



## Low level sulphur analyser CG325

- Analysing sulphur components at ppb level
- PFPD detector.
- ASTM D6228, D5504, ISO 19739
- Fast analysis using CompactGC<sup>4.0</sup>



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## Low level sulphur analyser

The GAS Low-Level Sulphur Analyser provides precise measurement of volatile sulphur species in various sample streams. It can operate independently as a standalone analyser or be combined with other hydrocarbon analysers as an extra analysis channel.

### Principle of operation

The low-sulphur analyser (figure 1) for gaseous samples comprises a gas sampling valve (GSV), a suitable separation column, and a sulphur-selective detector (PFPD; Pulsed Flame Photometric Detector), offering 20-30 ppb limit of detection.

As sulphur species readily adsorb onto active surfaces, Sulfinert (SilcoNert 2000) deactivation is applied to the entire sample path, a measure that is crucial for reliable and accurate quantification.

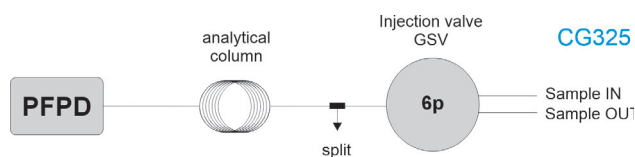


Figure 1 Diagram low level sulphur analyser

### Choice of separation column

The choice of the optimal separation column depends on the components being analysed and the sample matrix. Available column phases include non-polar, sulphur-selective, and porous polymer.

### Specification

- CompactGC<sup>4.0</sup> with GSV, capillary column, PFPD
- Minimum detectability: < 30 ppb
- Repeatability < 1 %

### Result

Figure 2 shows separation of a sulphur calibration standard on a Select Low Sulphur column. Figure 3 shows the repeatability.

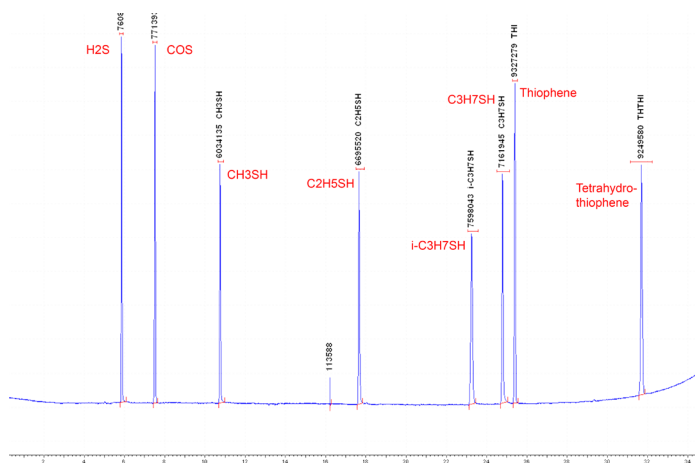


Figure 2 Chromatogram calibration standard. Concentration level: 5 ppm per component. Detector: PFPD. Column: Select Low Sulphur

GC-PFPD ID	H2S Area	COS Area	CH3SH Area	C2H5SH Area	i-C3H7SH Area	C3H7SH Area	THI Area	THTHI Area
PFPD_071	7653680	7716514	6026713	6764998	7612207	7096988	9317300	9228699
PFPD_072	7575351	7695225	5928568	6794046	7631111	7204149	9296086	9213385
PFPD_073	7648397	7698897	6013745	6725392	7641811	7193838	9352864	9246370
PFPD_074	7608142	7713938	6034135	6695520	7598043	7181945	9327279	9249580
Min:	7575351	7695225	5928568	6695520	7598043	7096988	9296086	9213385
Max:	7653680	7716514	6034135	6794046	7641811	7204149	9352864	9249580
Mean:	7621393	7706144	6000790	6744989	7620793	7164230	9323382	9234509
Std Dev:	36820	10646	48880	43352	19489	46294	23569	16811
%RSD:	0.48	0.14	0.81	0.64	0.26	0.67	0.25	0.18

Figure 3 Statistical data of the shown chromatogram

Ordering information CG325 - ABCDE

For the selection of options ABCDE (e.g. valve type and passivation, pump and vacuum sampling, rotameter and sample connections, pressure and moisture sensors, hydrogen sensor for safety shut-off, power plug type and more), [see the options table in the order guide](#).

## About GAS

Global Analyser Solutions provides GC & GC-MS solutions for Energy, Refinery, Chemical and Environmental markets. Our analysers address a broad spectrum of measuring requirements with high precision and reliability. Please reach out for more information on our website. [www.gassite.com](http://www.gassite.com)