless steel grades, including 304 food-grade stainless steel
  *Identification of mold steel grades, displaying important metal elements and their contents
  *Aluminum alloy grade identification and composition testing, including analysis of common
- 1–7 series aluminum alloys
- Rare earth element detection
- Mining exploration: rapid on-site multi-element analysis, tracing mineralization anomalies, expanding exploration coverage, and reducing the transportation and analysis costs of samples sent to the laboratory
- Identification of battery cathode materials: avoiding the use of non-compliant or out-of-spec batteries
- Testing of ternary lithium battery cathode materials: NCM523, NCM622, NCM811, etc
- Petrochemical and energy
- Precious and special alloy testing
- Rapid detection of heavy metal content in soil: rapid on-site analysis of soil pollution risks for “agricultural land and construction land”; accurate detection of eight major heavy metal elements in soil, compliant with the control standards of the “Soil Ten Measures” (Action
- Plan for Soil Pollution Prevention and Control)

Product Detail



1. Detection Indicator Light **2. Power Button** **3. Protective Cover**

●The detection indicator light will flash once testing starts and will continue flashing until testing is completed.



1. Test Window **2. Test Trigger** **3. Battery Protective Cover**

●X-rays are emitted through the test window. Never point the test window at any person, especially the eyes or head.

●The rubber protective cover provides shock absorption, better protecting the instrument and extending its service life.

Product Detail





1.Bottom Battery Compartment

●Removable high-capacity battery for easy replacement.

●To ensure accurate test results, make sure the battery level remains above 50% during use.



- Charging base (insert the battery; a red light indicates charging, and a green light indicates the battery is fully charged)

Software Interface



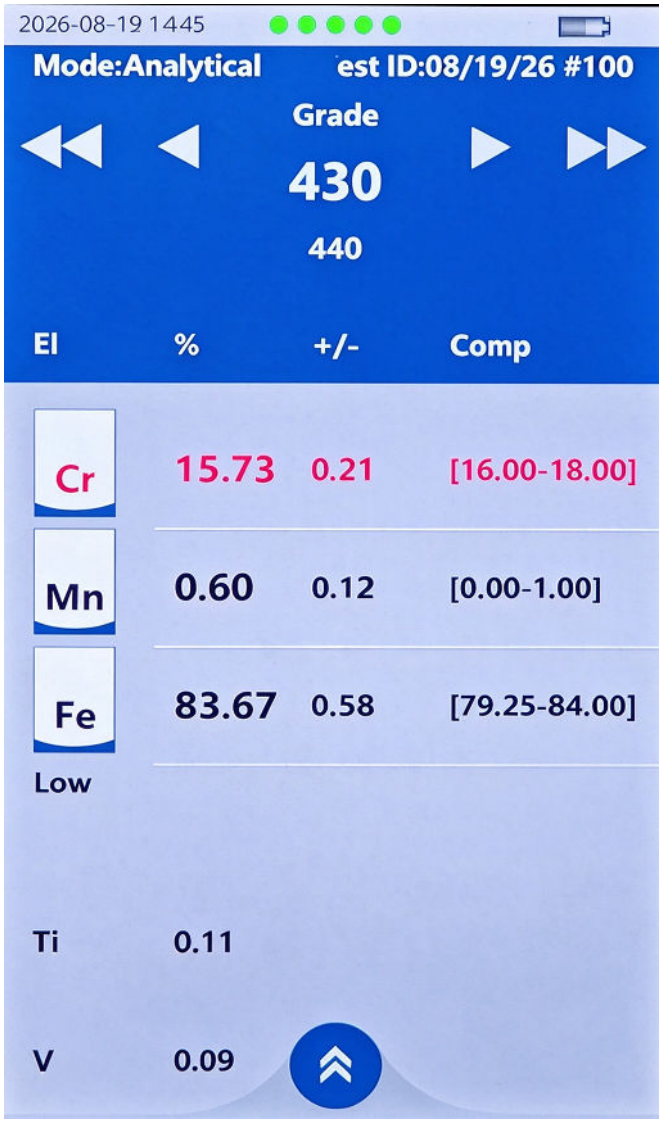
1.Test Run Button **2. Historical Data Review Button**

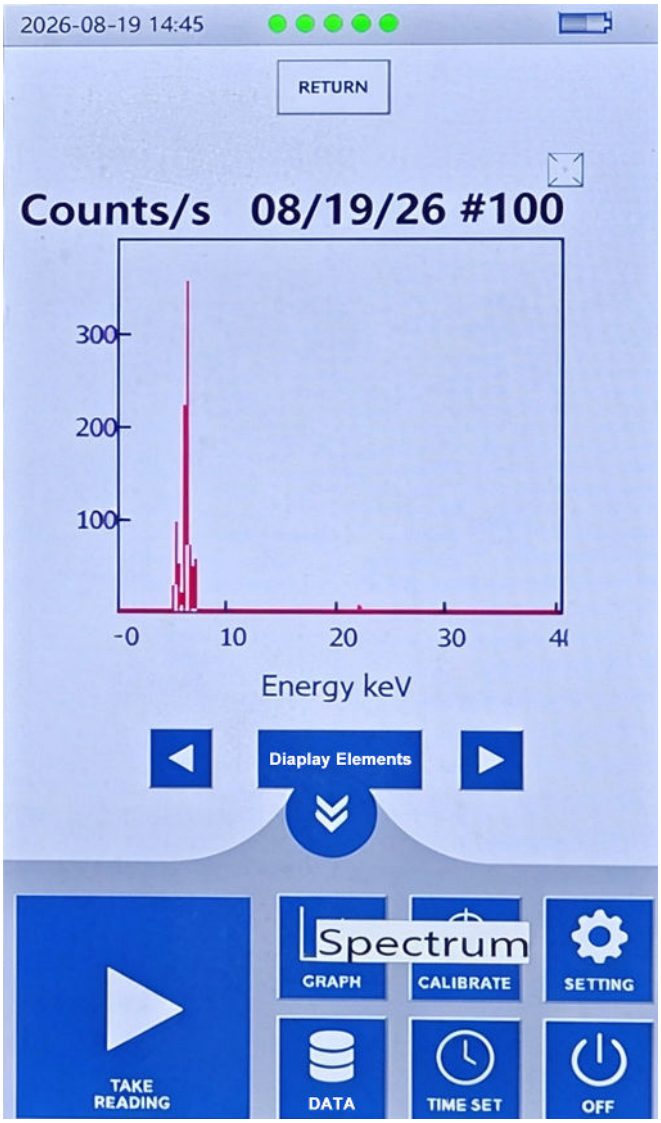
3. Test Time Shortcut Button **4. Power Off Button** **5. Settings Menu**

6. Calibration Button **7. View Spectrum**

(The instrument must be powered on strictly using the top power-on button and powered off using the power-off button on the screen interface, in that order; otherwise, the device may be damaged or the instrument may not function properly!)

Software Interface

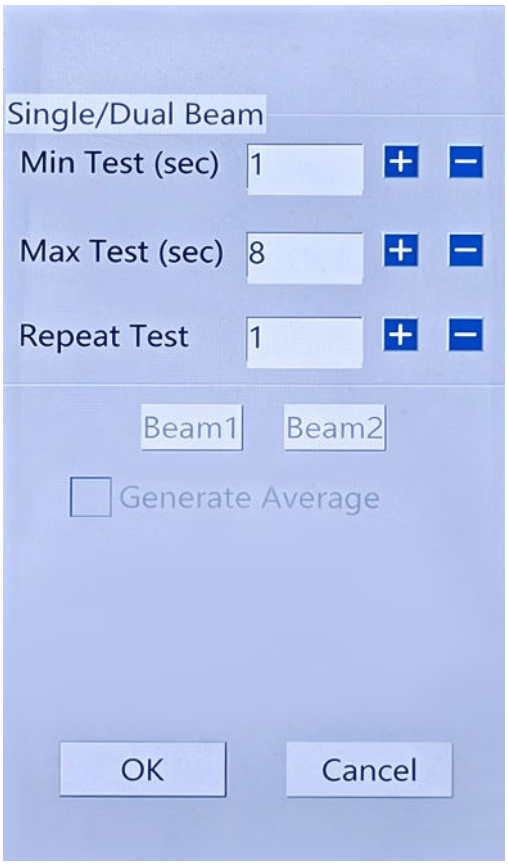




- Test results are accurate and intuitive, with precision up to 0.01. The grade corresponding to the tested material in the database is displayed automatically, and the display can be switched to a spectrum view.

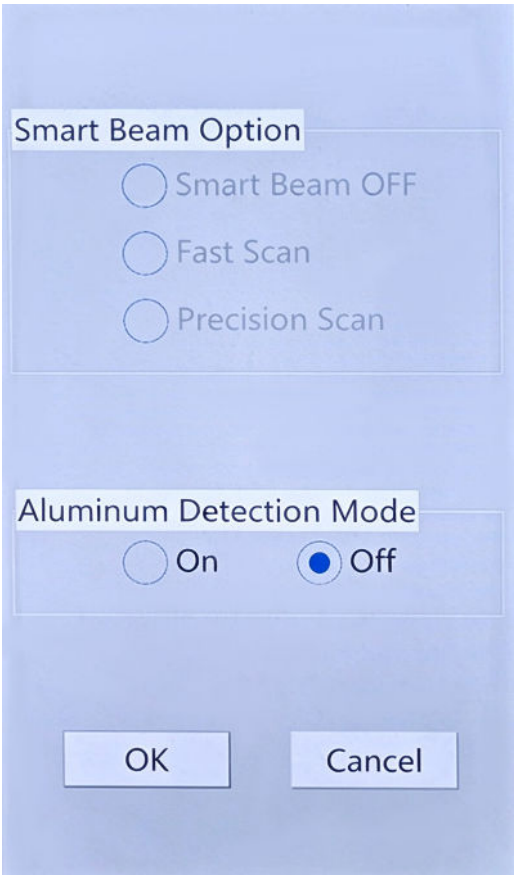
Software Interface

Common Functions



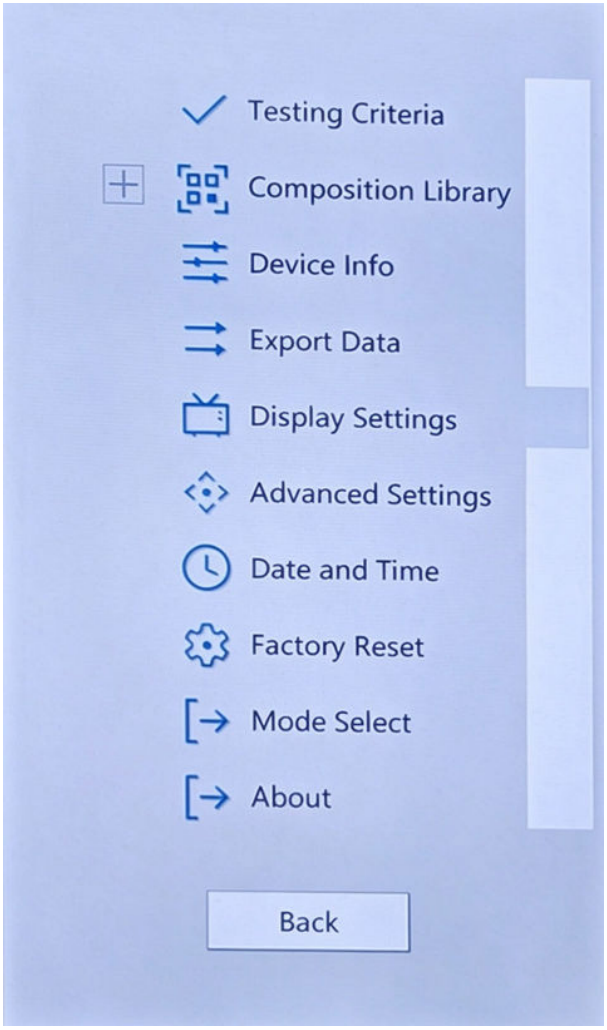
- The test time can be set to as short as 0 or 1 second, and the maximum time can be set according to your needs (the recommended optimal test time is 10–15 seconds).

- This instrument can also perform testing on aluminum and aluminum alloys; the aluminum mode needs to be turned on. Normally, aluminum mode is off by default.

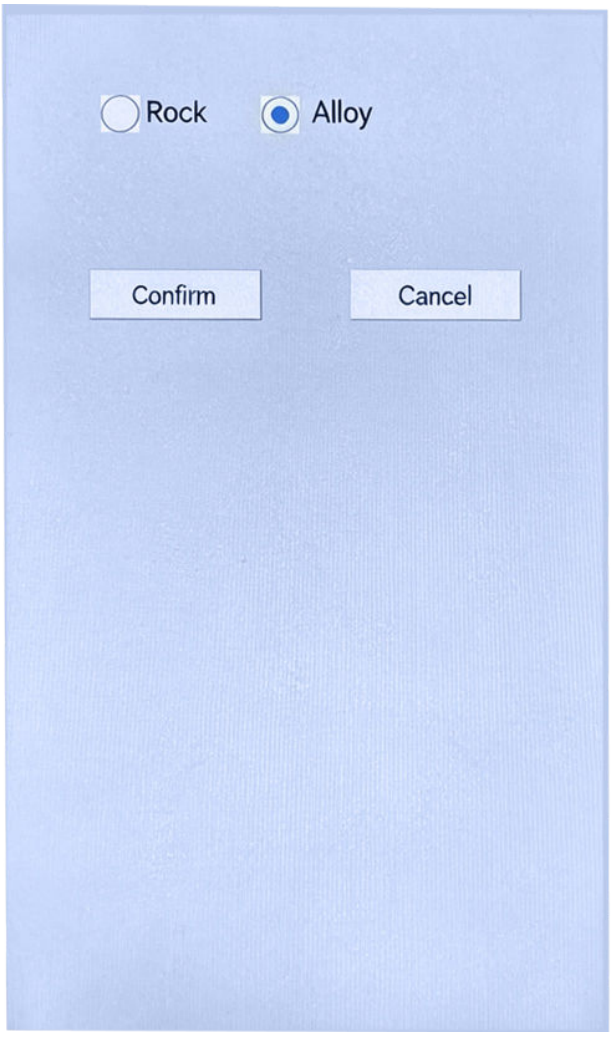


Software Interface

Common Functions



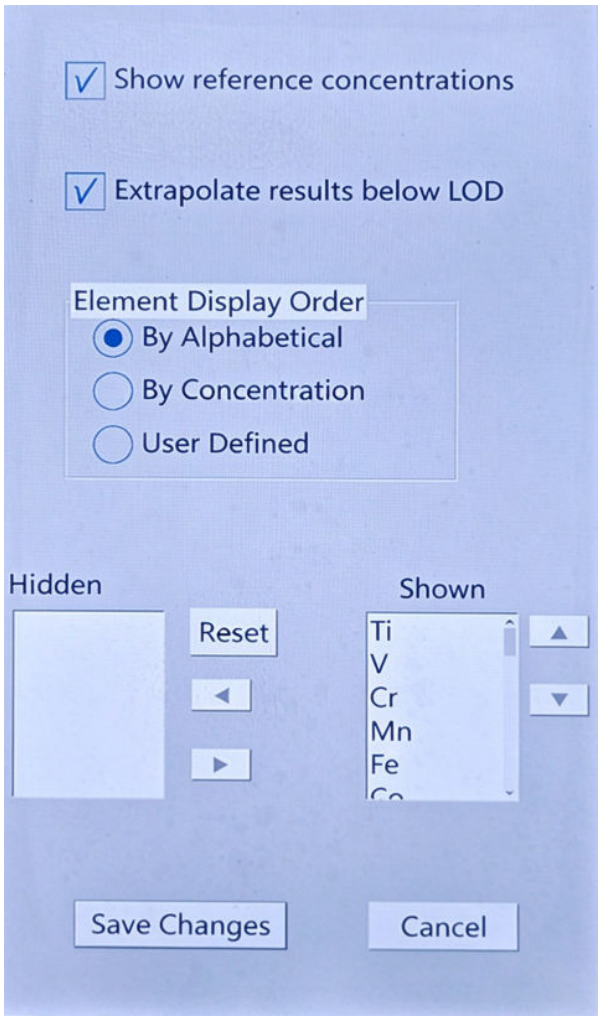
- Users can add new grades to the grade database according to their own needs.



- Users can select the appropriate mode based on the material being tested.

Software Interface

Common Functions



- Users can choose to hide or display elements below the detection limit as needed, and can also hide or display specific elements.



- File export is supported and requires use with a mobile terminal (optional).

Technical Specification

Name	X-ray fluorescence spectrometer
Model	iSpectro-T5100-Sipin/ iSpectro-T5100-SDD
Weight	Basic weight not exceeding 1.5 kg (with battery)
Battery	10200 mA
Dimensions	245 mm × 86 mm × 310 mm (L × W × H)
Excitation Source	High-power, high-performance X-ray tube
Target Material	5 selectable options: Gold (Au), Silver (Ag), Tungsten (W), Tantalum (Ta), Palladium (Pd)*
Voltage	35 kV / 50 kV (intelligent variable voltage)
Filter	Multiple filters selectable; automatically adjusted according to different tested objects
Detector	High-sensitivity Si-Pin/SDD detector; resolution ≤ 180 eV
Detector Cooling Temperature	Peltier-effect semiconductor cooling; cooling temperature -35°C
Standard Sample	External 316 standard sample / window protective cover

Technical Specification

Processor	Intel 2133 MHz high-performance quad-core processor
Operating System	Microsoft Windows 10
Data Processing	256 GB SSD, DDR4 4 GB memory
Software Modes	Alloy, Ore, Soil, RoHS (select as needed)
Data Analysis	Equipped with professional intelligent analysis software, featuring intelligence, fast speed, and simple operation. The entire analysis process can be completed in just a few seconds.
Data Display	Percentage (%) display, spectrum or peak intensity (count rate)
Data Transmission	Mobile phone 4G, hotspot sharing, WiFi for data transmission with mobile APP
Display	720 × 1280 high-resolution 5.5-inch mainstream capacitive screen; automatic light sensing for clear visibility; intelligent human-machine interface
Design	Integrated body design; rugged, waterproof, dustproof and freeze-resistant; effective shockproof; suitable for field environments such as humid or low-temperature conditions
Safe Operation	One-touch "trigger"; software has protection functions such as self-locking and no-sample test prevention
Analyzed Elements	Mg, Al, Si, P, S, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Hf, Ta, W, Hg, Se, Au, Br, Pb, Bi, Zr, Nb, Mo, Ag, Cd, Sn, Sb, Re, Ir, Pt, Ru, Rh, Pd, etc.
Test Environment Conditions	Temperature -20 to +40°C; humidity < 80% RH

Standard Delivery

Name	Qty	Photo
Main Unit	1set	
High-capacity Lithium Battery	2pcs	
110/200V Battery Charger	1pc	
Standardization Cap	1pc	

Standard Delivery

Name	Qty	Photo
Kapton Window Protective Film Spare	2 pcs	
Instruction Manual	1 copy	
Certificate Of Conformity/ Warranty Card	each 1copy	 
Calibration Report	1 sheet	