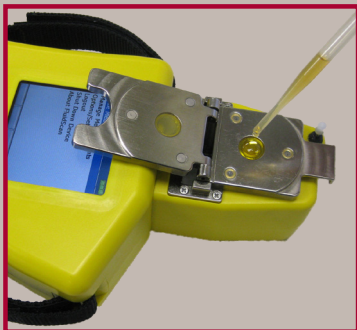


FluidScan®

Handheld Fluid Condition Monitor

Features

- ▶ Small, handheld rugged mid-infrared spectrometer
- ▶ Sensitive, comparable to high-end laboratory FTIR spectrometers
- ▶ On-site analysis
- ▶ Reliable performance – self-calibrating reference
- ▶ Under 1 minute analysis time
- ▶ Unique flip-top cell
- ▶ Measures key biodiesel parameters including:
 - ★ Total Acid Number (TAN)
 - ★ Water
 - ★ Free Fatty Acid Content
 - ★ Total Glycerin
 - ★ Biodiesel (FAME) Content in Diesel Fuel
- ▶ Stores over 5,000 records
- ▶ Available in Yellow or Olive Drab



FluidScan's Flip-Top Sampling Cell
Eliminating the Need for Solvents



"A portable, fast, accurate and cost effective instrument for the on-site determination of biodiesel quality, blend verification and feedstock suitability."

FluidScan® is a handheld fluid analyzer that provides immediate on-site analysis of critical biodiesel parameters necessary for the production and distribution of high quality biodiesel. FluidScan quickly and effectively measures key quality properties for incoming inspection, during biodiesel production as well as at the final tank.

FluidScan® analyzes fluids using infrared spectroscopy, a technique that has found wide acceptance as a primary test for biodiesel quality control. The small handheld design allows FluidScan to analyze fluid samples in less than one minute with accuracy similar to laboratory instruments. FluidScan® provides immediate on-site analysis of critical properties in feedstock, biodiesel product and diesel/biodiesel blends.

Application:

The FluidScan® Fluid Condition Monitor is ideal for applications including:

- Production Plants
- Terminals
- Distribution Racks
- Incoming Inspection
- Rail Car or Tank Truck Inspection

FluidScan® Theory of Operation

The FluidScan® Lubricant Condition Monitor is a self-contained handheld analyzer that delivers instant fluid condition assessment to the user. It reports both ASTM Standard Practice E 2412 condition parameters in addition to key indicators such as TAN, TBN, and incorrect lubricant. It has no moving parts and eliminates the need for sample preparation and time-consuming cleanup by using a flip-top fluid cell for easy and rapid on-site analysis. At the core of the FluidScan® is a patented mid-infrared spectrometer. The spectrometer collects the infrared light transmitted through the fluid in the flip-top cell, into a waveguide. The waveguide then carries the light to and from a prism-like diffraction grating and into a high-performance array detector which registers the infrared spectrum of the fluid. The waveguide allows the infrared signal to be completely confined, minimizing any atmospheric interference and maximizing the efficiency of the spectrometer. This unique technology enables a rugged, highly accurate miniature device to operate on a Li-Ion battery pack for up to 8 hours.

Key infrared signatures of fluid condition, using Joint Oil Analysis Program Technical Support Center (JOAP-TSC) and proprietary methods, are used to obtain fluid status in real-time. The user loads a sample into the flip-top cell, enters sample information, and initiates an analysis using the FluidScan®'s intuitive, color user interface and navigation pad. Status and supporting fluid condition parameters are then determined and displayed to the user, and can be stored for trending or exported to a central database. FluidScan Manager database software is provided so a personal computer may store, trend, set alarms, and report all collected data.

Measure Fluid » Results	
Biodiesel B100 A 29 Oct 2009 11:23:17	
% BD	100.0 % BD
TAN	0.37 mgKOH/g
Total Glycerin	0.193 mass %
Water	0 ppm
<input type="button" value="Spectrum"/> <input type="button" value="Discard"/> <input type="button" value="Save"/>	

Biodiesel Analysis Screen

Specifications:

Power:	Replaceable Li-Ion Battery Pack
Size:	17 x 14 x 9 cm (6.5 x 5.5x 3.5 in.)
Weight:	1.4 Kg (3 lbs)
Operating System:	Windows CE
Display:	320 x 320 Transflective Color Display
Connectivity:	USB Host (accepts keyboard and mouse) USB Client (for data transfer)
Memory:	64 MB RAM 64 MB Flash
Controls	4 Soft Buttons and a Directional Pad
Storage:	5,000 Assets and Analyses
Operating Temperature:	-10°C to 50°C (14°F to 122°F)
Operating Humidity:	0 to 100%, Non-condensing
Ambient Altitude:	5,000 meters (16,400 feet)
Battery Life:	6 - 8 Hours

SPECTRO INC.

QinetiQ North America

160 Ayer Road • Littleton, MA 01460 USA

Tel: (978) 486-0123 • Fax: (978) 486-0030

E-mail: sales@spectroinc.com • World Wide Web: www.spectroinc.com

Benefits

The FluidScan® provides immediate on-site analysis of biodiesel properties. The primary benefits of real-time, on-site analysis include:

- No delay in waiting for laboratory analysis.
- Spot check raw feedstock.
- Verify Splash blending.
- Pre-screen prior to full testing.
- On-site sampling at tanks, tanker compartment, racks, rail car tops.
- Uses no hazardous or flammable fluids.

Spectro Incorporated is the only company dedicated exclusively to providing instrumentation, software and applications support for machine condition monitoring through oil analysis.

Contact us for your instrumentation needs and complete turnkey systems for oil analysis.

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Biodiesel v.2.4/ 29 Oct. 2009