

# MEDOR<sup>®</sup> easy

Stand alone online analyser for H<sub>2</sub>S and odorants  
in natural gas and gaseous fuels



Model: M43022

## Main applications

Odorant concentration monitoring ppm  
Odorant concentration monitoring and odorant injection control level  
H<sub>2</sub>S trace monitoring in natural gas and gaseous fuels

## Targetted compounds

H<sub>2</sub>S  
All odorants blend from ARKEMA Spotleak<sup>®</sup> and Chevron Philipps Scentinel<sup>®</sup>:  
THT  
THT and TBM  
DMS and TBM  
MES and TBM  
TBM, IPM and NPM  
EM

## Main markets

Natural gas odourisation station  
LPG odourisation  
Petrochemical  
Gas transportation  
Process



## Standard

ASTM D7493-14, ISO 19739:2004, DIN 51855/7

## Certifications

GOST, ATEX, IECEx, CSA, CSA international



Chromatotec<sup>®</sup> 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: May 2021

THT

TBM

H<sub>2</sub>S

DMS

ODOR  
INDEX

ODORANTS

ET-SH

Me-SH  
(MM)

# MEDOR® easy

Stand alone online analyser for H<sub>2</sub>S and odorants  
in natural gas and gaseous fuels



## Description:

- MEDOR® easy is a very simple auto GC-ED (MEDOR® Electrochemical wet cell Detector) for the analysis and monitoring sulfides and mercaptans in natural gas and gaseous fuels.
- This turnkey online solution MEDOR® easy monitor accurately all type of odorants blends depending on configuration

## Principle:

- Automatic sampling using a loop
- Automatic loop injection on packed column
- Isothermal gas chromatograph
- Detection compounds eluting from the column performed by MEDOR® Detector:
- Electrochemical wet cell Detector which is SSD Sulfur Specific Detector.
- Signal provided by reaction between the wet cell electrolyte and the sulfur compounds

## Key Points:

- Simply and robust performance with an inexpensive and continuous control of odorant which allow to save money by odorant injection saving
- Fully compliant with ASTM D 7493-14 : Standard Test Method for Online Measurement of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatograph and Electrochemical Detection.
- Cylinder free autoGC with it's internal carrier and calibration gas generator
- Automatic calibration/validation of the data, with embeded permeation tube
- 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 : full chromatogram
  - 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
  - QC Set up and control of threshold alarms
  - Data export by MODBUS / 4-20 mA / 0-10 V
  - Time stamp results

## Options:

- Multiple stream selector (up to 32 streams with one analyser)
- Explosion proof version Exp or Exd for ATEX, IECEx zone 1 and 2 group IIC T4 and also for CSA C1D2 group B, C & D T4
- Calculation modules (Average / Statistics / Odor index and more)
- Alarm module with dry contact on low or high concentration or other on request
- Automatic data transfert through: Module for 4 outputs 4-20 mA (with 0 mA for instrument default) / 0 - 10 V / MODBUS RTU or TCPI IP or MGS1
- Nitrogen or air generator for safe and hasardous area
- 24 V DC power supply
- Electric selection valve to reduce air consumption
- Liquid injection valve from LPG up to condensates
- High concentration injection valve up to 5%
- External cylinder inlet for automatic calibration from external cylinder
- MFC for multipoint calibration from internal CALIB and/or from cylinder
- Zero method
- Sample pressure reducer from 20 bar (up to 200 bar in option) with sampling flow regulation at 100 ml/min

## Product technical specifications:

### Compounds Analysed:

- H<sub>2</sub>S / All odorants blend from ARKEMA Spotleak® and Chevron Philipps Scentinel® / THT / THT and TBM /DMS and TBM / MES and TBM / TBM, IPM and NPM / EM

### Detection Limit:

- ppm Model 0.3 mg/m<sup>3</sup> or 0.1 ppm

### Detection Range:

- ppm model - 0 to 50 mg/m<sup>3</sup> or 0 to 500 mg/m<sup>3</sup> (adjustable)
- ppb model - 0.3 to 3.0mg/ m<sup>3</sup> (Ranges adjustable depending on Application)

### Relative Standard Deviation:

- RSD < 2 % on concentration over 48H
- RSD < 0.6% on retention time over 48H

### Cycle Time:

- H<sub>2</sub>S 5 min (2 min in option)
- THT 5 min (3 min in option)
- THT and TBM 5 min (3 min in option)
- DMS and TBM 10 min (5 min in option)
- MES and TBM 10 min (5 min in option)
- TBM, IPM and NPM 10 min (5 min in option)
- EM 5 min (3 min in option)

### Supervisor:

- Embeded computer Windows® based with LCD touchscreen display on front panel
- 128 GB of Hardware storage on SSD memory

### Linearity:

- > 0.995 for all compounds

### Communication:

- MODBUS RTU included in standard
- Ethernet, remote control

### Gas supply:

- Sample inlet 1 bar (160 ml/min) 1/8"double ferrule
- Bellow gas consumption are not required in case of internal gas generator option:
  - Carrier Gas: N<sub>2</sub> (3 bars): 10 ml/min 1/8"double ferrule
  - Internal calibration: 50 ml/min (if selected)

### Power supply:

- Main: 230V / 60Hz or 115V / 50Hz
- In case of power loss, the instrument will restart automatically

### Electrical consumption:

- Mean: 150 VA

### Dimensions and weight:

- Wall mounted version
- Height: 800mm
  - Width: 600mm
  - Depth: 320mm
  - Net weight: 40Kg

### To order:

MEDOR easy

### Model:

M43022

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

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