ONLINE ANALYTICAL SOLUTIONS EXPERTS

GAS ANALYZER GC 866

DMDS

H_2S

Me-SH (MM)

DMS

Total Sulfur (TS)

EtSH (EM)

COS*

*in option

H2S/TOS TS MEDOR®

Sulfur compounds analyzer

Model: M51000-TS (rack version) Model: M51000-TS (wall mounted version)

Main applications:
Trace detection in natural gas / LPG / Gaseous fuels
H2S and TS in crude oil / Diesel / Fuel oil / Condensates / Water
Deodorisation control at ppb level
Propellant gas
Catalyzer protection and control
Sales gas

Targetted compounds:
H2S, TOS (Total Organic Sulfur = mercaptans and sulfides) and Total Sulfur (TS) by sum, COS in option

Main markets:
Refineries / Petrochemicals
Gas transportation
Fiscal metering station
Process
Ambiant / Industrial air monitoring
Odor impact management

SCAN or CLICK ME

Standards:
ISO 19739:2004, DIN 51855/7
ASTM D7493-22, ASTM D5504-20 & ASTM D7165-22

24 7 365 TURN KEY SOLUTION

Certification:
ATEX, IECEx, QPS

US FIELD CERTIFICATION U 104723 · ASTM INTERNATIONAL Standards Worldwide · Ex · GOST-R · IECEx

Chromatotec® is specialised in VOC, Sulfur and permanent gases analysis at trace and ultra trace levels (ppm, ppb, ppt). Please visit our website for more details.

Updated: October 2025

H2S/TOS TS MEDOR®

Sulfur compounds analyzer

Description

- The H2S/TOS TS MEDOR® is an autoGC-ED (MEDOR® Electrochemical wet cell Detector) for the analysis and monitoring of H2S, TOS and TS by sum of H2S + TOS in natural gas and gaseous fuels.
- Different configurations exist depending on the application and concentration range:
  - HS2/TOS TS MEDOR ppb for 0-1 ppm
  - H2S/TOS TS MEDOR ppm for 0-10 / 0-50 / 0-100 ppm

Principle

- Automatic sampling using a loop
- Automatic loop injection on metallic capillary column
- Isothermal gas chromatograph
- Detection of all compounds eluting from the column performed by MEDOR® detector: Electrochemical wet cell Detector which is a Sulfur Specific Detector (SSD)
- Signal provided by electrochemical reaction between the wet cell electrolyte and the sulfur compounds
- Fully compliant with ASTM D 7493-22: Standard Test Method for On-line Measurement of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatograph and Electrochemical Detection.
- Compliant with ASTM D 5504-20: Standard Test Method for Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Chemiluminescence with alternative detector.

Key points

- Continuous monitoring with automatic online sampling
- Analytical performances:
  - Specific, linear and very sensitive to sulfur compounds
  - Results validation by automatic standard injection
  - Long term stability using detector installed in reservoir
- Extremely low maintenance
  - Very long life time detector with electrolyte, **up to 10 years.**
  - Low gas consumption, can be reduced in option
  - More than 10 years data storage
  - No cylinders required thanks to internal calibration tube and gas generators
- Automatic control with process device
- Intelligents system with tunable and interactive alarm levels
- Powerful VISTACHROM Chromatotec® software:
  - Remote monitoring & injection control
  - Full traceability with on board archiving of results and chromatograms

Options

- MODBUS RTU communication protocol
- One modul for 4 x Analog output 4-20 mA or 0-10 V
- 24 V power supply for transportable analyzers
- Multiple stream selector (2 to 10).
- airmopure (**XXX031**) or nitroxychrom (**XXX913CS**)
- CALIB with DMS permeation tube
- Explosion proof version Exp or Exd for ATEX, IECEx, Zone 1 and 2 and also for C1D2
- Internal electric heater and/or cooler for temperature regulation of the Exp/Exd cabinet with thermal insulation
- Liquid sample system with purge for Sulfurs extraction from liquid phase (**XXPurge ED Ex**)
- Second electrochemical detector for COS measurement (reference **XXX945**)
- Multiple stream selector (2 to 32)
- Automatic tank filling

Product technical specifications

Compounds Analysed:

- H2S, TOS (total of mercaptans and sulfides) and TS by sum (H2S + TOS), COS in option

Detection Limit:

- H2S/TOS TS MEDOR® ppb: 5 ppb H_2S (7 µg/m^3)
- H2S/TOS TS MEDOR® ppm: 0.1 ppm H_2S (0.1417 mg/m^3) and 0.1 ppm COS (0.246 mg/m^3)

Detection Range: H2S / TOS / TS

- 0/10, 0/100 or 0/1000 (ppb or ppm)
- Low % with HC sampling valve

Relative Standard Deviation:

- RSD < 3% on concentration over 48H.
- RSD < 0.6% on retention time over 48H.

Cycle Time:

- H2S / TS result in 2 min for 0-3 ppm range
- H2S / TS result in 5 min for higher range

Linearity:

- > 0.995 for all compounds

Storage / Transfer of Results:

- Hardware storage
- MODBUS communication protocol (optional)
- 4-20mA (optional)

Gas supply:

- Carrier: **Dry air** or N2 (3 bars): 5 ml/min.
- CALIB: in continuous 50 ml/min. (option)
- CALIB during validation ~ 250ml/min (option)
- Pneumatic valve 90ml/commutation

Power supply:

- Main (230V / 115V 50/60Hz)
- 24V battery (optional)

Electrical consumption:

- 150 VA

Dimensions and weight:

Rack: 4582 mm 19"
- Height: 222 mm (5U)
- Width: 482mm
- Depth: 600 mm
- Net weight: 20 Kgs

Wall mounted box:
- Height: 800 mm (1300 mm if XXPurge ED Ex is included)
- Width: 600 mm
- Depth: 300 mm
- Net weight: 40 Kg (50 Kg if XXPurge ED Ex is included)

CLICK HERE FOR ADDITIONAL DIMENSIONS DETAILS

To order:
H2S/TOS TS MEDOR®
inbuilt computer - 5U (XX022)

Model:
M51022-TS
Rack or wall mounted

Chromatotec® is continuously improving its products, therefore these specifications are subject to change without notice

To contact us: sales@chromatotec.com

NORTH AMERICA
Houston - USA

EUROPE
Bordeaux - FRANCE

ASIA
Beijing - CHINA