

Residual Marine Fuels | Refinery Feedstock Components



An advanced instrument for the rapid measurement of H₂S in liquid petroleum products, including residual marine fuels and refinery feedstock components

New Test Method: IP 570 'Determination of Hydrogen Sulfide in Fuel Oil - Rapid Liquid Phase Extraction Method'

- IP 570 designated new Energy Institute (IP) Standard Test Method has been developed
- Measurement range from 0-250 mg/kg H₂S (0-250 ppm H₂S) in the liquid phase
- Fast measurement time of less than 15 minutes compared to 3 hours with IP 399
- A non chemical method, no wet chemistry involved
- Small lab bench footprint, fully portable operation
- Ideal for monitoring residual fuel blends, cargoes & products in the distribution system
- Critical Measurement method for Product Safety and Release
- Patent Pending

Who should use the H₂S Analyser?

- Refineries and Fuel Blending Locations
- Tank Storage Terminals
- Marine Fuel Suppliers
- Inspection Companies
- Independent Analytical Services



The H₂S Analyser was developed with Lloyd's Register's 'Fuel Oil and Bunker Analysis Service' (FOBAS) along with support of other major international oil companies to provide users with a simple to use instrument. H₂S is efficiently purged from the test sample by a combination of heat and agitation, and is measured by a H₂S technological advanced specific detector. The instrument offers a cost effective solution for H₂S measurement - no costly chemicals are required and there is no need for analytical preparation by an expert chemist. The instrument also has the capability with advice from SetaAnalytics to measure certain crude oil and other distillate products.

The H₂S Analyser is an excellent tool for supporting product Quality Control and safety ensuring product is within approved specification. It is also ideal for both product remediation treatment of feedstock components and off-spec products with fast repeat sample measurement capability.

H₂S analyser



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Principle

A small volume of sample is dissolved in a diluent and heated under precisely controlled conditions to 60°C to release any entrained H₂S content present in the sample. Clean air is passed through the sample vessel to carry the H₂S to the sensor, where the concentration is measured by an electrochemical sensor. Airflow through the sensor is measured by a mass flow meter. When the H₂S concentration in the sample has been fully driven off the Analyser will calculate and report the total H₂S released from the sample.

Operation

To conduct a test, 20ml of diluent is decanted into the Sample Vessel, which is inserted into the Heater Block. After approximately 5 minutes, the diluent has reached 60°C and 1ml of sample is added to the diluent. Sample identity, operator name, weights of empty/charged syringe are input via the menu display and keys on the front membrane panel.

Automatic test result and error reports

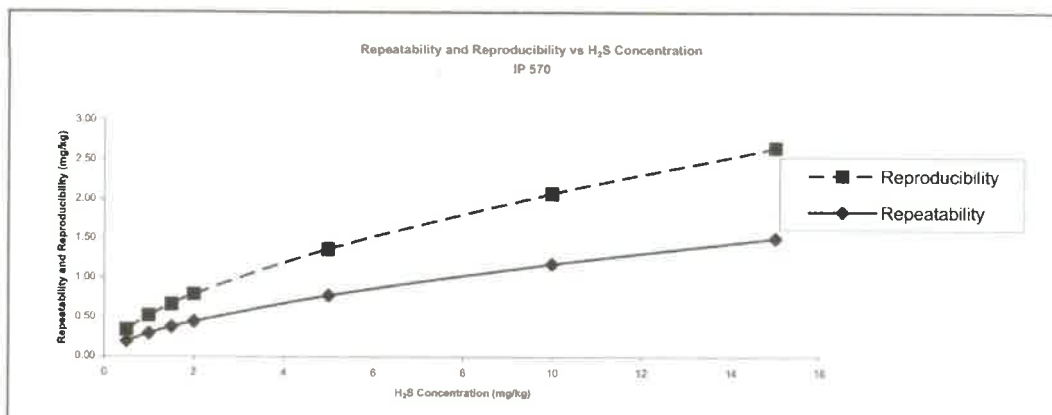
The test is initiated by pressing the START/STOP Button, sample analysis is fully automated and result results are stored to memory at the end of the test. The Analyser software automatically detects leaks in the system and produces error codes and alerts if sample/test analysis is void.

Download to PC

Results can be printed out or downloaded via the RS232 interface



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|---------------------------|---|
| Measurement range: | 0-250 mg/kg H ₂ S in the liquid phase (0-250 ppm H ₂ S) |
| Operating limits: | 5 - 40c maximum (80% RH) |
| Viscosity Range | Up to 3000 mm ² /s |
| Principle of measurement: | Advanced Electrochemical sensor |
| Test duration: | 15 minutes |
| Sample size: | 1ml, 2ml, 5ml (depending on H ₂ S concentration) |
| Diluent volume: | 20ml |
| Voltage | 12V DC, supplied with universal A/C transformer |
| Power | 60W max |
| Computer interface | RS232 |
| Size (HxWxD) | 210 x 300 x 410 mm |
| Weight | 8kg |



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