

LEADING APPLICATIONS

PROCESS CONTROL OF SULPHUR TRACES

Speciation of TRS (Total Reduced Sulphur)

H₂S/Mercaptans (THT)

energyMEDOR

ppm (odorisation)

ppb (deodorisation) (TSP M41)



EnergyMedor is able to analyze H₂S, mercaptans and/ or THT for detecting the odour of the gas with the ability to have total organic sulphur (TOS) calculation. The analysis is made in addition to the calibration stream (permeation tube installed into the instrument) at very low levels (ppb- ppm).

- **APPLICATION:** The control of odorization of Natural Gas during its distribution is essential due to safety reasons or combustion gas
- **DETECTION LIMIT:** H₂S and DMS : 0.1 ppm –EnergyMedor ppb: H₂S : 5 ppb – DMS: 2 ppb (ppt in option)
- **OPTIONS:** Integrated PC /Modbus/JBUS/MGSI as communication protocols for online results /Analogue outputs 4-20mA or 0-10 V./Multiple stream selector (2 to 6)

H₂S /COS (mercaptans)

Chroma S (TSP C51)



A Chroma S cabinet allows the operation from **sampling to data transfer**. The GC with **double flame photometric detector** enables to **separate H₂S and COS** as well as to delete any interference with methane. Besides a traceable calibration mixture of **6 sulfur compounds** balanced in **pure methane** is used. The **high signal-to-noise output** makes the monitoring at low / mid ppb levels possible. This cabinet is well adapted for field installation in accordance with **EEX guidelines**

- **APPLICATION :** Natural Gas/butane/pure gas/ CO₂
- **DETECTION LIMIT:** 7 ppb for H₂S
- **OPTIONS:** Integrated PC /Modbus/JBUS/ or MGSI communication protocols for on-line results /Analogue outputs 4-20 mA or 0-10 V./Hydrogen generator / Calib/ multiple Stream selector (2to 6)

H₂S/Me-SH/DMS/DMDS (option C12)

AirMedor (TSP M11)



- At the arrival of the wastewater at the **stripping area of the plant**, the polluted air is captured and thereafter passed in a circuit that neutralises it. These odours are caused by **bacteriological fermentation**. Successive chemical cleanings in the deodorisation towers neutralise these odours.
- The bad odours are in large part due to the **transformation of sulfides into H₂S by the bacteria in the fermentation process**.
- Placed at the outlet of the stripping process, the **airMEDOR measures the H₂S concentrations and pilots the adjunction of calcium nitrate**. Process that allows to the bacteria to have a oxygen reserve and therefore to stop sulfate transformation into sulfides and then in H₂S

- **APPLICATION:** Deodorisation and Toxicity Survey in Waste Water Plant or landfill (fermentation/biogas)
- **DETECTION LIMIT:** 1 ppm
- **OPTIONS:** MODBUS/JBUS/MGSI as communication protocols for on line results/analogue outputs 4-20mA or 0-10 V./ multiple stream selector (2 to 6)

VOLATIL ORGANIC COMPOUNDS ANALYSIS

Speciation or Total Hydrocarbon

Pams and VOC list (56(usa)/58 (Japon)/30(Europe)

AirmoVOC range (AirmOzone) (TSP A11&A21)



- Multiplexer & calibration
- Supervisor
- AirmoVOC C₆-C₁₂ Max 32 compounds
- AirmoVOC C₂-C₆ Max 32 components
- H2 Generator
- airmoPure & airmoPump

The airmOzone is designed for measurement of "light" hydrocarbons. It is used for the analysis of volatile hydrocarbon in the range of C₂ to C₁₂ and is able to analyse up to 58 compounds (ozone precursors)

- **APPLICATION:** Ozone precursors (VOC) in ambient air monitoring /outdoor or indoor
- **DETECTION LIMIT:** C₂ – C₆ : 15 ppt for 1,3 butadiene or 33ng/m³ – C₆ – C₁₂: tri-methylbenzene: 10 ppt
- **OPTIONS:** Modbus /JBUS or MGS1 as communication protocols/analogue outputs 4-20mA or 0 10 V. / automatic data validation of results with permeation tube/ hydrogen generator/ multiple stream selector

BTEX (Benzene/Toluene/Ethylbenzene/mp and O xylenes) airmoBTX.FID (TUV approval) (TSP A31&A34)

airTOXIC PID (TSP A74)

In large cities, **car emissions** are an important source of atmospheric pollution. This **BTEX** compounds are present in **car emissions**. Our **airmoBTX** is able to analyse them with short analyses cycle duration and on a continuous and automatic way **Styrene** is in option.

AirToxic PID system is able to identify and measure the **BTEX** pollution between two plants thanks to a safety barrier. A **complete shelter** with **multiplexer** and **alarm pilot** system has been installed to measure the polluting compounds: NO_x, SO₂, H₂S and BTEX (**our airToxic PID system**).

- **APPLICATION:**
 - ❖ Quality of air in town
 - ❖ automotive
 - ❖ CO₂ quality (acetaldehyde and methanol)
- **DETECTION LIMIT:** Benzene 50 ppt or 0,16 µg/m³/
OPTIONS: 1,3 butadiene and styrene/ automatic data validation of results with permeation tube/ Hydrogen generator/ multiple stream selector.



CH₄/NMTHC

CO/CO₂/Formaldehyde

ChromaTHC (TSP C21C22)

ChromaCO (TSP C11)

The analyser is an **isothermal gas chromatograph** dedicated to the analysis of volatile organic compounds in indoor air and pure gas like N₂/CO₂/O₂ for the **gas quality control**.
LdL = (CH₄ = 100 ppb) (NMTHC = 30ppb).

The analyser is an **isothermal gas chromatograph** with FID and methaniser dedicated to the analysis of CO, CO₂, formaldehyde in industrial hygiene, pure gas like N₂ or air.
LdL = 100 ppb for each component

Benzene/Epichloridrine/ETO/SOLVENTS

ChromaFID (TSP C31)

ChromaPID (TSP C91)

The ChromaFID is an instrument for the detection of COV, **chlorinated solvents**: dichloromethane, 1-2 dichloromethane, vinyl chloride for **industrial hygiene**,
LdL: = : Benzene: 20ppb(FID).

The ChromaPID is an instrument with **Photo Ionisation Detector** for the detection of the benzene. **The main edge is that only N₂ is used (no flame)**

- **APPLICATION:** Toxic Survey/ Monitoring of solvent emissions in air (indoor)or impurities in pure gas