

SPECTRO MIDEX_{MID05}

ED-XRF SPECTROMETER
FOR COMPLIANCE SCREENING



Easy, reliable, accurate analysis
at twice the speed

Elemental compliance screening made easy

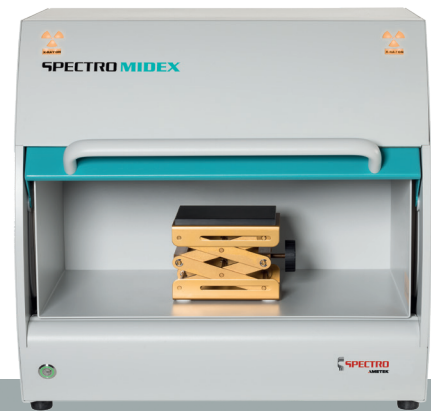
SPECTRO MIDEX

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 — OFFERS THE SPECTRO MIDEX SPECTROMETER TO MEET OR EXCEED THESE REQUIREMENTS.

SPECTRO MIDEX 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.



SPECTRO MIDEX ED-XRF ANALYZER FOR COMPLIANCE SCREENING

The SPECTRO MIDEX 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. SPECTRO MIDEX enables a fast, smooth workflow even for minimally trained users.

The top-down geometry offers a 5 mm working distance between the samples and the excitation/detection system. This enables the operator to analyze in “valleys” between components on a printed circuit board. The integrated laser pointer and video system allows for a precise positioning of the sample to be tested.

EXCEPTIONAL SPEED & PERFORMANCE

SPECTRO MIDEX 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

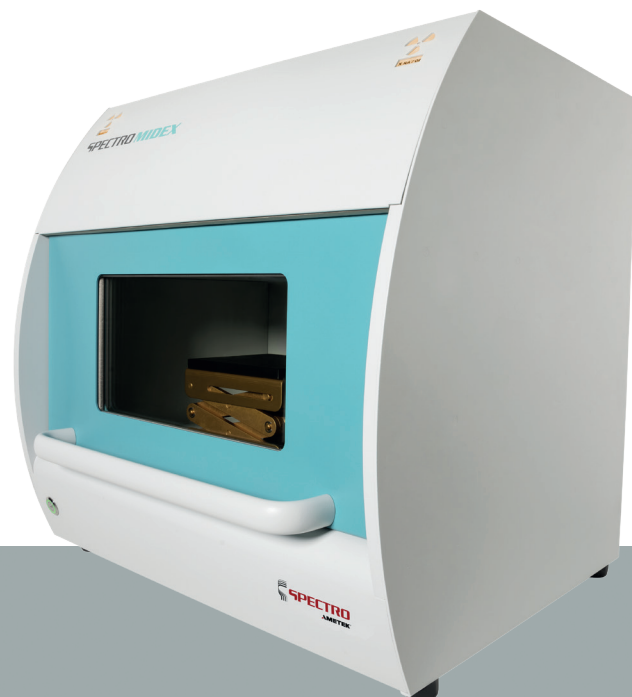
To match growing lists of restricted materials, the SPECTRO MIDEX analyzer is designed to deliver reliable results on a greatly expanded number of matrices, elements, and compounds. Choose from dozens of elements to specify a single general-purpose factory calibration set. Activate new configurations 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.

SPECTRO MIDEX

Meeting the full spectrum of regulations

The SPECTRO MIDEX 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). Additional regulations in different regions around the globe list additional substances in various products.

SPECTRO MIDEX 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.



SPEED AND PRECISION

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

ENSURED AFFORDABILITY

SPECTRO MIDEX 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 top-down design allows analyzing samples with a topology up to 5 mm distance in height. Users can process high numbers of samples simply, quickly, conveniently, and efficiently. In addition, the top-down geometry reduces the risk of contamination of the analyzer excitation and detection system with the detector being additionally shielded by a shutter open only during measurement. Results: SPECTRO MIDEX components are securely protected against contamination, damage — and unneeded downtime. So the analyzer can provide trouble-free performance over a long service life.



SPECTRO MIDEX

Technical Specifications

Detector	Silicon Drift Detector (SDD)
Excitation	40 W X-ray tube, molybdenum (Mo) anode, 50 kV max.
Dimensions	
Height	540 mm (21.2 in)
Width	555 mm (21.8 in)
Depth	470 mm (18.5 in)
Weight	ca. 50 kg (~ 120 lbs)
Sample Chamber	
Video system to display sample image	
Manually adjustable sample table	
Power Supply	
Operating voltage 95-120 V / 200-240 V, 50/60 Hz	
Power consumption of spectrometer: 200 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; compliance screening program for polymers and composite materials
Options	Collimator changer to realize different spot sizes and excitation conditions

SUPERIOR SERVICE AND SUPPORT

AMECARE Performance Services maximize uptime for all the world-class elemental analyzer products and services from SPECTRO Analytical and associated companies. The program is staffed by hundreds of experienced service engineers in 50 countries. They provide high-value, customized support designed to ensure the longest possible equipment life — plus optimum performance for high-volume, high-productivity analysis.

Ask about AMECARE virtual or on-site demos, SPECTRO PROTEKT secure global remote monitoring, proactive performance maintenance, performance upgrades, applications solutions, consultation, targeted training, and ongoing support.



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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.

SPECTRO operates worldwide and is present in more than 50 countries. For SPECTRO near you, please visit www.spectro.com/worldwide

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