

Introducing
SPECTROCUBE

ED-XRF SPECTROMETER FOR
PRECIOUS METALS TESTING



**Easy, reliable, accurate
analysis at twice the speed**

Introducing the high-throughput answer for precious metals analysis **SPECTROCUBE**

Testing centers, hallmarking and assay offices, and jewelry makers must establish the precise value of the materials they handle. So their analytical instruments must determine exactly what elements — gold or silver; platinum or palladium; nickel, copper, zinc, or more — are present in a given precious metal sample or piece of jewelry, and at what concentration levels. These high-volume operations also demand reliable analysis that's simple and quick. Short measurement intervals, effortless workflow via intuitive software, and low downtime are vital. And given these metals' high values, nondestructive testing is a must.

SPECTRO — A GLOBAL LEADER IN ANALYTICAL INSTRUMENTATION — INTRODUCES THE NEW SPECTROCUBE SPECTROMETER TO MEET OR EXCEED THESE REQUIREMENTS.

SPECTROCUBE employs improved technologies for energy dispersive X-ray fluorescence (ED-XRF) analysis. It adapts the performance and reliability that have made the SPECTRO MIDEX spectrometer a benchmark for precious metals analysis.



SPECTROCUBE ED-XRF ANALYZER FOR PRECIOUS METALS TESTING

The compact new SPECTROCUBE small-spot spectrometer incorporates the latest developments in ED-XRF detector technology, including high resolution and high count rate. Along with its ease, speed, and affordability, these innovations help make it the ideal benchtop solution for high-volume precious metals analysis.

UNPARALLELED EASE OF USE

Intuitive software presents relevant information on a single screen. SPECTROCUBE enables a fast, smooth workflow even for minimally trained users. Analyze each sample in three easy steps: 1) Center the sample over the measurement window on the cabinet floor. 2) Close the lid. 3) Click the PC screen or hit the unit's "start" button. Display, print-out, and transfer of analysis results all support later data use and/or proof of compliance.

EXCEPTIONAL SPEED & PERFORMANCE

Analyzing precious metals alloys, SPECTROCUBE provides high precision for a wide range of concentration levels — plus testing times as low as 15 seconds. That's 2x faster than many analyzers in its class! So it can handle hundreds of precious metal samples per working day. And on jewelry items large or small, it can analyze an area down to a spot size of 0.2 mm — among the industry's smallest spot sizes.

RUGGED RELIABILITY

SPECTROCUBE is constructed with user-tested, top-grade components for 24/7 use in demanding, high-throughput quality control operations. It's designed to provide low operating costs over a long, trouble-free service life. The analyzer shares the built-in reliability of other leading SPECTRO products now performing ruggedly in challenging conditions for industries and businesses worldwide. SPECTROCUBE applies proven SPECTRO XRF technologies in a bottom-up cabinet design for dependably high throughput, simplicity, and convenience.

SPECTROCUBE

Targeted technology

SPECTROCUBE TARGETS ISSUES THAT USERS HAVE WITH OTHER INSTRUMENTS, AND OFFERS CLEAR SOLUTIONS.

Example: one-stop calibration for alloy groups. Forget performing separate calibrations for specific gold alloys, or undertaking tedious remeasurements. For most precious metals analyses, SPECTROCUBE delivers the required accuracy with its general-purpose calibrations set alone!

Other XRF analyzers may not register minor and trace amounts of some nonprecious components. That's a potentially costly shortcoming. Example: in a gold alloy sample, failing to detect ten minor elements, each at 0.05%, could produce an erroneous — and expensive — 0.5% higher total for gold.



With the latest high-resolution silicon drift detector (SDD) and an ultra-high count rate, SPECTROCUBE handles trace elements with ease. At the same measurement time as previous-generation models, SPECTROCUBE delivers up to 3x higher intensities, for significantly improved precision. (Alternatively, users who prioritize speed can perform an accurate analysis within only 15 seconds.)

ENSURED AFFORDABILITY

SPECTROCUBE provides dependable, high-throughput, cost-effective analysis. Its price/performance ratio makes it affordable for precious metals testing offices, hallmarking centers, and manufacturing labs. Finally, its high reliability keeps maintenance costs low.

COMPACT, DURABLE DESIGN

The analyzer's compact, ruggedly built cabinet fits tight benchtop spaces, yet accommodates samples from tiny jewelry pins to large silver pieces. Its bottom-up design locates detection, excitation, and processing

components below the chamber floor, eliminating more elaborate sample positioning mechanisms so the user can process high numbers of samples quickly and efficiently. In addition, those components are guarded by a sample window, with the detector further shielded by a shutter open only during measurement. Result: SPECTROCUBE components are securely protected against contamination, damage — and unneeded downtime.



SPECTROCUBE

ED-XRF SPECTROMETER FOR PRECIOUS METALS TESTING



Detector	Silicon Drift Detector (SDD)
Excitation	40 W X-ray tube, molybdenum (Mo) anode, 50 kV max. Collimator changer to realize different spot sizes and excitation conditions
Dimensions	
Height	380 mm (15 in)
Width	520 mm (20.5 in)
Depth	540 mm (21.3 in)
Weight	ca. 48 kg (~ 106 lbs)
Sample Chamber	Video system to display sample image HxWxD: 155 x 400 x 320 mm (6.1 x 15.7 x 12.8 in)
Power	Operating voltage 95-120 V / 200-240 V, 50/60 Hz
Supply	Power consumption of spectrometer: 120 W
Evaluation system	External computer system; Windows operating system keyboard, mouse, monitor, printer
Software	Menu-based software for control of spectrometer functions and evaluation of data
Analyses	Fundamental Parameters program FP+ for elemental analysis of alloys

GLOBAL SUPPORT



Precious metal assayers and manufacturers depend on fast, accurate, uninterrupted analysis for productivity — and profitability. To ensure that reliable SPECTROCUBE analyzers keep up the pace, SPECTRO offers the AMECARE Performance Services program.

Customers report unmatched levels of coverage, application knowledge, and uptime. More than 200 AMECARE service engineers in 50 countries help ensure peak performance and extended life for every SPECTROCUBE instrument. AMECARE's high-value, customized services include proactive maintenance programs; application solutions; access to specialists; and instrument-specific training.

www.spectro.com

GERMANY

SPECTRO Analytical Instruments GmbH
Boschstrasse 10
D-47533 Kleve
Tel. +49.2821.892.0
spectro.sales@ametek.com



U.S.A.

SPECTRO Analytical Instruments Inc.
50 Fordham Rd
Wilmington 01887, MA
Tel. +1 800 548 5809
+1 201 642 3000
spectro-usa.sales@ametek.com

CHINA

AMETEK Commercial
Enterprise (Shanghai) CO., LTD.
Part A1, A4 2nd Floor Building No. 1 Plot Section
No. 526 Fute 3rd Road East; Pilot Free Trade Zone
200131 Shanghai
Tel. +86.400.022.7699
spectro-china.sales@ametek.com

Subsidiaries:

► **FRANCE:** Tel. +33.1.3068.8970, spectro-france.sales@ametek.com ► **GREAT BRITAIN:** Tel. +44.1162.462.950, spectro-uk.sales@ametek.com
► **INDIA:** Tel. +91.22.6196.8200, sales.spectroindia@ametek.com ► **ITALY:** Tel. +39.02.94693.1, spectro-italy.sales@ametek.com
► **JAPAN:** Tel. +81.3.6809.2405, spectro-japan.info@ametek.com.jp ► **SOUTH AFRICA:** Tel. +27.11.979.4241, spectro-za.sales@ametek.com

SPECTRO operates worldwide and is present in more than 50 countries. For SPECTRO near you, please visit www.spectro.com/worldwide
© 2019 AMETEK Inc., all rights reserved, subject to technical modifications • C-19, Rev.1 • 80902735 • Photos: SPECTRO, Adobe Stock
Registered trademarks of SPECTRO Analytical Instruments GmbH • **SPECTRO**: USA (3,645,267); EU (005673694); "SPECTRO": EU (009693763);
SPECTROCUBE: USA (6,082,269); EU (017937930)

FULL FAMILY OF ANALYZERS

SPECTRO provides one of the industry's most comprehensive suites of advanced elemental analyzers. Devices particularly suited for precious metals applications include the following:

- SPECTRO XEPOS: top-of-the-line, benchtop XRF analytical spectrometer
- SPECTRO MIDEK: midrange, versatile benchtop small-spot XRF spectrometer
- SPECTROCUBE: high-throughput, affordable benchtop small-spot XRF spectrometer
- SPECTROSCOUT: portable yet powerful ED-XRF spectrometer
- SPECTRO xSORT: ultraportable handheld XRF spectrometer

Whatever the product, SPECTRO's more than 30 years of experience in elemental analysis, plus its unparalleled record of technological innovation, ensure the best results in the business.