

LABSPECTRO

SPARK OES

LABSPECTRO- Optical Emission Spectrometer (OES) The LABSPECTRO Metals Analyzer is a cutting-edge solution for

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comprehensive metal analysis, leveraging advanced atomic emission spectrometry (AES) technology. Designed for industries requiring precise and reliable elemental analysis, this analyzer excels in applications such as quality control, alloy verification, and material certification. This spectrometer uses a scientific research grade CMOS sensor as the detectors and patented argon self-purification technology, which has excellent performance and can meet the analysis needs from mid to high-end users

PRODUCT FEATURES

Advanced CMOS Detector

- Scientific Grade Performance: High UV response, low noise, and anti-halo technology ensure superior detection and full-spectrum analysis.
- Fast Reading Speed: OEO technology optimizes signal processing for rapid, precise results.
- High UV Sensitivity: Enhanced non-metallic element analysis (C, S, P) with improved accuracy.

Digital Pulse Source 🔸

- Programmable Pulse Control: Supports sparks, arcs, and hybrid discharges for customizable analysis.
- High Stability: No temperature-sensitive components; maintenance-free design with up to 1000 Hz frequency.









Arc type discharge current

Spark type discharge current

Enhanced Stability

- Robust Optical Chamber: Integrated aluminum alloy with constant temperature control (±0.1°C) ensures spectral precision and long-term stability.
- Optimized Airflow: Precise airflow design for consistent results.



OPERATIONAL HIGHLIGHTS

Efficient Argon Use

The analyzer's advanced argon flow system reduces consumption during both analysis and standby modes, significantly lowering operational costs.

Quick Start-Up

Optimized for rapid stabilization, the LABSPECTRO ensures minimal downtime and immediate readiness for operation.

Flexible Sampling

Supports a wide range of sample sizes and geometries, with adapters available for unique sample shapes.

Minimal Maintenance

Durable components, including long-life filters, minimize the need for frequent maintenance, ensuring uninterrupted operation.

TECHNICAL INNOVATIONS

Self-Purification Technology

The self-purification system minimizes argon waste and improves start-up times by recycling gas within the optical path. This innovation significantly lowers operational costs.

High-Performance Optics

Paschen-Runge optical system using multiple high-performance CMOS detectors, The argon-filled optical system reduces light absorption, enhancing detection sensitivity and accuracy for even trace elements.

Adaptive Software

Automatically adjusts to environmental conditions and operational changes, ensuring consistent and reliable results.



PATENTED ARGON SELF-PURIFICATION TECHNOLOGY

- Integrated Optical Chamber: Ensures excellent sealing, maintaining long-term argon purity and extending purifier lifespan.
- Enhanced UV Analysis: Creates a vacuum-like environment (10⁻³ Pa) for improved short-wave element detection.
- **Stable Performance:** Constant temperature and pressure design eliminate optical drift caused by environmental changes, ensuring long-term reliability.
- **Cost Efficiency:** Reduces argon consumption, lowering operational costs.
- **Continuous Purification:** Argon is recycled through a purification system, maintaining high-purity conditions in the chamber.



SPECTRAL STANDARDISATION TECHNOLOGY



WHY CHOOSE LABSPECTRO?

The LABSPECTRO Metals Analyzer combines precision, efficiency, and durability to provide unmatched performance for modern laboratories and production facilities. Its advanced technology and user-centric design ensure reliable results with minimal operational costs. Whether for routine analysis or demanding applications, the LABSPECTRO is the definitive choice for metal analysis.

Customizable sample clamps meet various sample analysis needs.



High Sensitivity and Precision:

The Labspectro offers exceptional sensitivity, making it ideal for trace element analysis across various industries, including metals, petrochemicals, and environmental testing.



SOFTWARE CAPABILITIES

LABSPECTRO features advanced software designed for efficiency and ease of use:

- User-Friendly Interface: Intuitive navigation for streamlined operations.
- Data Management: Secure storage and easy retrieval of historical analysis data.
- Customizable Calibration: Tailor calibration methods to specific requirements.
- Integration: Seamless data transfer to external systems for reporting and further analysis.

TECHNICAL SPECIFICATIONS

PARAMETERS

Wavelength Range Analysis Time Argon Purity Requirement Optical System Power Supply Working Temperature Humidity Range Dimensions (L x W x H) Weight Max Power Consumption

SPECIFICATIONS

175-520 nm 30 seconds (typical) >99.999% Paschen-Runge Single-phase 220V AC, 50Hz 10-30°C 20-80% (non-condensing) 818 x 590 x 396 mm Approx. 66.5 kg 400W

HOLISTIC SOFTWARE

The LABSPECTRO's software offers an array of functions, including:

- Grade Identification: Automatic alloy and grade matching.
- Quality Control: Ensures consistency and accuracy in results.
- **Pseudo-Element Detection:** Enables calculations for derived or combined element values.
- Flexible Configuration: Supports custom calibration and method development.

APPLICATIONS



ROBUST PERFORMANCE

Built for durability, the Labspectro can operate in a variety of industrial settings, offering reliable, consistent performance even under demanding conditions.

COMPREHENSIVE ELEMENTAL ANALYSIS

Capable of analyzing a wide range of samples such as metals, alloys, environmental samples, and more, the Labspectro is versatile and adaptable to multiple industries.



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