

H₂S Analyser with Vapour Phase Processor (VPP)TM



IP 570, ASTM D7621
ISO 8217:2012 Marine Fuel Specification

Features of the H₂S Analyser

- Measurement range from 0-250 mg/kg H₂S (0-250 ppm H₂S) in the liquid phase
- Vapour Phase Processor proven to eliminate effects of chemical interference
- A non chemical method, no wet chemistry involved
- Small lab bench footprint, fully portable operation
- Suitable for monitoring residual marine fuel blends, refinery feedstock components, cargoes & products in the distribution system and crude oils
- Critical Measurement method for Product Safety and Release

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 offer rapid measurement of H₂S in petroleum 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.

Introducing the Vapour Phase Processor (VPP)

Seta developed the VPP accessory for use with the H₂S Analyser to improve precision and accuracy of IP 570-ASTM D7621 by eliminating the effects of chemicals such as toluene, xylene or Mercaptans which can damage the sensor and 'interfere' with readings. The VPP also enables the analyser to address a broader range of petroleum products.

The latest edition of IP 570 provides the marine industry with a more robust specification tool for monitoring H₂S by including the VPP in Procedure A of the test method. Procedure A has now become the industry recommended practice for measuring marine residual fuels and blend streams.

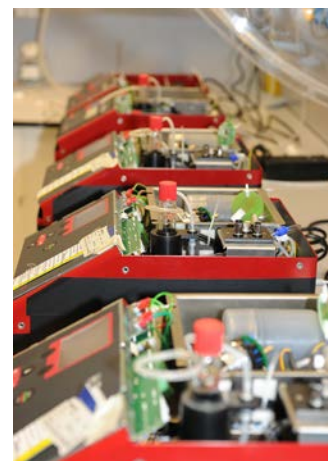
How does the VPP work?

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. H₂S is efficiently purged from the test sample by a combination of heat and agitation, and is measured by a technologically advanced H₂S specific detector.

Gases emitted from the H₂S analyser test vessel are passed through a cooled sorbent cartridge before they are measured by the electrochemical sensor. Hydrogen Sulfide passes through the sorbent cartridge whereas methyl mercaptans, dimethyl sulphide and other volatile chemicals are slowed or trapped by the cartridge.

Analyser software enables the instrument to differentiate if more than one peak is present and calculate the H₂S in mg/kg.

View a demo video at www.seta-analytics.com/h2s-analyser-VPP-video.htm



How to perform a test with the VPP

1. Load a sorbent cartridge and press start on the VPP
2. The VPP cools the cartridge to the required temperature
3. Type in the sample information on the H₂S Analyser
4. When the VPP is ready inject the sample into the test vessel, press start on the H₂S Analyser
5. When the test finishes the results are displayed



Automatic test result and error reports

The test is initiated by pressing the START/STOP Button, sample analysis is fully automatic and 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. Results can be printed out or downloaded via the RS232 interface.



IP 570/14a - Proficiency Test Scheme recommended for verification

IP 570/14a incorporates the use of a verification solution containing a known concentration of liquid phase H₂S to validate performance of the H₂S Analyser. Stanhope-Seta's IP 750 Proficiency Testing Scheme (PTS) is now a recommended practice.

The IP 570 PTS is a statistical quality assurance programme that enables participants to continually monitor and compare performance by analysing their data against similar laboratories in accordance with ISO/IEC 17025.

The scheme is web based and is available for either a quarterly, 3 month or 12 month contract providing subscribers with a monthly test pack.

For more information visit www.seta-analytics.com/ip-570-proficiency-testing-scheme.htm



IP 570/14a PTS Trial Pack

Specification

| | |
|--------------------------------------|---|
| H ₂ S Analyser range | 0-250 mg/kg H ₂ S in the liquid phase (0-250 ppm H ₂ S) |
| Viscosity Range | Up to 3000 mm ² /s |
| Principle of measurement | Advanced Electrochemical sensor |
| Test duration | 25 minutes with VPP |
| Sample size | 1ml, 2ml, 5ml (depending on H ₂ S concentration) |
| Diluent volume | 20ml |
| H ₂ S Size (HxWxD)/Weight | 210 x 300 x 410 mm / 8kg |
| VPP Size (HxWxD)/Weight | 400 x 240 x 200mm / 7.8kg |

Order Information

| | |
|----------|---|
| SA4000-3 | H ₂ S Analyser |
| SA4015-0 | H ₂ S Vapour Phase Processor (VPP) |
| SA4005-3 | Consumables Test Kit |
| SA4030-0 | IP 570 PTS - 3 Months |
| SA4031-0 | IP 570 PTS - 12 Months |
| SA4032-0 | IP 570 PTS - Quarterly |