

# **ASPROC**

H<sub>2</sub>S IN LIQUIDS ANALYZER

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## H<sub>2</sub>S IN LIQUIDS PROCESS ANALYZER

Model 205 PermaStream | Crude Oil, Fuel Oil, Dirty/Clean Water, Drilling Fluid, Condensate, Diesel





### **Product Features**

- Real-time & accurate measurement
- Measure H2S in crude, water, diesel, etc.
- Specific to H2S only, no false positives ever
- No field calibrations required
- No liquid sample conditioning required
- No sample filters required
- Only one tap-point needed for sample exit and return (when pitot probe is utilized)
- Fast response time
- Proven reliability
- Conformity to ASTM methods
- Set in-line at process pressure and flow

## **Applications**

- Crude Oil (light/medium/heavy) Dirty/clean Water Diesel Fuel Oil Drilling Fluid Condensate Quality control
- Corrosion control Transportation safety Loading/unloading of trucks, rail cars, pipelines, etc. Compliance

No 'false positives' The only detection method specific to H2S only, proven by thousands of applications <u>Ultra low-maintenance</u> Advanced Colorimetric-Rateometric Detector is guaranteed hassle-free for long term operation Dependable operation No sample conditioning required; no filters, no pressure regulators, no pumps required No field calibrations The analyzer does not require calibrations in the field even with unexpected process changes

## **Product Description**

The effective procedure to measure H2S in crude oil and other opaque liquids requires the representative stripping of the H2S from the liquid into the gas phase for analysis by a gas H2S analyzer or sensor. Traditionally, headspace stripping columns have been used for this purpose but have become infamous for being problematic, high maintenance, and requiring many moving parts that break down over time.

Analytical Systems has overcome the shortfalls of the headspace stripping column by developing a reliable alternative; the state-of-the-art PermaStream utilizing KECO Membrane Technology. The PermaStream efficiently and reliably separates the H2S from the liquid sample for measurement in the gas phase by the H2S analyzer which is specific only to H2S and does not suffer from false positives. The PermaStream is a simple device that continuously provides an ultra-clean and dry sample to the H2S sensor. This results in radically reduced maintenance when compared to the headspace stripping column.

Analytical Systems is established as the world-wide leader in H2S in liquids analysis online due to the many benefits of PermaStream's exclusive technology. The 205 PermaStream is capable of measuring in ppb, ppm or even precent ranges and will never suffer from false-positives like other H2S detection methods.











## **Typical Specifications**

#### **DISPLAY**

- Alpha Numeric LCD
- 128 x 64 pixel
- Back-lit display

#### **TEMPERATURE RANGES**

- 1°C to 50°C (operating) without cooling/heating
- 0°C to 70°C (storage)

#### **ANALOG**

- 4-20mA Isolated

#### ANALYTICAL PERFORMANCE

- Resolution: 1 ppb

- Accuracy: ±2%

- Repeatability: ±1%

- Linearity:±1%

- Drift: Nil

- Temp. Coefficient: 0.01% / °C

- Analysis time: 0.75 Second

#### **DETECTION RANGES**

- 0-1 ppm
- 0-10 ppm
- 0-50 ppm
- -0-100 ppm
- 0-500 ppm
- Percent ranges
- Customer specified (contact factory)

#### **SAMPLING SYSTEM**

- Carrier Air/Gas requirement: 15 psig constant and 150 ml/min flow rate
- Liquid requirement: Minimum 0.5 L/min flow and maximum 1,500 psig

-~175 lbs (analyzer only, no options)

#### **DIMENSIONS**

- 3 ft X 3 ft X 1.5 ft

#### UTILITIES/SETTINGS

- 110VAC or 220VAC
- 100 Watts normal, 700 Watts max
- Carrier Air/Gas: 180 ml/min (15 psig max)
- Sample flow: 0.5 L/min minimum
- Sample pressure: 1,500 psig max

#### **AREA CLASSIFICATIONS**

- Class 1 Division 1
- Class 1 Division 2
- Zone 1 or Zone 2

#### **AVAILABLE OPTIONS**

- Concentration relay alarms
- Diagnostic/fault relay alarms
- Low flow relay alarms
- RS-232/485 Modbus
- Data Logger for data download to PC
- Remote monitoring/control with PC
- Automatic calibration

#### **TECHNOLOGIES**

- PermaStream™(ASI Membrane Technology)
- Rateometric-Colorimetric Tape

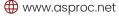
## **Advantages**

No 'false positives' The only detection method specific to H2S only, proven by thousands of applications <u>Ultra low-maintenance</u> Advanced Colorimetric-Rateometric Detector is guaranteed hassle-free for long term operation Dependable operation ASI Membrane Technology eliminates liquid carry-over that plague headspace stripping columns No field calibrations The analyzer does not require calibrations in the field despite any unexpected process changes











- ✓ **Specific only to H<sub>2</sub>S** No known cross-interferences proven by thousands of world wide applications
- ✓ **No calibrations required** Based on exclusive KECO Membrane Technologies and advanced Tape detector
- ✓ Automatic self-zero The KECO H₂S analyzer does not suffer from a 'zero drift' as seen in other analyzers thus eliminating zero gas requirements
- ✓ **Versatile** The analyzer will not suffer in the event of process changes no matter how drastic
- ✓ Wide Range Ability The analyzer is capable of measuring from the PPB levels through PPM up to saturation
- ✓ Hassle free KECO advanced Tape detector only needs 2 to 4 tape changes per year (typical) on standard 100 foot tape roll
- ✓ **Linear Response** The analyzer is innately linear in response, no need to calibrate in the field
- ✓ **Field-proven technology** The PermaStream analyzer is field-proven by installations all over the world and trusted by major oil & gas companies worldwide including Preferred Vendor status



