Spectro Scientific
Confidence in knowing

Spectroil Q100

RDE ATOMIC EMISSION SPECTROMETER

The world standard for multi element wear metals in used oil analysis

Spectroil Advantage

Oil is the lifeblood of equipment and oil analysis provides answers to machinery health. As a result, wear metals analysis is the backbone of used oil analysis programs.

Spectroil RDE technology, a proven, globally-accepted solution per ASTM D6595, analyzes oil, coolant, fuel and grease samples for equipment condition monitoring.

Determine the condition of your equipment in 30 seconds

Spectro's Rotating Disk Electrode (RDE) technology is a robust, proven spectroscopic technique designed to simultaneously analyze wear, additives and contaminants in mineral or synthetic petroleum-based products, compliant with ASTM D6595 and D6728.

The quality and stability of the Q100's solid state optics provides reliable trending data to determine the actions required to protect the health of your critical equipment potentially saving thousands in repair costs and downtime.

Ultra small footprint = site flexibility + valuable bench space

- The small compact rotating disc spectrometer frees up valuable bench space. Spectro's Spectroil spectrometer technology means mil-spec equivalent performance in a compact unit.

No solvents = reduced waste + low cost of operation

- The Spectroil Q100 does not require solvents, sample dilution or the need for gases. Coupled with 30-second analysis time and the ability to handle multiple elements simultaneously, you can quickly check the condition of your equipment's fluids.

Stable solid state optics = trend data you can trust

- An innovative, temperature stabilized CCD optical system provides the necessary resolution to quickly process the light from the time tested arc-spark excitation technique. You can trust the reliability of the Q100 trending data to tell you when further preventive maintenance or repair of your critical equipment is needed.

Windows-based PC control = more analytic power + processing versatility

- Spectroil software is an intuitive, easy-to-use system to operate and manage simultaneous, multi-element analysis. Data may be exported to your asset management system or to Spectro's web-based SpectroTrack information management system (IMS). SpectroTrack is optimized for analysis of in-service lubricants in support of machine condition monitoring applications.

Meets ASTM standards = results you can trust

- The Spectroil Q100 meets the requirements of ASTM D6595 for the determination of wear metals and contaminants in used lubricating oils or hydraulic fluids by rotating disc electrode atomic emission spectrometry. It also meets ASTM D6728 for alkali contaminants in fuel.

Optional coolant analysis + multiple matrix capability = extreme sampling flexibility

- Save time and expense. Use the same machine to perform rapid analysis of wear metals, contaminants and additives in lubricants, hydraulic fluids, coolants, grease, and even fuels per ASTM D6728. Elements may be added to the standard wear metal and fuel calibration profiles without hardware modifications.

Spectroil Q100 Ordering Information

PRODUCT INFORMATION	
Part #	Oil-Q100
Applications	Mineral and synthetic lubricants including turbine, distilled fuel, heavy fuel oil (HFO), crude, glycol coolants and turbine washdown water
Output	Concentration mg/kg (ppm)
Methodology	ASTM D6595; D6728
Standard Analytical Range	Up to 32 elements from Li to Ce (varies by application)
Accuracy	Varies by method
Repeatability	Varies by method
Calibration	n/a here for Q100 – See Optic System
Excitation Source	Oscillatory arc discharge, JOAP characteristic
OPTICAL SYSTEM	
Optical System	Pashen-Runge polychromatar optic (Rowland Circle Alignment)
Spectral Range	203 mm to 810 mm
Temperature Control	Thermally Stabilized; 40°C ± 1°C
Detectors	CCD proprietary design for frequency range of interest
Calibration	Not Required
OPERATIONAL SPECIFICATIONS	
Sample Volume	1mL of fluid
Solvents/Reagents	None
Ambient Operating Temperature	0° to 40°C (32°F to 104°F)
Relative Humidity	0 to 90%, non-condensing
Ambient Altitude	Up to 7,000 meters
USER INTERFACE SPECIFICATIONS	
Software/Operating System	Windows®-based Spectroil Software
Display	External Monitor
Data Storage	External PC
Data Transfer	Ethernet RJ45
Data Entry	External Keyboard and Mouse

POWER REQUIREMENTS	
Power	AC 110/240V, 50/60 Hz, 10 Watts
Power Consumption	1000 Watts at test
Fusing	10 amps
MECHANICAL SPECIFICATIONS	
Dimensions	70.6 cm (H) x 38.4 cm (W) x 66 cm (L) (27.8 in x 15.1 in x 26 in)
Weight	70 kg (154 lbs)
Shipping Package Dimensions	18.9 cm (H) x 9.8 cm (W) x 16.9 cm (L); (48 in x 25 in x 43 in)
Shipping Package Weight	149.68 kg (330 lbs)
COMPLIANCE	
CE Mark: EMC Directive (2004/108/EC); RoHS	
CONSUMABLES	
M97008	Graphite Disc Electrodes D-2 AGKSP (500 per box)
M97009	Graphite Rod Electrodes .242 x 6" AGKSP (50 per box)
P-10524	Sample Holder High Temperature (1000/pkg)
CS-75-500	Standard Oil, 75 Base, 500g
CS-22-100-200G	Calibration Standard, 22 Element, 100 ppm, 200g
SMA-900-200G	Calibration Standard, Additive Elements, 900 ppm, 200g
M96380	Routine Maintenance Kit Spectroil Q100

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