The Portable Fuel Property Analyzer (PFPA) provides rapid fuel analysis anywhere it’s needed: the plant, port, or field. Analysis is obtained in seconds using only a 2 mL fuel sample. The PFPA uses Near Infrared Spectroscopy combined with Advanced Multivariate Analysis to determine key fuel properties that influence engine performance. The PFPA property determinations were developed and validated according to ASTM E1655 "Standard Practice for Infrared Multivariate Quantitative Analysis" using the property values of a diverse matrix of over 800 fuels from around the world determined by traditional ASTM methods.

The PFPA is used as follows:
1) The PFPA is turned On (warm-up takes 1 minute)
2) The type of fuel, Diesel, Jet or Gasoline is selected
3) A Reference Vial is placed in the PFPA and measured by pressing RUN (measurements take 10 seconds).
4) The Sample is placed in a disposable 2 mL vial, sealed, placed in the PFPA and measured by pressing RUN.
5) The Results are displayed in 10 seconds, and can be printed by pressing PRINT RESULTS.

There is no cleaning or flushing required between samples!

Properties Predicted by the PFPA According to Fuel Type.

<table>
<thead>
<tr>
<th>Diesel</th>
<th>Jet Fuel</th>
<th>Gasoline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density / API Gravity</td>
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</tr>
<tr>
<td>Distillation Fractions</td>
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</tr>
<tr>
<td>(IBP, 10%, 50%, 90%, FBP)</td>
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</tr>
<tr>
<td>Cetane Index</td>
<td>Freeze Point</td>
<td>Octane (RON, MON, AKI)</td>
</tr>
<tr>
<td>Viscosity 40C</td>
<td>Flash Point</td>
<td>Reid Vapor Pressure</td>
</tr>
<tr>
<td>Flash &amp; Cloud Points</td>
<td>Fuel System Icing Inhibitor</td>
<td>Ethanol &amp; MTBE</td>
</tr>
<tr>
<td>Aromatics &amp; Biodiesel</td>
<td>Aromatics &amp; Net Heat</td>
<td>BTEX</td>
</tr>
</tbody>
</table>
Portable Fuel Property Analyzer (PFPA)

Advantages

- One Analyzer for All Fuel Types: Diesel, Jet and Gasoline
- Only 2 mL of Fuel Required
- No Sample Preparation Required
- Analyzer Warm-Up takes <1 Minute
- Complete Analysis in 10 Seconds
- Permanently Aligned and Calibrated
- Light Weight, Portable, and Easy To Use
- Rugged Design, No Moving Parts
- Analysis Based on ASTM Data, Developed and Validated According to ASTM E1655 using Eigenvector PLS Toolbox
- Analysis Software and Tablet Computer Included
- Imbedded Printer
- Optional 4 Hour Rechargeable Battery Pack
- Economically Priced!

Analysis specific to regional fuels or new fuel types can be easily added to the PFPA without making any modifications to the hardware.

US Patent 8,781,757

The PFPA was developed with the support and cooperation of the United States Marine Corps, Army, and Navy.

Contact Bill Welch RTA Sales Representative
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Fax 606-585-0223
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System Specifications

Operation
- Warm-up Time: 1 minute
- Measurement Time: 10 seconds
- Sampling: 2 mL glass vials (disposable)

Analyzer
- Measurement Type: Near Infrared Spectroscopy
- Optical Design: Dispersive (no moving parts)
- Light Source: Incandescent Lamp
- Detector: 256 pixel InGaAs (thermo-electrically cooled)
- Spectral Resolution: 3-6 nm (20-30 cm⁻¹)
- Spectral Range: 1000 to 1600 nm
- Calibration: Factory set using NIST standard lamp

Analysis
- Fuel Properties: Developed and validated according to ASTM E1655.
- System Check: Diesel 2 Sample
- Outlier Detection: Non fuel or contaminated fuel rejected

Data System
- Computer: Tablet computer
- Operating System: Windows 8.1
- Sample Storage: Over 1000 measurements on computer
- Data Export: USB Port, Ethernet, WiFi
- Data Printout: Thermal printer

Environment
- Dimensions: 7x13x16” (17.4x33x40.6 cm)
- Weight: 14 lbs (6.24 kg)
- Power: 120/240 VAC 50/60Hz or 12 VDC with automotive lighter adapter
- Operating Temperature Range: 32 to 125 F (0 to 52 C)

RTA is located at 362 Industrial Park Rd (#8) / Middletown, CT 06457
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