

Q6000 FDM Series

PORTABLE FUEL DILUTION METERS

Solvent-free, simple to use, fast and accurate results



The Need for Fuel Dilution Measurement

If left unchecked, fuel dilution in lube oil causes serious engine damage. In diesel engine crankcases, fuel dilution can be caused by:

- Excessive idling
- Defective injectors
- Loose connections
- Intercooler leakage (aircraft hydraulic systems)

The Q6000 Fuel Dilution Meter (FDM) is a portable fuel dilution meter used in the laboratory or in the field for rapid measurement of fuel contamination in lubricating oil. The Q6000 is a low-cost screening alternative to other techniques such as flash point test, gas chromatograph or FT-IR.

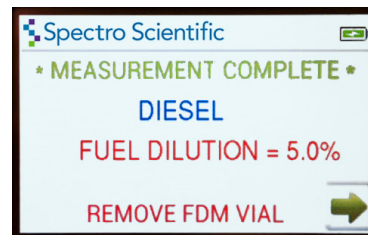
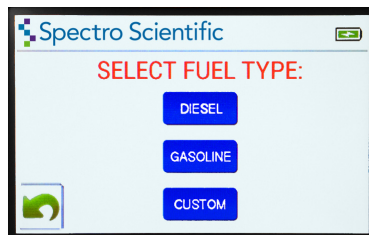
The Q6000 is the newest model based on a concept originally developed in collaboration with the U.S. Navy. The instrument measures the concentration of contaminating fuel vapor present in the air or "headspace" over the lubricating oil. In addition to numerous naval installations, the FDM systems are widely used in the railroad industry and within independent testing laboratories.

Lab quality results where and when you need them

- Innovative headspace sampling fang design ensures excellent repeatability ($\leq 5\%$ RSD).
- 0.2 to 15% fuel dilution measurement range.
- Disposable FDM vials eliminate carryover contamination.
- Onboard memory allows use of up to three stored calibration profiles.
- Sample ID entry and data file export via USB cable.
- Battery powered, lightweight, optional hard case for transit.

Fast and easy to use

- Small sample required in disposable FDM vial – no solvents needed for cleaning.
- Test results within a minute for direct measurement of fuel dilution.
- Result in % fuel displayed, allowing immediate maintenance actions.
- Color touchscreen.
- Audio prompt feature guides operators through testing. Languages include English, Spanish, Russian, Chinese and French.



Q6000 FDM Series Ordering Information

The Q6000 and Q6001 includes the base fuel dilution meter, soft tip stylus, battery charger, USB cable, CD manual, FDM vials and disposable pipettes for 100 samples.

Q6000 is a single calibration device – suitable for fleet operators.

Q6001 can store up to three calibrations – suitable for laboratories or service companies.

PART NUMBER	
SpectroFDM-Q6001	Q6001 Fuel Dilution Meter System – Multiple Calibration. Requires SA1019 Standard Accessory Kit.
SpectroFDM-Q6000	Q6000 Fuel Dilution Meter System – Single Calibration. Requires SA1019 Standard Accessory Kit.
SA1019	Spectro-Q6000 Standard Accessories
PRODUCT INFORMATION	
Application	Mineral and Synthetic Lubricants used in liquid fueled engines
Output	% (wt or vol) Fuel dilution
Methodology	ASTM WK 46501
Standard Analytical Range	0.2 -15% fuel in oil (fuel dilution)
Accuracy	≤± 0.2% fuel dilution in range 0.2-2% ≤± 10% of measurement in range 2-15%
Repeatability	≤± 5% RSD of measurement + 0.2% fuel dilution
Calibration	Single point, User developed or Certified Check Standard (optional)
OPERATIONAL SPECIFICATIONS	
Sample Volume	500 µL
Solvents/Reagents	None
Ambient Operating Temperature	5°C to 35°C (41°F to 95 °F)
Relative Humidity	0 to 90%, non-condensing
Ambient Altitude	up to 2,000 meters (6561 feet)
USER INTERFACE SPECIFICATIONS	
Display	4.3" TFT color screen (480 X 272)
Data Storage	4 GB
Data Transfer	USB
Data Entry	Touch-screen with stylus
POWER REQUIREMENTS	
Battery Power Source	Built in Rechargeable Lithium Ion Battery
Power	AC 110/240 V, 50/60 Hz, 9 Watts, 9 Volts
Typical Runtime	3-4 hours
Recharge Time	4 hours

MECHANICAL SPECIFICATIONS	
Dimensions	15 cm (W) x 19.75 cm (D) x 13.5 cm (H) (5.9 in x 7.77 in x 5.31 in)
Weight	1.4 kg (3 lbs)
Shipping Package Dimensions	17.1 cm (H) x 6.3 cm (W) x 5.5 cm (L) (18 in x 16 in x 14 in)
Shipping Package Weight	8.1 kg, (18 lbs)
COMPLIANCE	
Compliance: CENELEC EN 61010-1 (2010/10/01 Ed:3); CENELEC EN 61326-2-1 (2006/05/01); FCC 47CFR 15B; RoHS	
CONSUMABLES	
346162035	FDM Vials Kit (50 pk)
346162037	FDM Vials Kit (500 pk)
346162036	500 µL Disposable Pipettes (50 pk)
P-11185	500 uL Disposable Pipettes (500 pk)
DSL5%DEV-100	5% Devolatized diesel in oil fuel dilution standard, NIST traceable, 100ml
DSLBLK-15W40-100	Diesel blank standard for fuel dilution standard, 100 ml
GASFD-2P-100	2% Devolatized gasoline in oil standard, NIST traceable, 100 ml
OPTIONAL ACCESSORIES	
P-11186	Positive Displacement Pipette 100-1000 µl
P-11187	Pipette Tips 100-1000 µl (182 pk)
P-11189	Transport Case FDM 6000 Series

