Elvatech
www. elvatech.com

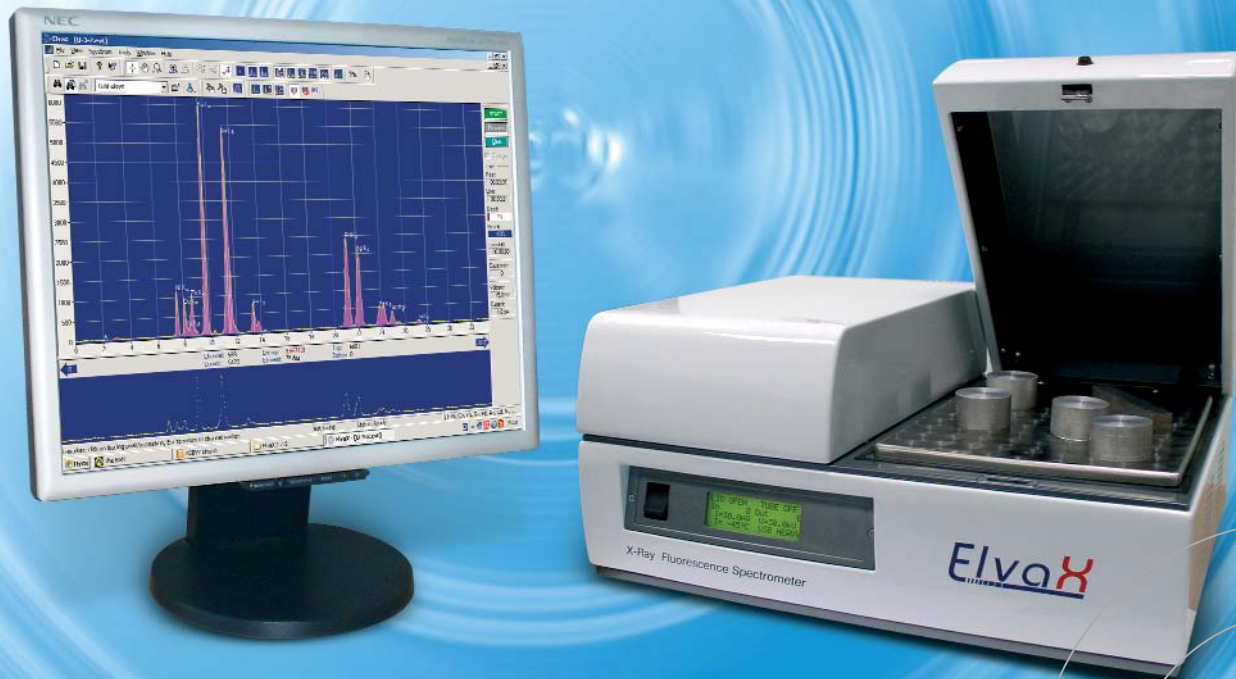# Portable X–Ray Fluorescence Spectrometer ElvaX

## Non-destructive, fast and versatile analysis

Introducing **ElvaX**:
The Next Generation Desktop ED XRF Spectrometer

Engineered to meet the growing demand for precise qualitative and quantitative analysis of solids, liquids and powders, **ElvaX** delivers the precision and accuracy of expensive stationary lab spectrometers for a fraction of the price of comparable performance systems.

Capable of detecting Na(11) − U (92) in a wide range of elemental concentrations, **ElvaX** provides ultimate versatility for a vast array of modern industrial and scientific applications in which elemental composition has to be known in a matter of minutes. With a completely automated measuring process and an intuititive, user-friendly interface, **ElvaX** is simple to operate for even the novice user. No time-consuming specimen preparation is required, and samples may be of any shape.

For the past decade this unique tool has been widely used in Europe, US, Russia, Middle East, India and many other countries worldwide.
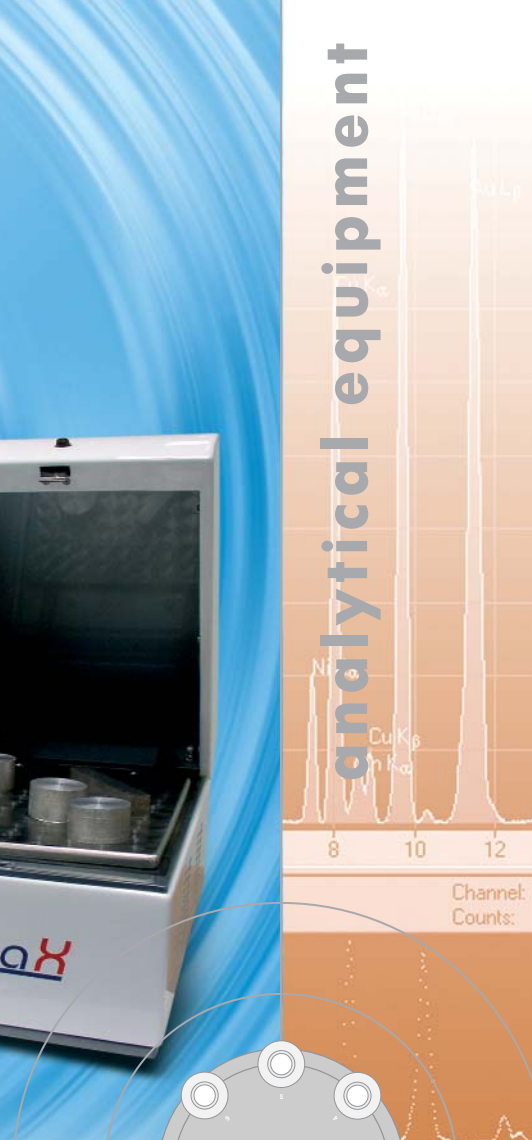
Precise, rapid qualitative and quantitative analysis for hundreds of applications, including:

◎ RoHS & WEEE Inspection

◎ Jewelry & Precious Metals Assay

◎ Metallurgy & Chemical Analysis

◎ Customs & Criminal Forensics

◎ Medical Research & Diagnostics

◎ Food, Feed & Cosmetics Testing

◎ Environmental Monitoring

◎ Archeological Research
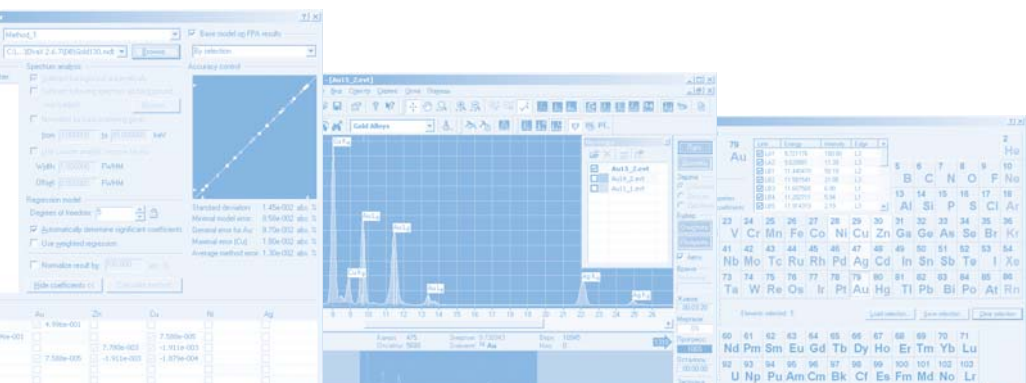
Applications Performance

| Measurement Capability	
Detectable Range	Cl (17)-U (92). ElvaX Light option extends range to Na (11)-U (92); uses Helium purge instead of vacuum chamber.
Detectable Concentration	1.0 ppm for most elements in light matrix; 0.01% for metal alloys.
Key Applications	
Metallurgy	Precious and non-precious metal analysis; steel; ore; solder.
Jewelry & Precious Metals Assay	Gold, Platinum, Silver, Palladium and other precious metals (with or without standard sample).
Chemicals	Elemental analysis of plating solutions, petroleum products, rubber.
Organics	Testing of food, feed and cosmetics for heavy metals and contaminants.
Environmental	Water, soil, burnt ash.
Forensics	Customs control, criminology lab analysis, archeological research.
Medical	Research & development, medical diagnostics.

ElvaX Standard Chamber

System Specifications

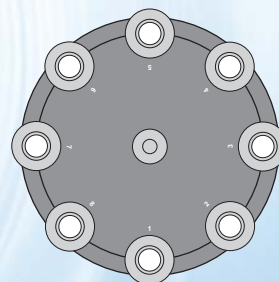| X–Ray Generation	
X-Ray Tube	W or Ag target anode, Be window, air cooled.
X-Ray Generator	4-50 kV (adjustable in 0.1 kV steps), 0-100 μA (adjustable in 0.2 μA steps), 5 W max.
Filters	Up to 5 position primary filter changer.
X-Ray Detection	
Detector	Si-PIN diode, thermoelectrically cooled, (optional SDD).
Resolution	160 eV at 5.9 keV (<140 eV for SDD option).
Active area	6 mm². (Special order up to 25 mm²).
Analytical Unit	
Dimensions/ Weight	Standard Chamber: 43 cm x 34 cm x 20 cm, 18 kg. Large Capacity Chamber: 50 cm x 50 cm x 38 cm, 35 kg.
Power Supply	110 VAC/60 Hz or 220 VAC/50 Hz.
Power Consumption	50 W.
Data Acquisition Time	10-1200 sec.
Pulse Processing	Digital Pulse Processor, base line restoration, pulse pile up rejection, rise-time discriminator, automated adaptation to count rate.
Optional Features	Automated multi-position sample carousel. (Contact for specifications.).
	Sample view video camera. (Contact for specifications.).
Software	
Operating Software	ElvaXTM analysis package, running under Microsoft Windows™ XP, Vista or 7.
Control	X-ray source output, data acquisition system parameters, sample and filter selection (optional).
Spectrum Processing	Automatic peak search, peak deconvolution, background removal, automatic element identification, net peak intensities above background.
Quantitative Analysis Algorithms	Fundamental parameters, quadratic stepwise multiple regression, manual spectra comparison.
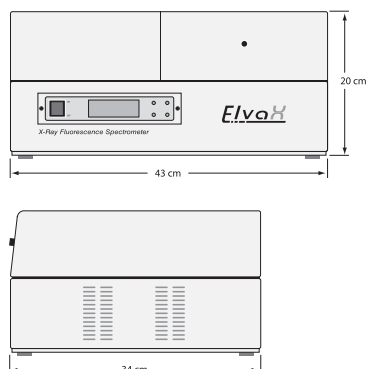
ElvaX Large Capacity Chamber
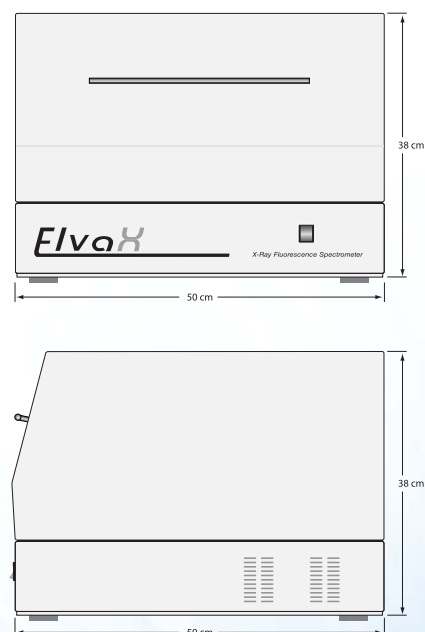
Below:
Optional multi–sample carousel

Your Local Representative