

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



- Ancient Pottery and Porcelain
- Ancient Bronze Ware
- Ancient Jewelries
- Plating Thickness

**EDX-3600L**  
**X-ray Fluorescence Spectrometer**  
**for Archaeology**

Hotline: 800-9993-800  
400-7102-888

**China Jiangsu Skyray Instrument Co., Ltd.**

Add: 1888, West Zhonghuayuan Rd., Yushan, Kunshan, Jiangsu Province  
Fax: +86-512-57017261  
Website: www.skyray-instrument.com  
E-mail: sales@skyray-instrument.com

Test data in this manual, if not noted, is our company's test data.  
All information in this manual is for reference only, which is subject to any change without notice.

Skyray Instrument Copyright 2011  
Press date:2011.07.28

# EDX-3600L

The EDX3600L instrument is designed by Skyray to measure the contents of Na<sub>2</sub>O, MgO, Al<sub>2</sub>O<sub>3</sub>, CaO, Fe<sub>2</sub>O<sub>3</sub>, K<sub>2</sub>O, MnO, SiO<sub>2</sub>, TiO<sub>2</sub>, As, Cr, Cu, Co, Mn, Ni, Pb, Ti, V, Zn, Zr, Ba in the embryo and glaze of ancient pottery and porcelain, with instrument calibrated by the standards provided by two well-known research institutes, i.e. China History Museum and Shanghai Silicate Research Institute. Through referring to China Ancient Pottery and Porcelain Database, EDX3600L identifies the period and source of the tested sample. Plus, its super large sample chamber, specially built for archaeological industry, can accommodate samples of large sizes and various shapes, better presenting the non-destructive feature of X-ray Fluorescence spectrometers.

EDX3600L, not only a ceramic tester but offers composition analysis of bronze wares (Cu, Sn, Pb, Zn, etc.) and precious metals (Au, Pt, Ag, Pb, Cu, Ni, Ru, Rh and Fe) and thickness measurement of metal platings, is multi-functional and indispensable to Archaeological research. The users of EDX3600L include China History Museum and China Collector Association.

## Configurations

- Electric-cooling UHRD Detector
- In-built SNE improves the signal processing ability up to 25 times.
- Automatic collimator and filter switch
- Light Path Enhancement System
- In-built high resolution CCD
- Enhanced Metal Sensitivity Analyzer
- Intelligent full-element analysis software matches with the hardware well
- Surface light source
- Amplifier circuit
- High and low power supplies
- X-ray Tube
- Multi-variable non-linear regression procedure
- Independent matrix effect correction models
- Triple safety protection model



## Application Fields



- Ancient Pottery and Porcelain
- Ancient Bronze Ware
- Ancient Jewelleries
- Plating Thickness

## Technical Parameters

- Product Name: Skyray Fluorescence Spectrometer
- Model: EDX3600L
- Measurable elements: Na to U
- Element contents: 1ppm-99.99%
- Analysis accuracy: 0.05%
- Ability of simultaneous analysis: dozens of elements
- Plating thickness: up to 0.01um each layer
- Forms of samples: powder, solid and liquid
- Measurement time: 60s-200s
- Tube voltage: 5kv-50kv
- Tube current: 50uA-1000uA
- Input voltage: AC 110V/220V
- Consumed power: 200 W
- Ambient temperature: 15-26°C
- Ambient humidity: ≤70%
- Super large vacuum sample chamber: 600\*600\*1000mm<sup>3</sup>
- Weight: 280KGS

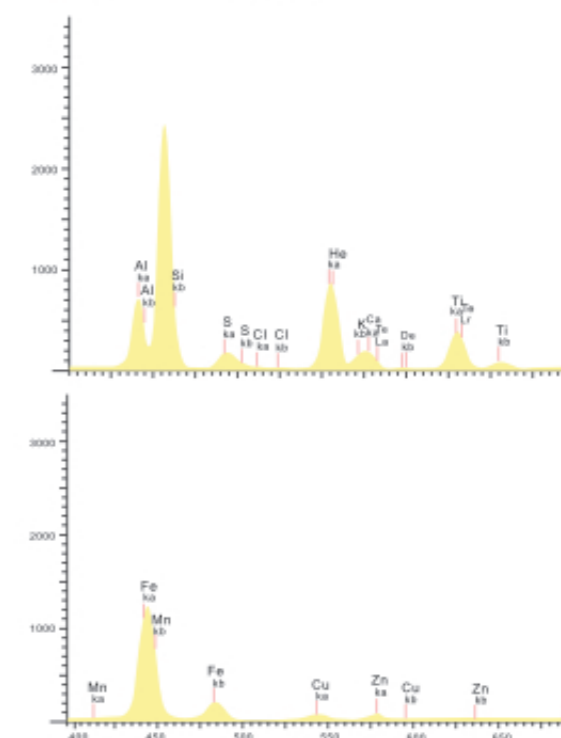
Below is a test example of plum vase made of black glaze ceramics. The spectrum and test results are:



### Test Results

Element	Intensity	Content
Na	13.9	1.115
Mg	17.3	1.407
Al	18.3	13.962
Si	560.1	72.011
P	7.0	0.171
K	75.8	3.131
Ca	164.2	4.073
Ti	2.4	0.076
V	3.1	0.016
Mn	34.8	0.037
Fe	157.4	1.029
Co	8.9	0.003
Cu	47.3	0.530
Zn	30.5	1.440
Zr	1.7	0.270
Ba	7.5	0.003
Pb	66.1	1.303

### Testing spectrum



Conclusion: seen from the test results, this Plum Vase is a forgery, for it contains a high level of Zn 1.44% and a comparatively low level of Ca. With instrument like EDX 3600L, even the finest imitation can be distinguished.