

Specifications

Function

Quantitative constituent analysis for product research measurement and/or product monitoring.

Optical Capabilities

Measurement Mode Diffuse transmittance
Spectrum Range 32 filters covering wavelengths from 604 to 1045 nm
Scan Speed Up to 10 scans per second
Optical Range 0 to 6 AU
Resolution 0.00001 AU
Stability 0.02 Mili-AU
Measurement Modes Diffuse transmittance
Measurement Time Variable (Typically under 45 seconds)
Measurement Data Log 1/T values

Sample Information

Sample Size 200 mL with 75 mm wavelength
Sample Holder Reusable glass with chemical seal cover
Sample Preparation None required
Sample Destruction None
Measurement Range From .05% to 99%

Physical Data

Dimensions 16" x 16" x 12" (40 x 40 x 30 cm)
Weight 22 lbs (10 kg)

Installation Data

AC Power Requirements 100 to 240 VAC, 50/60 Hz with autoswitching
Power Consumption 60 W

System Capabilities

Data Transfer Via RS-232 port for interface with PC
Data Analysis Includes full calibration software with MLR, Optimal WaveLength Search
Results Traceable to CFR Engine or other fuel lab standards
Calibrations Stores 100 separate sets
Precalibrated for Octane number RON, MON, (R + M)/2
Diesel cetane index, Cetane number
Outputs Large Backlit LED display; built-in printer

Other Zeltex Products

ZX-101/XL Near-Infrared Portable Octane Analyzer

- Lab accurate results in 15 seconds
- Measures all grades of unleaded gasoline
- Provides RON, MON, and (R+M)/2
- Small, lightweight, and easy to use
- Battery operated
- Includes research software and RS-232 output
- Results traceable to CFR engine and other laboratory standards



For Analysis
...Where you need it most
...When you need it most™

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Printed in USA

Zeltex® ZX-440 XL

Near Infrared Gasoline/Diesel Fuel Analyzer

For Analysis
...Where you need it most
...When you need it most™



Near Infrared Gasoline/Diesel Fuel Analyzer

Fast, Accurate and Comprehensive Fuel Analysis...

... from an advanced instrument designed for laboratory applications ranging from simple measurement to sophisticated research.

For Simple Measurement

The ZX-440 XL Liquid Fuel Analyzer utilizes highly accurate near-infrared spectroscopy for routine constituent analysis and is less costly and easier to use than larger more bulky fuel analyzers. The ZX-440 XL accurately analyzes gasoline, diesel fuel, motor oil, and other petroleum based products. Integrity of the samples is maintained with no waste or chemical byproducts.

The ZX-440 XL's patented source-array, solid state optical system uses 32 fixed, narrow bandpass filters mounted in front of infrared emitting diodes to project a spectrum of near-infrared energy (from 604 to 1045 nanometers) without any moving optical parts, light bulbs, or other mechanical devices prone to failure.

During operation, light energy that enters the liquid sample is scattered and absorbed within the sample. The ZX-440 XL analyzes the spectra exiting from the sample and directly displays the product's constituent concentrations on a large, back-lit LED display. A built-in printer provides a permanent record of test results.

For Sophisticated Research

As a research instrument, the ZX-440 XL allows a user to perform meaningful studies involving new or unusual applications and build a comprehensive library of data on which to base future product development and control decisions.

The ZX-440 XL includes software for performing complex regression analysis for statistics, calibration, and stores files in ASCII or binary format for use with other software.



Easy, Three Step Analysis!



Step One
With the measurement chamber empty, press the MEASURE button. (This standardizes the instrument)



Step Two
Place sealed sample in the measurement chamber, close hood, and press the MEASURE button.



Step Three
Rotate the sample 180°, close hood, and press the MEASURE button.

Results are displayed and printed in seconds!



Outstanding Operating Features

As a simple measurement instrument, the ZX-440 XL:

- Is easy to use
- Displays results in under 30 seconds
- Measures a large 200 mL sample with 75 mm pathlength (no sample preparation, damage or chemical byproducts)
- Measures extreme sample concentrations from .05 to 99%
- Measures multiple constituents simultaneously
- Has a built-in printer for permanent record keeping

As a sophisticated research instrument, the ZX-440 XL:

- Utilizes superior, patented source array technology proven in more than 30,000 applications
- Features a 6 magnitude optical sensitivity
- Performs high speed optical scans (up to 10 per second)
- Measures at 32 primary wavelengths and provides spectrum data from 604 to 1045 nanometers.
- Has a built-in RS-232 port for sending data to a PC for further analysis
- Uses infrared emitting diodes (IREDS) with virtually unlimited life (no light bulb burnouts)

Unmatched Performance Benefits

From simple measurement to sophisticated research the ZX-440/XL is the most cost-effective choice for composition control vital to overall profitability and exploration of new or improved products.

The ZX-440 XL Provides:

- Fast, accurate and comprehensive test results
- A qualitative and quantitative edge in analysis of daily production output
- Optical data between 604 nm and 1045 nm for analysis using PLS, PCA, MLR and other statistical mathematics
- Unmatched performance and reliability (no moving parts to fail or break)

How Does It Work?

Applied Science in Measurement

Diffuse Transmittance

Light energy that enters a product is scattered and absorbed within the product. The ZX-440 XL analyzes the spectra that exit from the products and measures constituent concentrations.

