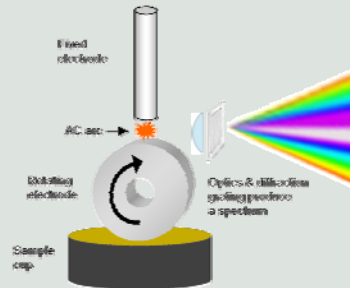


About MOA

As a company, MOA Instrumentation International was formed to better serve the needs of military and civilian oil analysis laboratories.

MOA Instrumentation International is a U.S. based analytical instruments company, founded by scientists formerly with BAIRD and responsible for the original BAIRD MOA, to develop and manufacture a superior rotating-anode emission spectrometer. Our scientists and engineers have vast experience in the oil analysis and atomic spectroscopy industry and have collectively pioneered many analytical innovations.

Decades of experience in the Optical Emission Spectroscopy marketplace, coupled with a staff descendant from legacy companies, allows us to provide service and support unavailable elsewhere. MOA Instrumentation can help keep your BAIRD and Jarrell Ash OE instrumentation in service for many years to come.



Simplified schematic of MOA II Plus operating components. The rotating electrode "wicks up" sample to the point where a high-voltage arc occurs between the rotrode and a fixed electrode. The resulting plasma vaporizes the sample and imparts sufficient energy to afford atomic emission of elements in the sample. This emitted light is subsequently collected and analyzed by a spectrometer.

MOA II Plus

Benchtop Rotating Disk Electrode Optical Emission Spectrometer

Multielement Oil Analyzer



Specifications

Spectrometer

Polychromator type:	Paschen-Runge
Focal length:	0.6 m
Grating:	2,400 groves/mm (original holographic)
Wavelength:	200.0 – 800.0 nm (dedicated potassium channel)
Dispersion:	0.69 nm/mm
Resolution:	0.035 nm (1 st order) 0.017 nm (2 nd order)
Aperture:	f/12
Channels:	60 maximum
Profile:	Automatic (via internal reference lamp)
Background correction:	Automatic (multipoint, either or both sides)

Source

Type:	AC pulsed arc
Gas:	Not required
Control:	Fiber optic
Computer:	IBM PC compatible
O/S:	MS Windows® VISTA
Software:	MOA (32-bit Windows®)
Printer:	300 dpi B&W laser
Voltage:	110/240 VAC (50/60 Hz)
Power:	1,250 watts
Environment:	10-43°C (0-95% R.H.)
Dimensions:	94 x 67 x 26 cm (WHD)
Weight:	90 kg



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For elemental analysis of:

- Lubricating oils
- Transmission fluids
- Fuels
- Hydraulic fluids
- Greases

MOA Instrumentation International



An atomic emission spectrometer employing the rotating disk electrode (RDE) technique, the MOA II Plus is the ideal primary analytical tool for machine condition monitoring programs based on oil analysis. It was designed to measure trace quantities of elements, that are either in solution or suspended as fine particles, in lubricating oils, transmission fluids, fuels, hydraulic fluids, and greases.

Direct and Rapid Oil Analysis

Direct elemental analysis of oils, without dilution or digestion, is a critical enabling technology for many applications, including fighter and transport aircraft. For example, such analysis plays a key role in reducing engine maintenance costs and preventing catastrophic failure. By establishing a normal analysis pattern, potential problems can be detected and corrective action taken before major mechanical work is needed. By providing a complete analysis in 30 seconds, and with a low cost of ownership, the MOA II Plus is perfect to enable operations - with limited space and resources - to do their own oil analysis. This eliminates the time, expense and unpredictable delays associated with sending samples to remote or centralized labs.

Mil-Spec Performance

The MOA II Plus, designed and manufactured in the United States of America, meets the rigid performance and environmental requirements of U.S. Department of Defense (DOD) military specification MIL-S-83129A. It also fully complies with T.O. 33-1-37-3, TM 38-301-3 and NAVAIR 17-15-50.3 monitoring programs. Rugged, easy-to-use, stable and accurate under severe environmental conditions, its features reflect the experience gained from our scientists and engineers decades of involvement with this technology and marketplace. Composed of three distinct modules mounted on a single frame, this compact design incorporates temperature compensating construction and comprehensive shock mounting. In addition, the polychromator features pre-aligned exit slits for all elements-of-interest so as to facilitate field upgrades as analytical requirements change.

Easy to Install and Use

The instrument can be quickly and easily installed almost anywhere. Just uncrate it and plug it in. An operator can be trained to use the MOA II Plus within a day. The operator simply installs the electrodes, loads a small amount of the sample to be analyzed (approximately 2 ml), and clicks a button. Results are automatically displayed and printed. No special sample preparation or dilution is required. MOA 32-bit Windows® software requires a minimum of training, providing simple and clear menus to guide the operator through normal operation. Other features include: automatic calibration and standardization, multi-point background correction, extensive graphics capabilities, unlimited calibration curve storage, statistical analysis, and data export to virtually any database program.

Permits the Use of Less Expensive Fuels

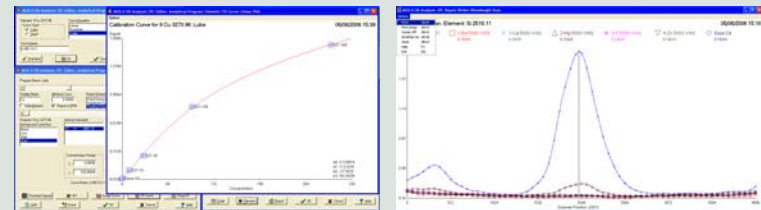
Crude and residual oils normally contain high concentrations of corrosive elements that must be treated or removed prior to use as a fuel. The MOA II Plus can analyze potential fuels to quantify these contaminants so as to determine what elements must be removed and what other elements must be neutralized by addition of additives. Accurate analysis, before and after the treatment procedure, assures the efficiency of the process and the adequacy of the resulting product as a non-corrosive fuel.



MOA II Plus was designed specifically for elemental analysis of lubricating oils, transmission fluids, fuels, hydraulic fluids, and greases for wear metals, contaminants, additives, and corrosive impurities.



- Fuels
- Hydraulic fluids
- Greases
- Lubricating oils
- Transmission fluids



Screen images from the advanced MOA II Plus software illustrate a calibration curve, the graphical user interface, and spectral peaks.