

# LABORATORY H<sub>2</sub>S ANALYZER FOR LIQUIDS

Model 205L | Crude Oil, Fuel Oil, Water, Gasoline, Condensate, Diesel, Naphtha



## Product Features

- Fastest on the market: 5-10 min. average analysis
- Reliably measure crude oil, fuel oil, water, gasoline, Diesel, and other liquids
- Specific to H<sub>2</sub>S only. No false positives, ever
- No routine calibrations required
- Quantitative measurement in PPB, PPM & higher
- No diluents or sorbents required
- Conformity to ASTM methods
- Easy operation: one button for analysis; no need to weigh sample, no diluents, no scales required
- Stores ~4,500 Lab Data records

## Applications

- Crude Oil • Dirty/clean Water • Diesel • Fuel Oil • Drilling Fluid • Condensate • Quality control • Fuel Terminals
- Corrosion control • Transportation safety • Loading/unloading of trucks, railcars, pipelines • Laboratories

## Product Description

The ability to analytically quantify H<sub>2</sub>S in liquids such as crude oil, fuel oil, naphtha, water, diesel and gasoline are enhanced with the Sample Transfer Stripper™ (STS), exclusive ASI Membrane Technologies and rateometric-colorimetric detection technology offered by Analytical Systems Keco. Analysis is a quick procedure requiring only one push button for analysis. The user first connects the prepared Sample Container to the analyzer. Next, the user presses START on the analyzer's keypad. The rest of the analysis is automatic: The sample is quickly heated and agitated by purging the sample with air. The purging strips the H<sub>2</sub>S gas from the liquid sample based in part on Henry's law. Next, the stripped H<sub>2</sub>S gas is swept to the STS unit which permeates through the exclusive ASI Membrane Technology. A carrier air on the other side of the membrane then sweeps the H<sub>2</sub>S gas sample to the H<sub>2</sub>S specific detector (no cross-interferences) for quantitative analysis in ppb, ppm, and up to saturation levels. The STS acts as an ultra-effective filter, blocking any mists or liquid carry-overs. This radically reduces any maintenance requirements. The detection technology used in the 205L is based on chemically specific density changes. The advanced Tape detector utilized in our analyzers is the only detection method proven to be specific only to H<sub>2</sub>S, proven by thousands of worldwide applications. The analysis time is quickest on the market (5-10 minutes on average) without compromising precision. Tape rolls will last several months with continuous operation. The detector principle of operation is described in various ASTM methods include D4084-82, D4468-85, and D4045-81.

Proof of representative stripping of H<sub>2</sub>S from the liquid sample lies in the factory liquid calibration process and validation. While other analytical methods calibrate using only a blended gas phase sample (whereby compromising a true liquid to gas phase conversion), the 205L is fully factory calibrated with actual liquid samples in a process traceable to NIST standards.

The rateometric-colorimetric tape detector offered by ASI is the only H<sub>2</sub>S detection method that is practically free from cross-interference. The analyzer will not suffer from "false positives" like other H<sub>2</sub>S analyzer methods. Users demand Analytical System Keco's H<sub>2</sub>S analyzer due to its precision and reliability proven by thousands of worldwide installations around the globe.



# Typical Specifications

## DISPLAY

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

## TEMPERATURE RANGES

- 1°C to 50°C (operating)
- 0°C to 70°C (storage)

## ANALOG

- 4-20mA Isolated

## ANALYTICAL PERFORMANCE

- Resolution: 1 ppb
- Accuracy:  $\pm 2\%$  of FS
- Repeatability:  $\pm 2\%$  of FS
- Linearity:  $\pm 1\%$  of FS
- Drift: Nil
- Temp. Coefficient: 0.01% / °C
- Analysis time: 0.75 Second

## DETECTION RANGES

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

## ENCLOSURE

- Bench top or bottom mount packaging
- High grade aluminum
- Industrial powder coating
- NEMA 4X / IP 65
- Rubber feet/dampeners & bottom mounting holes

## WEIGHT

- ~50 lbs.

## DIMENSIONS

- 20" x 22" x 10"

## UTILITIES/SETTINGS

- 110VAC or 220VAC
- 50 Watts normal, 350 Watts max.
- Carrier Air/Gas: 180 ml/min (15 psig max) or none with optional Carrier Air Pump System

## AREA CLASSIFICATIONS

- General purpose for non-hazardous areas
- CE certificate available

## AVAILABLE OPTIONS

- Carrier Air Pump System (if no carrier air/gas available)
- Diagnostic/fault relay alarms
- RS-232/485 Modbus
- Heavy duty carrying case with wheels
- Data Logger for data download to PC

## TECHNOLOGIES

- Sample Transfer Stripper™ (ASI Membrane Technology)
- Rateometric-Colorimetric Tape (specific to H2S only)

## Advantages

**No 'false positives'** The only detection method specific to H2S only, proven by thousands of applications

**Ultra low-maintenance** Advanced Colorimetric-Rateometric Detector is guaranteed hassle-free for long term operation

**Dependable operation** ASI Membrane Technology eliminates liquid carry-over that plague **sparger methods**

**No field calibrations** The analyzer does not require calibrations in the field despite any unexpected process changes



## CMC TECHNOLOGIES

PTY LIMITED ACN: 085 991 224, ABN: 47 085 991 224

Engineering &  
Industrial  
Instrumentation

Phone: +61 2 9669 4000  
Fax: +61 2 9669 4111  
Email: [sales@cmctechnologies.com.au](mailto:sales@cmctechnologies.com.au)  
Web Site: <http://www.cmctechnologies.net.au>

Unit 19, 77 Bourke Road,  
Alexandria, NSW, 2015  
AUSTRALIA