

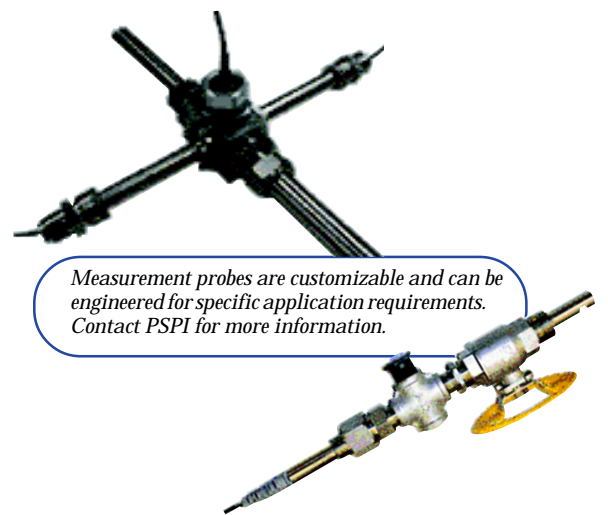
FUELVIEW COLORIMETER

PROCESS/ON-LINE 42015 FV

Measure red dye concentration, color and haze simultaneously, continuously and completely on-line!

The PSPI FuelView Analyzer continuously measures the red dye concentration of dyed commercial fuels, simultaneously with color and haze, either in a side-stream or directly in the pipeline.

- Measures color on ASTM D 1500, Saybolt (ASTM D 156) or APHA Platinum-Cobalt (ASTM D 1209) scales
- Designed to measure Solvent Red 164 dye concentrations in aviation and diesel fuels up to 20 mg/L
- Simultaneously measures color on ASTM D 1500 or Saybolt (ASTM D 156) scales
- Capable of measuring red dye, color, and colonial haze (ASTM D 4176) using a single measurement probe
- Several different styles of measurement probes available to fit all applications
- Flow-through cells provide accurate Red Dye and Color measurements for samples with particulate or water contamination
- Insertion probe installs directly into pipeline — no need for a Fast Loop or Sample Conditioning System
- High pressure, high temperature, and customized measurement probes available
- Models available with Welker Insertion Device for assisted probe insertion and retraction under pressure



Measurement probes are customizable and can be engineered for specific application requirements. Contact PSPI for more information.

MEASUREMENT RANGE

| | |
|--------------------------------------|--------------|
| ASTM D 1500 Scale | 0 to 8 |
| Saybolt (ASTM D 156) Scale | -16 to 30 |
| APHA / Platinum Cobalt (ASTM D 1209) | 0 to 100 |
| Haze (ASTM D 41756) | 1 to 6 |
| Red Dye (Solvent Red 164) | 0 to 20 mg/L |

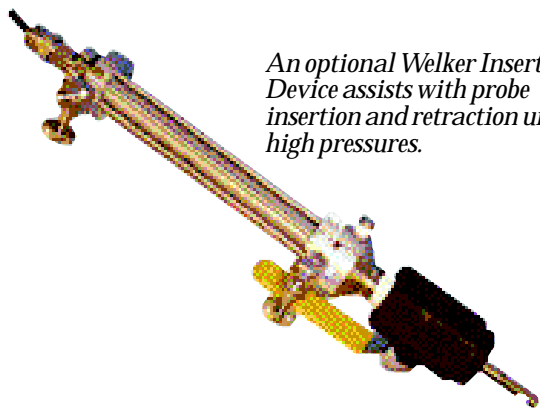
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THEORY OF OPERATION

The PSPI Clear View Analyzer is designed for real-time, on-line process analysis. It can accept a wide variety of optic probes, depending on application requirements. Light is sent through an optical fiber into the sample probe. The VIS/NIR lamp is optically stabilized for ultra-low photometric drift with its own detector adjusting the voltage to the lamp to maintain lamp brightness. The probe allows light to pass through the sample.

Depending on sample characteristics, light can be absorbed or reflected at different wavelengths. The light transmitted through the sample is collected and sent back to the detector via a second fiber optic cable. The light received from this fiber is then directed to several narrow band wavelength filters and detectors using a patented procedure. The light reflected by the sample is collected at a 90 degree angle from the initial beam direction and sent back to the detector via a third fiber optic cable. The circuitry in the control unit analyzes these signals from the flow probe and converts them into color results using programmed calibration sets. Haze results are determined in the insertion probes using loss of transmission.



An optional Welker Insertion Device assists with probe insertion and retraction under high pressures.

SPECIFICATIONS

Performance

- **Reproducibility:** (dependent on installation) $\pm 2-4$ mAU with $< 2^\circ$ system variations at $AU < 1$
- **Accuracy:** Correlation with ASTM methods
- **Ambient Temperature:** 10° to 50°C (50 to 120°F); weather protection required; no direct sunlight

Sample Requirements

- **Sample Pressure:**
 - Insertion Probes:* Up to 50 psig (3.5 bar g); Welker Insertion Device recommended for higher pressures; custom probes can handle up to 1500 psig (103 bar g)
 - Flow Cells:* Up to 500 psig (34.5 bar g)
- **Fast Loop and Sample Conditioning:** Not required for insertion probes; Sample Conditioning System and Flow Cell recommended for samples with particulate or free water
- **Sample Flowrate:** Laminar flow through probe, typically 2 to 5 L/minute (0.5 to 1.3 gal/min)
- **Sample Temperature:**
 - Insertion Probes:* Up to 150°C (300°F) with standard probes; custom probes can handle up to 400°C (750°F)
 - Flow Cells:* Up to 150°C (300°F) with standard cells; custom cells can handle up to 300°C (570°F)

Utility Requirements

- **Electrical:** 100–240 VAC, 50/60 Hz, single phase, 60 Watts

Signal Outputs

- **Analog Outputs:** Up to four isolated 4–20 mA analog outputs user configurable and programmable
- **Alarm Contacts:** Three programmable Opto-closure contacts
- **Local Display:** 3.5" x 3" backlit LCD display; nine-button keypad for programming

Area Classification

NEC Class NEMA-4X Enclosure; Optional Type-X Purge for Class 1, Division 1, Groups C and D; sealing glands for fiber optics, electrical, and signal connections supplied separately: **CE** compliant

Dimensions & Weight

| | H | W | D | units |
|-----------------------|--|-----|-----|--------|
| • Control Unit | 250 | 200 | 150 | mm |
| 3.6 kg (8 lbs) | 10 | 8 | 6 | inches |
| • Probe | Weight and dimensions vary with specific probe configuration | | | |
| • Fiber Optics | 5 meters (195 inches) standard; available in custom lengths | | | |

Optional Accessories

- **Welker Insertion Device** assists with probe insertion and retraction under high pressures

Due to PSPI's commitment to continual product development, specifications are subject to change without notice.

For more information, please contact us:

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