SpectrOil 100

(RDE-OES) Elemental Analyzer

ASTM D6595, ASTM D6792

SpectrOil 100 Series Rotating Disc Electrode Optical Emission Spectrometer (RDE-OES) is the eighth generation of the market leading RDE elemental spectrometer. It is widely used in commercial oil laboratories, on-site or trailer labs, as a proven means of precisely determining elemental composition in lubricating oil, coolant, light or heavy fuels, grease, and process water. It is also a key component of Spectro's TriVector™ MiniLab 153 Combined Oil Analyzer for on site predictive maintenance operations.

Principle of Operation

SpectrOil 100 Series Elemental Analyzer, consists of three main components. These components are:

- **Excitation Source** – introduces energy to the sample. This includes a high voltage AC source that applies voltage across a small gap formed by a purified graphite rod and disc, with the disc rotating and picking up oil from the sample holder under it.

- **Optical System** – separates and resolves the resulting emission from that excitation into its component wavelengths.

- **Readout System** – detects and measures the light that has been separated into its component wavelengths by the optical system and presents this information to the operator in a usable fashion.

A specific calibration program is applied to raw spectrum which eliminates the matrix effect, so results are compliant to ASTM standards. Then user only needs to select the calibration profile for specific fluids. So, switching from oil to fuel to coolant or water only takes seconds, not hours like ICP and other instruments.

Key Features

- No sample dilution, no solvent
- Only use 2 ml of oil
- 30 second test time with up to 31 elements simultaneously measured
- Sub PPM lower limit of detection (LOD) for most elements
- Push button operation, simple to use for both laboratory and on site applications
- Conforms to ASTM-D6595 (Oil) and ASTM-D6728 (Fuel)

Specifications	
Analytical Range	Up to 32 elements from Li to Ce
Spectral Range	203 nm – 810 nm
Detectors	CCD proprietary design for frequency range of interest
Temperature Control	40°C ± 1°C
Sample Volume	1mL of fluid
Ambient Operating Temperature	0° – 40°C
Power	120/240 VAC, 50/60 Hz
Dimensions (WxLxH)	38.5 x 66 x 71 cm

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