

GC-IMS-ODOR

Reliable, Automated, At-Site, Monitoring
of Gasodor[®] S-Free[®], THT and
tert-Butyl Mercaptan (TBM) in Natural Gas



GC-IMS-ODOR

The GC-IMS-ODOR is a fully automated, stand-alone instrument developed for at-site, on-line sampling, quantification and reporting of Gasodor[®]-S-Free[®] (methyl acrylate and ethyl acrylate), THT and tert-butyl mercaptan (TBM) concentrations in natural gas.

The system requires only nitrogen or synthetic air, as drift and carrier gas, eliminating the need for helium (carrier gas) or hydrogen (carrier or combustion gas) required by other techniques. The desired measurement interval is set by the user. A calibration based on a connected calibration gas source can be done manually or sequenced at a user-defined interval to ensure maximum accuracy. Before each measurement the system automatically carries out a self-check - ensuring safe use and reliable results.

The large TFT touchscreen displays current measurements and allows review of earlier results at-site. The system may also be controlled using this screen if required. Results and measurement files are stored locally on the integrated compact flash card. These results can be downloaded to a connected USB device or transferred via the 4-20 mA current loop, a modem or network connection to a control station.

Technical Specifications

Working Principle: Gas Chromatograph-Ion Mobility Spectrometer

GC-Column: Capillary Column 30 m

Detector Source: Tritium 300 MBq, below the exemption limit for a license according to EURATOM Directive 96/26

Sampling: Heated 6-port-valve

Measurement Range: Gasodor[®] S-Free[®]: 4.0 - 40 mg/m³ (Resolution 0.1), THT: 4.0 - 40 mg/m³ (Resolution 0.1), TBM: 0.1 - 10 mg/m³ (Resolution 0.1)

Calibration Gas: Gasodor[®] S-Free[®], THT and TBM in natural gas or nitrogen

Display: 6.4" TFT touchscreen display

Data Acquisition: Ultra fast ADIO-Board

Data Processing: 1.6 GHz Intel Atom

Data Storage: 4GB (or bigger) compact flash card

Interfaces: RS232, USB, Ethernet, 4-20 mA current loop

Pressure Range: 1.0 kPa - 400.0 kPa (10 mbar – 4 bar)

Power Supply: 100 – 240 V AC, 50-60 Hz (external)
24 V DC / 5A, XLR connector (internal)

Operating Temperature: -10 °C - +40 °C

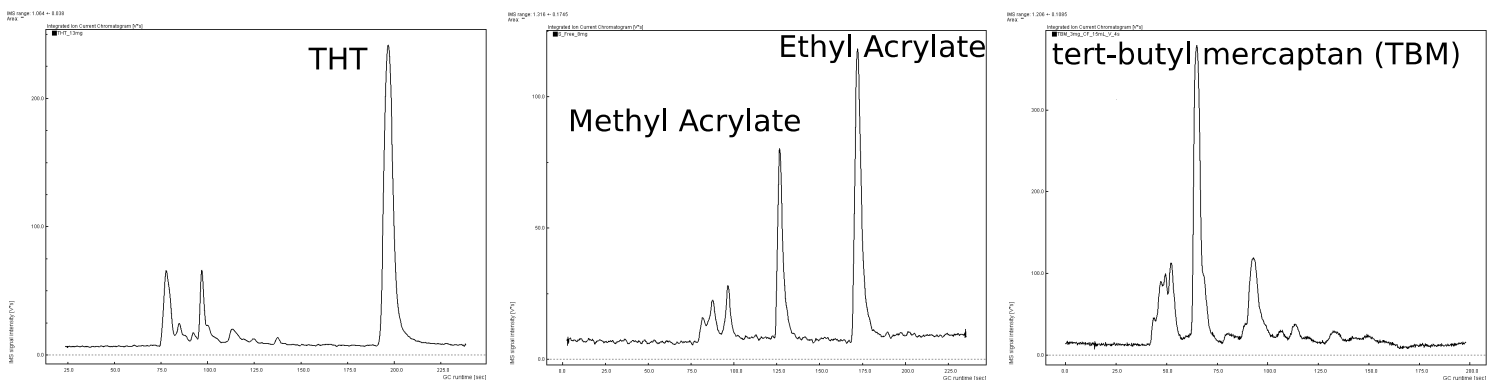
Dimensions: 449 x 435 x 177 mm (WxDxH)

Weight: 15.5 kg

Housing: 19", IP 20 enclosure, EMC conformity

Cooling: Axial fan, speed control temperature related (max 5.5 m³/h)

Gas Connectors: 3 mm stainless steel (Swagelok) for drift gas inlet, sample gas inlet and outlet, carrier gas inlet and IMS gas outlet.



Total Ion Current: 13.0 mg/m³ THT in H-Gas Total Ion Current: 3.2 mg/m³ Methyl Acrylate and 5.3 mg/m³ Ethyl Acrylate in H-Gas (8.8 mg/m³ Gasodor[®]-S-Free[®]) Total Ion Current: 3.0 mg/m³ TBM in H-Gas