

Technical Specifications of eraspec oil X

Available Test Methods	ASTM E2412, D2668, D7214, D7412, D7414, D7415, D7418, D7624, D7844, D8340, DIN 51452, DIN 51453, IEC 60590, IEC 60666, JOAP
Spectrometer Type	Patented mid-FTIR interferometer Laser and temperature controlled design
Measurement Cell	100 µm path length sample cell, additional built-in reference cell Optimized dual position cell design for automated reference measurement without solvent
Calibration	Factory calibration for e.g. soot, water, glycol, antioxidants
Measurement Principle	Direct trending: calculation based on the absorption spectrum of the sample at specific wavelengths Spectral subtraction: fresh oil spectrum used as reference for highest performance and lowest LODs
Measurement Time	60 seconds; warm-up time: 30 seconds
Filling Mode	Syringe filling
Sample Viscosity	Up to 1 000 mm ² /s at 20 °C
Sample Volume	Minimum 4 mL with sample displacement; minimum 2 mL with intermediate cleaning
Cleaning	Rinsing with next sample or solvent Integrated and replaceable filter to prevent blocking of measurement cell
Interfaces	Built-in PC with Ethernet, 5x USB-A, 1x USB-B, and RS232 interfaces; Wifi via USB dongle Direct LIMS connectivity via LAN and output to printer or PC, and export as CSV or PDF Optional input by keyboard, mouse and barcode reader
Display	Industry proven 8.4" multilingual color touchscreen
Remote Control	Remote service capability via Ethernet interface
PC Software	erasoft RCS – remote-control Windows® software for multi-instrument remote control, convenient data transfer, viewing spectra and result analysis erasoft OCM Software – supports operators in the management, operation and predictive maintenance of technical equipment with a focus on oil condition monitoring
Result Database	Approx. 30 000 detailed test reports and spectra stored in the internal memory
Alarm Tracking	All alarm messages are stored in the database together with the results
Power Requirements	85–264 V AC, 47–63 Hz, max. 150 W Field application: 12 V DC vehicle battery, adapter available
Operating Conditions	5 °C – 45 °C up to 90 % rel. humidity (non-condensing)
Dimensions / Weight (W x D x H)	18.0 x 28.6 x 29.3 cm (7.1 x 11.2 x 11.5 in) / 7 kg (15.4 lb)

Due to continuing product development, specifications are subject to change.

All eralytics products are manufactured under ISO 9001 regulations and are CE, ROHS and UL/CSA compliant. www.eralytics.com/eraspecoil-x



eraspec oil X instruments are available worldwide.
An international network of over 50 authorized and well-trained distributors
is ready to answer your inquiries and to offer local support and service.
www.eralytics.com/sales



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trusted solutions.
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eraspec oil X

DEDICATED FTIR LUBE OIL ANALYSIS

eraspec oil X

The NEXT ERA of lube oil analysis

The **eraspec oil X** is the world's smallest lab-grade spectral lubricating oil analyzer. At the push of a button **eraspec oil X** delivers a detailed fingerprint of lubricating oils using only 2 mL of sample. Thanks to its rugged, lightweight design **eraspec oil X** is the perfect tool for ultrafast measurements inside mobile labs or even directly in the field, still offering highest precision.



THE NEXT ERA



• Xtra VERSATILE

eraspec oil X is the perfect solution for FTIR fingerprinting of lubricating oils, providing a comprehensive composition of any lubricant or base oil. Monitoring oil degradation like oxidation, screening contaminants such as water, and checking levels of antioxidant additives was never easier.

• Xtra RUGGED

eraspec oil X is a lab-grade mid-FTIR spectrometer built inside a lightweight and rugged metal housing making it ideal for on-site lubricating oil analysis. Whether you are testing fresh or used oil, **eraspec oil X** provides fast and reliable results in the lab as well as in the field.

• Xtra FAST & EASY

eraspec oil X is factory-calibrated and comes with a built-in reference cell that allows for fully automated reference measurements. The measurement itself is fully automated and requires only 2 to 4 mL of sample. In less than two minutes **eraspec oil X** delivers a detailed fingerprint of lubricating oils with outstanding measurement accuracy.

• Xtra ACCURATE

With its modular design the detailed analysis of fresh and used oils becomes simple routine. Important degradation parameters such as oxidation, nitration or sulfation as well as soot or fuel dilution are readily monitored by IR spectroscopy. Additionally, it comes pre-programmed for important antioxidant and wear additives.

With direct trending and spectrum subtraction the two standard FTIR evaluation methods are supported. In contrast to the direct method, spectrum subtraction evaluates the difference to the fresh oil spectrum at a specific wavelength.

eraspec oil X: Dedicated FTIR oil analysis to support predictive maintenance

- **Contamination detection**
Detects contaminants like water, glycol, fuel, or other impurities compromising oil quality
- **Oil composition monitoring**
Trending of oxidation, nitration, sulfation
- **Additive depletion**
Tracks antioxidants and anti-wear additives