




Introduction

OA800M Oil Analysis Spectrometer is a rotating disk electrode optical emission spectrometer (RDE-OES) that combines efficiency and portability. It is designed for mobile industries such as mining, aviation, and shipping, where fixed laboratory environments are often lacking. The instrument, paired with a portable case and mobile power supply, enables on-site testing, greatly improving work efficiency and flexibility.

The OA800M can accurately analyze metal wear, contaminants, and additives in lubricating oil, completing multi-element testing within 2 minutes without the need for agon gases or cooling water, thus simplifying the process and reducing costs. It is suitable for monitoring large equipment oil, predicting mechanical status, analyzing failure causes, and assisting in equipment maintenance, upkeep, and upgrades to ensure safety and extend lifespan.

- Portability
- Efficient integration of all accessories
- Simple operation
- Rapid elemental analysis
- No need sample preparation

Product Information

	OA800H	OA800M	OA800P
			
Type	Bench-top	Mobile	Bench-top
Detector	15 pieces CCD	8 pieces CCD	16 pieces CMOS
Focal length	500mm	500mm	750mm
Dispersion	1.35mm/nm	1.35mm/nm	1.80mm/nm
Chambers and its range	2 Chambers 200nm~470nm 470nm~800nm	2 Chambers 200nm~470nm 470nm~800nm	1 Chamber 200~800nm
Elements	24	24	24
Elements can extend by customized	√	√	√
Laser safety detector (IR)	√	√	√
Bidirectional excitation	√	√	√
Temperature control	40±0.1 °C	40±0.1 °C	40±0.1 °C
Volume of sample	2mL	2mL	2mL
Conforms to ASTM D6595; ASTM D6728	√	√	√

Product Information

Mobile	x	√	x
External computer	√	x	√
External electrode sharpener	√	x	√
Build-in touch screen	x	√	x
Build-in keyboard	x	√	x
Build-in sharpener	x	√	x
Build-in code scanner	x	√	x
Shock and vibration resistance	x	√	x
USB interface	√	√	√
Printer	x	Customized	x
Curve calibration	√	√	√
Element calibration	√	√	√
Dimension	80 cm(L)×42 cm(W)×60 cm(H)	77 cm(L)×36 cm(W) ×54 cm(H)	104 cm(L)×46 cm(W)×70 cm(H)
Weight	70Kg	69Kg	125Kg
Shipping dimensions	111 cm(L)×60 cm(W)×85 cm(H)	111 cm(L)×60 cm(W)×85 cm(H)	135.6 cm(L)×89.4 cm(W) ×94.6 cm(H)
Shipping weight	126 kg	125 kg	181 kg
Standard accessories			
Electrode sharpener	1	x	1
Sample tray	1	1	1
Oil drip pan	1	1	1
Fire-prove cover	1	1	1
USB data cable	1	x	1
Power cable	1	1	1
Exhaust duct	2	2	2
User manual	1		1
Optional accessories			
Portable mobile box	x	√	x
Mobile power source	x	√	x
Variable frequency transformer	√	√	√

Detection Range of OA800M




Number of elements.			Lubricant	*Lubricant Extended 24+7	*Aviation	*Aviation	*Aviation	*Synthetic Aviation POE/Turbo	*Fuel	*Low Detection Fuel	Glycol	Water
			24	31	15	20	30	8	15	15	13	7
Element	Symbol	Common Source	Range (ppm)	Range (ppm)	Range (ppm)	Range (ppm)	Range (ppm)	Range (ppm)	Range (ppm)	Range (ppm)	Range (ppm)	Range (ppm)
Silver	Ag	Wear Metal	0-1000	0-1000	0-1000	0-1000	0-1000	0-50	×	×	×	×
Aluminum	Al	Wear Metal	0-1000	0-1000	0-1000	0-1000	0-1000	0-50	0-500	0-100	0-50	×
Boron	B	Contaminants/ Additives	0-500	0-500	0-500	0-500	0-500	×	×	×	0-500	×
Barium	Ba	Additives	0-2000	0-2000	×	0-2000	0-1000	×	×	×	×	×
Calcium	Ca	Contaminants/ Additives	0-6000	0-6000	×	0-10000	0-1000	×	0-500	0-100	0-50	0-5
Cadmium	Cd	Wear Metal	0-1000	0-1000	×	0-1000	0-1000	×	×	×	×	×
Chromium	Cr	Wear Metal / Additives	0-1000	0-1000	0-1000	0-1000	0-1000	0-50	0-500	0-100	×	×
Copper	Cu	Wear Metal / Additives	0-1000	0-1000	0-1000	0-1000	0-1000	0-50	0-500	0-100	0-50	×
Iron	Fe	Wear Metal	0-1000	0-1000	0-1000	0-1000	0-1000	0-50	0-500	0-100	0-50	0-5
Potassium	K	Contaminants	0-1000	0-1000	×	0-1000	0-1000	×	0-500	0-100	0-1000	0-5
Lithium	Li	Contaminants	0-1000	0-1000	×	×	0-1000	×	0-500	0-100	×	0-5
Magnesium	Mg	Wear Metal / Additives	0-6000	0-6000	0-1000	0-10000	0-1000	0-50	0-1500	0-100	0-50	0-5
Manganese	Mn	Wear Metal / Additives	0-1000	0-1000	×	×	0-1000	×	0-500	0-100	×	×
Molybdenum	Mo	Wear Metal / Additives	0-1000	0-1000	0-1000	0-1000	0-1000	×	×	×	0-500	×
Sodium	Na	Contaminants	0-6000	0-6000	0-1000	0-1000	0-1000	×	0-500	0-100	0-1000	0-5
Nickel	Ni	Wear Metal	0-1000	0-1000	0-1000	0-1000	0-1000	0-50	0-500	0-100	×	×
Phosphorus	P	Additives	0-6000	0-6000	×	0-10000	0-1000	×	×	×	0-2500	×
Lead	Pb	Wear Metal	0-1000	0-1000	0-1000	0-1000	0-1000	×	×	0-100	0-50	×
Silicon	Si	Wear Metal / Additives	0-1000	0-1000	0-1000	0-1000	0-1000	×	×	0-100	0-500	0-5
Antimony	Sb	Wear Metal	0-1000	0-1000	×	×	×	×	0-500	×	×	×
Tin	Sn	Wear Metal	0-1000	0-1000	0-1000	0-1000	0-1000	×	0-500	×	×	×
Titanium	Ti	Wear Metal	0-1000	0-1000	0-1000	0-1000	0-1000	0-50	×	×	×	×
Vanadium	V	Wear Metal	0-1000	0-1000	×	×	0-1000	×	×	0-100	×	×

Detection Range of OA800M






Zinc	Zn	Contaminants/ Additives	0-6000	0-6000	0-1000	0-10000	0-1000	×	×	0-100	0-50	×
Bismuth	Bi	Wear Metal	×	0-100	×	×	0-100	×	×	×	×	×
Arsenic	As	Contaminants	×	0-100	×	×	0-100	×	×	×	×	×
Indium	In	Wear Metal	×	0-100	×	×	0-100	×	×	×	×	×
Cobalt	Co	Contaminants/ Additives	×	0-100	×	×	0-100	×	×	×	×	×
Zirconium	Zr	Wear Metal	×	0-100	×	×	0-100	×	×	×	×	×
Tungsten	W	Wear Metal	×	0-100	×	×	0-100	×	×	×	×	×
Cerium	Ce	Wear Metal	×	0-100	×	×	0-100	×	×	×	×	×

The * series of tests is under research and will be launched soon. If you have any requirements, please contact Roget Scientific or our local distributor.


Instruments

	Part No.	Product Name	Description
	A-101-010-001	OA800H Oil Analysis Spectrometer	Cost-effective and high-performance oil analysis spectrometer
	A-101-010-002	OA800M Oil Analysis Spectrometer	Designed for mobility application oil analysis spectrometer
	A-101-010-003	OA800P Oil Analysis Spectrometer	High-sensitive and high-performance oil analysis spectrometer

Consumables

	Part No.	Product Name	Description
	M97008	Graphite Disc Electrode	500 PCs/box
	M97008	Graphite Rod Electrode	50 PCs/box
	H-101-012-101	Sample Cup	1000 PCs/pack
	H-101-013-001	Pipette	100PCs. / box, 3mL
	H-101-016-001	Blade of Electrode Sharpener	\

Standard Samples

	Part No.	Product Name	Content
	H-801-001-001	75 cSt Mineral Oil Blank	100mL



H-801-002-001	100ppm Custom V23+Li Standard	100g
H-801-003-001	900ppm Custom Metal Additives Standard MA5	100g

- If you require other standard items, please contact Roget Scientific or your distributor for a quotation.

Accessories and Maintenance Supplies

	Part No.	Product Name	Description
	F-101-010-004	Electrode Sharpener	Sharpen the graphite rod electrode before each experiment
	F-101-010-001	Sample Tray	Used to hold sample cups
	F-101-010-019	Ceramic Fire-proof Cover	Used for fuel experiments



F-101-010-002

Oil Drip Pan

Used to carry splashing oil drops, with a magnet on the back for easy attachment inside the groove at the bottom of the instrument



F-101-010-013

Exhaust Duct

To exhaust fumes during the experiment



F-101-010-006

Power Cable

1.5m length



F-101-010-008

USB Cable

3m length



F-101-010-022

Portable Mobile Box

It can accommodate one OA800M and corresponding accessories, and the box comes with wheels for easy mobility



F-101-010-023

Maintenance Box

Necessary accessories for maintenance included

Customer Questionnaire

If you are interested in our instruments, please fill in the following information and send it to our local agent or email the form directly to sales@rogetscientific.com. We will reply to you within two working days.

Please tick the box in the brackets

Application

- Nuclear Power plant
- Petrochemicals.
- Mining machinery
- Aerospace.
- Marine
- Engineering Machinery
- Wind power generation
- Railway
- Commercial laboratory
- Other _____

Oil Type

- Lubricating oil
- Hydraulic oil
- Fuel
- Jet fuel
- Coolant
- Cooling water
- Grease
- Other _____

Key elements and detection range

* To enhance customer experience, we have introduced flexible element sorting and detection range customization features. Customers can easily assign numbers to the elements of interest, and the system will automatically sort them according to these numbers to ensure that important information is displayed first. In addition, customers can also set the detection range for each element according to their needs to achieve personalized analysis. A special note is that setting the daily detection range in the middle of the selected range helps to obtain more accurate linear results and optimize data analysis effectiveness.

Elements	Designated number	Key elements and detection range
Al		<input type="checkbox"/> 0-10ppm <input type="checkbox"/> 0-100ppm <input type="checkbox"/> 0-1000ppm <input type="checkbox"/> Other
Ba		<input type="checkbox"/> 0-100ppm <input type="checkbox"/> 0-1000ppm <input type="checkbox"/> 0-2000ppm <input type="checkbox"/> Other
B		<input type="checkbox"/> 0-10ppm <input type="checkbox"/> 0-100ppm <input type="checkbox"/> 0-500ppm <input type="checkbox"/> Other
Cd		<input type="checkbox"/> 0-10ppm <input type="checkbox"/> 0-100ppm <input type="checkbox"/> 0-1000ppm <input type="checkbox"/> Other
Ca		<input type="checkbox"/> 0-100ppm <input type="checkbox"/> 0-1000ppm <input type="checkbox"/> 0-6000ppm <input type="checkbox"/> Other
Cr		<input type="checkbox"/> 0-10ppm <input type="checkbox"/> 0-100ppm <input type="checkbox"/> 0-1000ppm <input type="checkbox"/> Other
Cu		<input type="checkbox"/> 0-10ppm <input type="checkbox"/> 0-100ppm <input type="checkbox"/> 0-1000ppm <input type="checkbox"/> Other
Fe		<input type="checkbox"/> 0-10ppm <input type="checkbox"/> 0-100ppm <input type="checkbox"/> 0-1000ppm <input type="checkbox"/> Other
Pb		<input type="checkbox"/> 0-10ppm <input type="checkbox"/> 0-100ppm <input type="checkbox"/> 0-1000ppm <input type="checkbox"/> Other
Mg		<input type="checkbox"/> 0-100ppm <input type="checkbox"/> 0-1000ppm <input type="checkbox"/> 0-6000ppm <input type="checkbox"/> Other
Mn		<input type="checkbox"/> 0-10ppm <input type="checkbox"/> 0-100ppm <input type="checkbox"/> 0-1000ppm <input type="checkbox"/> Other
Mo		<input type="checkbox"/> 0-10ppm <input type="checkbox"/> 0-100ppm <input type="checkbox"/> 0-1000ppm <input type="checkbox"/> Other
Ni		<input type="checkbox"/> 0-10ppm <input type="checkbox"/> 0-100ppm <input type="checkbox"/> 0-1000ppm <input type="checkbox"/> Other
P		<input type="checkbox"/> 0-100ppm <input type="checkbox"/> 0-1000ppm <input type="checkbox"/> 0-6000ppm <input type="checkbox"/> Other
Si		<input type="checkbox"/> 0-10ppm <input type="checkbox"/> 0-100ppm <input type="checkbox"/> 0-1000ppm <input type="checkbox"/> Other
Ag		<input type="checkbox"/> 0-10ppm <input type="checkbox"/> 0-100ppm <input type="checkbox"/> 0-1000ppm <input type="checkbox"/> Other
Na		<input type="checkbox"/> 0-100ppm <input type="checkbox"/> 0-1000ppm <input type="checkbox"/> 0-6000ppm <input type="checkbox"/> Other
Sn		<input type="checkbox"/> 0-10ppm <input type="checkbox"/> 0-100ppm <input type="checkbox"/> 0-1000ppm <input type="checkbox"/> Other
Ti		<input type="checkbox"/> 0-10ppm <input type="checkbox"/> 0-100ppm <input type="checkbox"/> 0-1000ppm <input type="checkbox"/> Other
V		<input type="checkbox"/> 0-10ppm <input type="checkbox"/> 0-100ppm <input type="checkbox"/> 0-1000ppm <input type="checkbox"/> Other
Zn		<input type="checkbox"/> 0-10ppm <input type="checkbox"/> 0-100ppm <input type="checkbox"/> 0-1000ppm <input type="checkbox"/> Other
K		<input type="checkbox"/> 0-10ppm <input type="checkbox"/> 0-100ppm <input type="checkbox"/> 0-1000ppm <input type="checkbox"/> Other

Table of Configuration

Please arrange the required system

Instruments

Quantity	Part No.	Product Name	Description

Consumables and Accessories

Quantity	Part No.	Product Name	Description

Send Offer to

Company	
Contact person	
Address	
Tel	
E-mail	
Web	

*As the product is updated and iterated, the data sheet may change. Please refer to the latest version of the data sheet. The final interpretation rights of the data sheet belong to Roget Scientific.