



QuickSpec

Fast and Accurate Ethanol and Water Analysis

- Highly Accurate Ethanol Analysis in only 20 Seconds
- Measures Full Range, 0 100%, Ethanol in Gasoline Blends
- Ideal for Lab and Field Measurement of Fuel Grade Ethanol
- ® Rugged Design, Portable, Low cost, Easy to Use

QuickSpec

PORTABLE ETHANOL AND WATER ANALYSIS

PetroSpec's portable QuickSpec™ ethanol analyzer delivers simple, fast, and accurate analysis of ethanol and water in gasoline blends throughout the fuel blending process. QuickSpec provides a broad analysis range of ethanol from 0.1 vol% to 100.0 vol%, which is crucial for ethanol blending in gasoline and for measuring purity of fuel-grade ethanol.

KEY ADVANTAGES



SIMPLE, FAST, AND ACCURATE ANALYSIS

- User-friendly, solid-state QuickSpec[™] is extremely rugged, with no moving parts
- Near-infrared spectral analysis, is accurate down to tenths of volume percent.
- The instrument sets a baseline and adjusts the electronics through automatic calibration.



ETHANOL PURITY/ETHANOL IN FUEL BLENDS

- Higher ethanol consumption requires to quickly and accurately measure the purity of the ethanol that will be blended into fuels for final consumption.
- Terminal operators and others need to know at all times that they are receiving fuel ethanol that meets the ASTM D4806 standard.



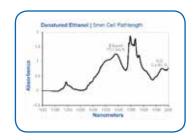
LOW MAINTENANCE OPERATION

- Precise determination of ethanol, water, and denaturant
- Virtually maintenance-free under normal operating conditions
- Fast, fully automated, and easy to use by non-technical personnel
- Lightweight, compact, and conveniently portable design

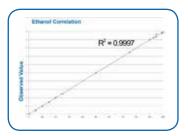
NIR SOLUTION

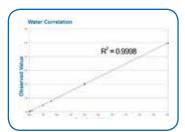
QuickSpec™ was developed around a spectroscopy method for analyzing the composition of gasoline grade ethanol, a method known as near-infrared spectrophotometry. The method is delivered pre-calibrated.

By developing a series of calibration solutions that span the expected concentrations, the absorbance at 1590 nm and 1950 nm can be converted to concentration of ethanol and water, respectively. The amount of denaturant is calculated to be the balance of the mixture. QuickSpec $^{\text{TM}}$ can quickly determine ethanol purity in the range of 0 - 100%, water at 0 - 5%, and denaturant or gasoline from the balance. Quickspec $^{\text{TM}}$ is quite portable, being no larger than a pair of field glasses. An optional battery pack allows instant mobility with power that will last days due to a built-in automatic sleep mode.



Near infrared spectrum of an ethanol and water mixture





Calibration results for ethanol and water





SPECIFICATIONS

Detection Method	Near Infrared Spectroscopy
Optical Design	LED photometric technique measures absorbance at selected wavelengths
Performance	Resolution 0.01%(Water), 0.1% (Ethanol, Denaturant)
Measuring Range	0.01 - 5.00 vol% (Water), 0.1 - 100.0 vol% (Ethanol), Balance (Denaturant or gasoline)
Sample Size	2 ml
Response Test Time	20 seconds
Electrical	120 or 240 VAC 50/60 Hz
Dimensions (w x d x h)	15 x 20 x 10 cm (6 x 7.8 x 4 in)
Weight	2 kg (4.4 lbs)

Continuing research and development may result in specifications or appearance changes at any time

ABOUT PAC

PAC develops advanced instrumentation for lab and process applications based on strong **Analytical Expertise** that ensures **Optimal Performance** for our clients. Our analyzers help our clients meet complex industry challenges by providing a low cost of ownership, safe operation, high performance with fast, accurate, and actionable results, high uptime through reliable instrumentation, and compliance with standard methods.

over 50 distributors. PAC operates as a unit of Roper Technologies, Inc., a diversified technology company and a constituent of S&P 500, Fortune 1000, and Russell 1000 indices.

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