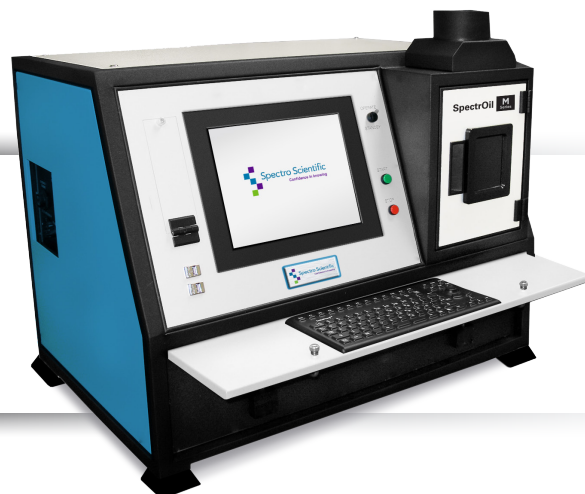


SpectrOil M/N-W

MILITARY OIL ANALYSIS SPECTROMETER

JOAP standard for spectrometric oil analysis



Originally designed for military applications in the mid 1990s and enhanced over the last two decades, the SpectrOil M/N-W is the only approved in service oil analysis spectrometer in the US Department of Defense (DoD) Joint Oil Analysis Program. It has been the industry standard for rapid, deployable and reliable spectrometers for the Air Force, Navy, Army and Marines. The SpectrOil M/N-W performs the rapid analysis of in service oils so the military's high value assets are ready to deploy when needed.

The SpectrOil M/N-W is the military version of the SpectrOil M family of oil and fuel analysis spectrometers. It is a compact, rugged, transportable and easy to use spectrometer designed for the analysis of wear metals, contaminants and additives in lubricants, hydraulic fluids and coolants. The SpectrOil M/N-W uses the time-tested and reliable rotating disc electrode (RDE) technique to measure quantities of dissolved and suspended fine particles in natural or synthetic petroleum based products and coolants. It was tested and selected by the U.S. Department of Defense (DoD) Joint Oil Analysis Program (JOAP) as its solely approved oil analysis spectrometer.

SpectrOil M/N-W Key Features

- Rugged frame and optics system that meets military shock and vibration and environmental test standards (JOAP CID-0191 and CID-486J)
- Designed for remote locations and frequent transportation
- No sample preparation
- 30 second analysis time
- Analyzes up to 31 elements simultaneously
- Self-sustained with built-in industrial touch panel PC
- Simple to operate; does not require special training
- No special utilities or gases required, only AC power
- Optional transit case for easy transportation



The optional transit case features a shock mounted cradle and a gas cylinder mechanism to raise the spectrometer to a comfortable operating height (variable).

SpectrOil M/N-W Product Information

PRODUCT INFORMATION	
Part Numbers	Spectro-M/N-W Spectro-M/N/R-W 800-00100 (JOAP Navy)
Applications	New and in-service lubricant, hydraulic
Output	mg/kg (ppm)
MIL Spec	JOAP CID 0191 (1999), CID 486J (2017)
Calibration	Factory set, no re-calibration needed
HARDWARE SPECIFICATIONS	
Excitation Source	Oscillatory arc discharge
Optical system	Rowland Circle polychromator Optic. Temperature controlled at 40C +/- 1C
Spectral Range	203 nm to 810 nm
Detectors	CCD array
OPERATIONAL SPECIFICATIONS	
Sample Volume	2 ml of fluid
Ambient Operating Temperature	10-43.3°C (50-110°F) per MIL-STD-810
Relative Humidity	0 to 90%, MIL-STD-810
Vibration	Transportation: MIL-STD-810, Method 514.5 Procedure I; Shipboard: MIL-STD-167
Shock	MIL-DTL-901E, Grade B, Class 1, Type A
EMI	MIL-STD-461G, test methods CE101, CE102, CS101, CS114, CS116, CS117, RE102, RS101 and RS103
Storage/Transport	Temperatures 10-43.3°C (50-110°F) per MIL-STD-810 Humidity 0-95% (non-condensing) per MIL-STD-810
Safety	MIL-STD-882
USER INTERFACE SPECIFICATIONS	
Operating System	Windows 10 64 bit version
PC and Display	Industrial touch panel PC, 12" display
Data Storage	Internal PC, USB, CD-RW
POWER REQUIREMENTS	
Voltage Input	AC 120/240V, 50/60Hz
Power Consumption	1000 Watts at test
MECHANICAL SPECIFICATIONS	
Dimensions	80 cm (L) x 63.5 cm (W) x 70 cm (H) (31.5 in x 25 in x 27 in)
Weights	114 kg (250 lbs) M/N 132 kg (290 lbs) M/N/R
Shipping Dimensions	102 cm (L) x 91 cm (W) x 94 cm (H) (40 in x 36 in x 37 in) for M/N 152 cm (L) x 91 cm (W) x 94 cm (H) (60 in x 36 in x 37 in) for M/N/R
Shipping Weights	261 kg (575 lbs) M/N 295 kg (650 lbs) M/N/R

National Stock Numbers and Configurations

NSN	CONFIGURATION
6650-01-535-4271	15 elements
6650-01-415-1767	15 elements with transit case
6650-01-535-4276	20 elements
6650-01-535-4273	20 elements with transit case

Consumables

SpectrOil M/N-W uses special JOAP-approved consumables.

PART NUMBER	DESCRIPTION
M97200	Graphite discs, 500, JOAP only
M97201	Graphite rod, 50, JOAP only
M90909	Reusable sample holder

Calibration Programs

CALIBRATION	DESCRIPTION	STANDARDS	
JOAP Airforce	JOAP Airforce calibration with 15 elements. Results correlate to SpectrOil M/N-W	D19-0	Base Oil
		D12-100	12 elements, 100 ppm
		D3-100	Zn, Mo, B, 100 ppm
JOAP Army	JOAP Army calibration with 20 elements. Results correlate to SpectrOil M/N-W	D19-0	Base Oil
		D12-100	12 elements, 100 ppm
		D3-100	Zn, Mo, B, 100 ppm
		CS-24-100-200G	24 elements, 100 ppm
JOAP Navy (for part number 800-00100 only)	JOAP Navy calibration with 30 elements. Results correlate to SpectrOil M/N-W	D19-0	Base Oil
		D12-100	12 elements, 100 ppm
		D3-100	Zn, Mo, B, 100 ppm
		D15-100	15 elements, 100 ppm
		CS-24-100-200G	24 elements, 100 ppm