SPECTRO
AMETEK

Introducing

SPECTROCUBE

ED-XRF SPECTROMETER FOR COMPLIANCE SCREENING

Easy, reliable, accurate analysis at twice the speed

Introducing the high-throughput answer for elemental compliance screening

SPECTRO**CUBE**

Growing regulations restrict hazardous substances in manufacturing worldwide. Electronics and electrical manufacturers, testing laboratories, and makers of packaging, plastics, toys, cosmetics, and more must make sure that products comply with these regulations and that substance such as toxic heavy metals are not present in consumer goods, raw materials, and additives at concentration levels above regulation limits.

To prove compliance elemental analysis is a very helpful tool. The analytical instruments must determine exactly what elements are present in a given sample, and at what concentration levels. Users in 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. Finally, analyzers should easily handle added elements as new restrictions emerge.

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 SPECTRO spectrometers the benchmarks for XRF and *optical emission spectrometry (OES) analysis*.

SPECTROCUBE ED-XRF ANALYZER FOR COMPLIANCE SCREENING

The compact new SPECTROCUBE small-spot spectrometer incorporates the latest developments in ED-XRF detector technology, including exceptionally high resolution and count rate. Along with its ease, speed, and flexibility, these innovations help make it the ideal benchtop solution for high-volume compliance screening of restricted elements.

UNPARALLELED EASE OF USE

Intuitive, user-tested XRF Analyzer Pro 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 plus proof of compliance.

EXCEPTIONAL SPEED & PERFORMANCE

SPECTROCUBE provides good precision for a wide range of concentration levels — plus testing times 2x faster than many analyzers in its class! At 1 to 10 minutes per sample, it's ideal for high-throughput operations.
In most cases, no user calibration or decisions are required. Analyze large, complex parts such as circuit boards without disassembly. Or test tiny board components with a beam that goes from 4 mm down to 0.2 mm — among the industry's smallest spot sizes.

FUTURE-PROOF FLEXIBILITY

To match growing lists of restricted materials, the SPECTROCUBE analyzer is designed to deliver reliable results on a greatly expanded number of matrices, elements, and compounds. Choose from dozens of elements to specify a single general-purpose factory calibration set. Activate new configurations to handle newly listed elements via simple software updates. The unit's sensors capture the full spectrum for all relevant elements, so users can archive results for future analysis, documentation, or supply chain adjustments.

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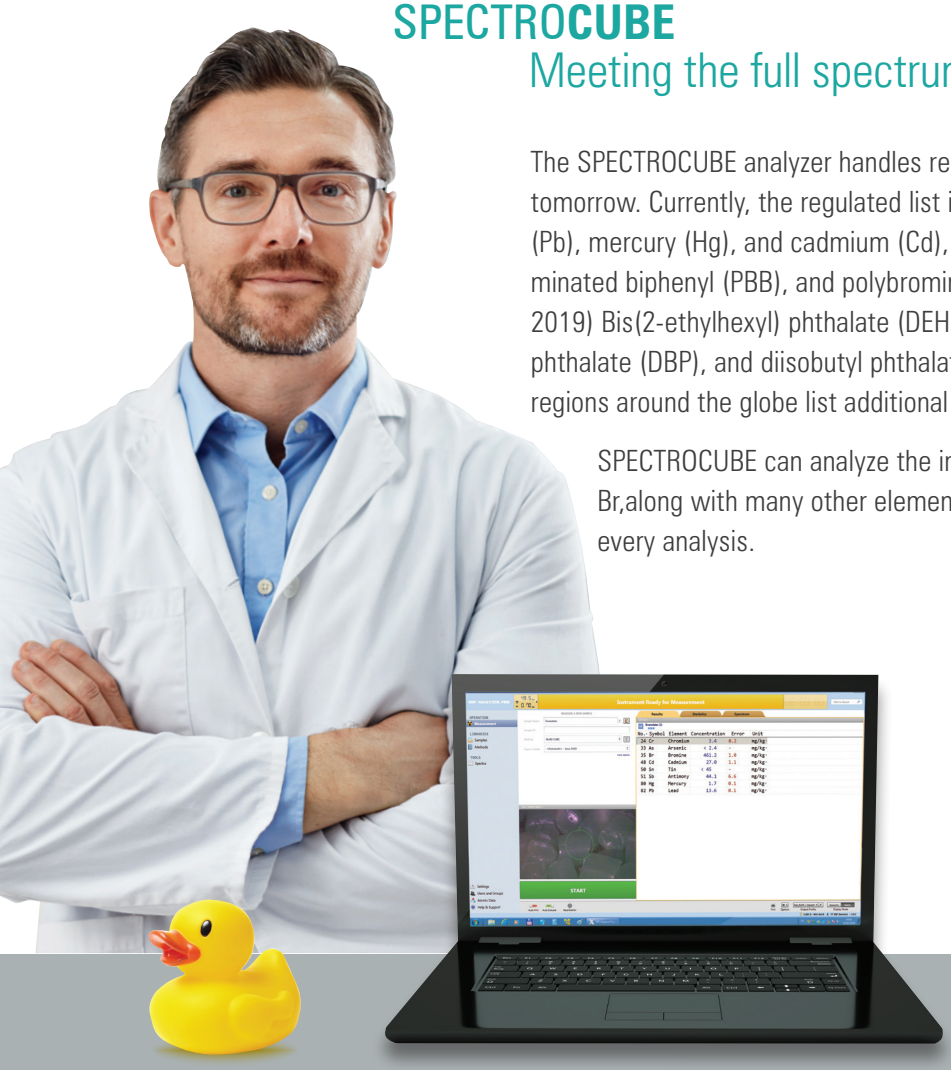
Meeting the full spectrum of regulations



The SPECTROCUBE analyzer handles real-world compliance analyses — today and tomorrow. Currently, the regulated list in the European Union alone includes lead (Pb), mercury (Hg), and cadmium (Cd), plus hexavalent chromium (CrVI), polybrominated biphenyl (PBB), and polybrominated diphenyl ether (PBDE). Plus (after July 2019) Bis(2-ethylhexyl) phthalate (DEHP), butyl benzyl phthalate (BBP), dibutyl phthalate (DBP), and diisobutyl phthalate (DIBP). Additional regulations in different regions around the globe list additional substances in various products.

SPECTROCUBE can analyze the inorganic components like Pb, Hg, Cd, Cr and Br,along with many other elements. And it screens the full elemental spectrum with every analysis.

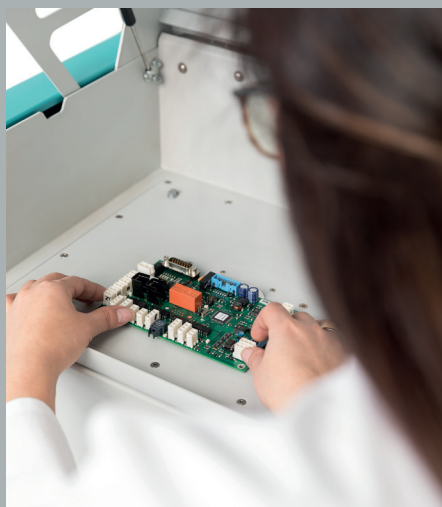
With the latest high-resolution silicon drift detector (SDD) and an ultra-high count rate, SPECTROCUBE handles trace elements with ease. At the same measurement time as previous-generation models, SPECTROCUBE delivers up to 3x higher intensities, for significantly improved precision.

ENSURED AFFORDABILITY

SPECTROCUBE provides dependable, high-throughput, cost-effective analysis. Its price/performance ratio makes it affordable for manufacturers, packagers, government authorities, and testing laboratories at all levels. Finally, its high reliability keeps maintenance costs low.

COMPACT, DURABLE DESIGN

The analyzer's rightsized, ruggedly built cabinet fits tight benchtop spaces, yet accommodates samples from tiny fasteners to large, complex circuit boards (without disassembly). Its bottom-up design locates detection, excitation, and processing components below the chamber floor. So users can process high numbers of samples simply, quickly, conveniently, and efficiently. In addition, those components are guarded by a sample window, with the detector further shielded by a shutter open only during measurement. Results: SPECTROCUBE components are securely protected against contamination, damage — and unneeded downtime. So the analyzer can provide trouble-free performance over a long service life.



SPECTROCUBE

ED-XRF SPECTROMETER FOR ELEMENTAL COMPLIANCE SCREENING

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	Video system to display sample image	
Chamber	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	External computer; Windows operating system;	
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; compliance screening program for polymers and composite materials	

GLOBAL SUPPORT

Compliance screening operations 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.

AMECARE PERFORMANCE SERVICES AMETEK

FULL FAMILY OF ANALYZERS

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

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

For final compliance verification, when required:

- SPECTROGREEN: midrange benchtop ICP-OES spectrometer

Whatever the product, SPECTRO's 40 years of experience in elemental analysis, plus its unparalleled record of technological innovation, ensure the best results in the business.

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

TÜVRheinland CERTIFIED Management System ISO 9001:2015 ISO 50001:2018 www.tuv.com ID 9105080266

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.co.jp ▶SOUTH AFRICA: Tel. +27.11.979.4241, spectro-za.sales@ametek.com

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