ONLINE ANALYTICAL SOLUTIONS EXPERTS

GAS ANALYSER GC 866

MEDOR® Exp CSA

On-line analysis & monitoring of sulfur compounds in natural gas and gaseous fuels for hazardous area

THT

TBM

DMS

H2S

Bu-SH

Me-SH

Et-SH

CSA US Class 1 Div 2 group B, C&D T4

CSA International Class 1, Div 2 group B, C&D T4

Model: MEDOR Exp CSA

Main applications:

Impurities detection in Natural Gas / LPG / Propane / Butane
Propellant gas
Catalyzer protection

Targetted compounds:

In standard : THT / H_2S / DMS / Mercaptans: MM / EM / IPM / TBM /NPM
In option: 2 BM / IBM / NBM

Main markets:

Petrochemical
Gas transportation
Process

SCAN or CLICK ME

Standard:

ASTM D7493-08, ISO 19739:2004, DIN 51855/7

ASTM INTERNATIONAL Standards Worldwide

CSA US FIELD CERTIFICATION U 104723

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

Updated: April 2025

MEDOR® Exp CSA

On-line analysis & monitoring of sulfur compounds in natural gas and gaseous fuels for hazardous area

Description:

The MEDOR® Exp is an industrial gas chromatograph for the analysis and monitoring of sulfur compounds in natural gas and gaseous fuels: H_2S, Mercaptans, Sulfides.
Two versions exist: ppm range or ppb range

Principle:

- Automatic sampling using a loop
- Loop injection by automatic valve on the column
- Isothermal gas chromatograph
- Detection of all compounds eluting from the column performed by Chromatotec's wet cell sulfur specific detector
- Signal provided by electrochemical reaction between the wet cell electrolyte and the sulfur compounds

Key points:

- Fully compliant with ASTM D 7493-08 : Standard Test Method for On-line Measurement of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatograph and Electrochemical Detection
- Internal automatic calibration system allowing automatic validation of the data
- Continuous monitoring with automatic online sampling
- Analytical performances:
  - Specific and very sensitive to sulfur compounds
  - Results validation by automatic standard injection at each analysis
  - Long term stability using wet cell detector installed in reservoir
- Extremely low maintenance
  - Very long life time detector, up to 10 years including electrolyte
  - Low gas consumption, can be reduced in option
  - More than 10 years data storage
  - No calibration cylinders required thanks to internal calibration tube
- Automatic control with process device
- Intelligence system with tunable and interactive alarms levels
- Internal temperature and pressure monitoring

Powerfull VISTACHROM Chromatotec® software:

- Remote monitoring & injection control
- Full traceability with on board archiving of results and chromatograms
- QC Set up and control of threshold alarms
- Data export by MODBUS / 4-20 mA / 0-10 V
- Time stamp results
- On site direct access to the analyzer with LCD screen and touch pad or front panel

Options:

- CSA International Class 1 Div 1, group B, C & D with inert purge
- External multiple stream selector (up to 16 streams controlled by the analyzer)
- Calculation modules (Average / Statistics / Odor index...)
- Electric selection valve to reduce air consumption
- 24 V DC power supply, can work on battery or solar panel
- Vortex cooler (air consumption: depending of internal t°)
- Inert purge with N2 for low consumption of purge gas with X - purge (can work on N2 cylinders)
- Internal electric heater and/or cooler for temperature regulation of the Exp Cabinet with thermal insulation
- Automatic tank filling
- Sealproof detector

Technical specifications:

- Speciation and/or total sulfur

Detection limits:

- **MEDOR® Exp ppm:**
  - H2S: 0,1 ppm (0,14 mg/m3)
- **MEDOR® Exp ppb:**
  - H2S: 5 ppb (7,0 µg/m3) or DMS: 2 ppb (5,1 µg/m3)

Range adjustable, depending on application:

- 0/10 or 0/100 or 0/1000 ppm or ppb
- Calculation: total sulfur, total mercaptans...

Relative Standard Deviation:

- RSD < 3% on concentration over 48H.
- RSD < 0.5% on retention time over 48H.

Cycle Time:

• H2S	120 s
• H2S/TOS/TS	120 s
• THT	180s (if only THT)
• H2S, MM, EM	300s
• H2S, mercaptans, THT	720 s
• H2S, mercaptans, THT	900 s with CALIB for validation of each analysis

Supervisor:

- Embedd industrial computer Windows® based with LCD display
- 32 GB of hardware storage on SSD memory

Linearity:

- > 0.995 for all compounds

Communication:

- MODBUS communication protocol
- 4-20mA
- Ethernet
- 3G module (optional)

Gas supply for GC operation:

- Carrier: zero air or N2 (3 bar): 4 ml/min. Use N2 if THT is present
- CALIB: air or N2 50 ml/min
- Sample inlet 1 bar: 80 ml/min
- Pneumatic valve: 90 ml/commutation (0 ml in option)

Gas supply for Exp cabinet:

- If air used for dilution: 30 l/min in continue
- If nitrogen used for dilution: 500 l to purge the cabinet and < 0,5 l/min in continue to maintain overpressure

Power supply:

- Main: 230V / 115V or 50/60 Hz
- 24 V DC in option

Electrical consumption:

- 150 VA without options

Dimensions and Weight:

- Height: 800 mm
- Width: 600 mm
- Depth: 300 mm
- Net weight: 40 kg

To order:
MEDOR® Exp CSA

Model:
Upon request

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

24 7 365 TURN KEY SOLUTION

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