

BTEX VOC Me CS<sub>2</sub> Phenol Naphtalene Odor TMB

C Mercaptans S
Phenol PAMS
lene H<sub>2</sub>S Styrene/

Benzaldehyde

ns Solvents C<sub>2</sub>-C
PAMS Sulfurs
Styrene/cyclohexane ET

C<sub>2</sub>CI<sub>4</sub>

CCI<sub>4</sub> COS

Polychlorobenzene





# Online Gas Analyzer Experts

TMOSPHER

# **Manufacturing**

Sales

**Maintenance** 





Ambient Air and Odor Monitoring

Water surveillance

Hygiene Air Monitoring

Natural gas / LPG



Control Emission Monitoring

Pure gas / Gas manufacturers

**Process Control** 



#### **MARKETS & EXPERTISES**

Chromatotec® provides a full range of automated continuous and online analyzers using gas chromatography coupled with innovative detectors for ppt/ppb/ppm and % quantification levels:

- VOC quantification with "airmo" products line (GC-FID, GC-PID, GC-MS, GC-TCD),
- Gas or air Impurities detection with "chroma" solutions (GC-FPD, GC-wet cell),
- Sulfur in air, natural gas or biogas monitoring with "medor" product line (GC-wet cell).

Chromatotec® provides turnkey solutions for gas process.

In addition to analyzers, Chromatotec provides all-in-one solution including sampling device as multiplexer, internal calibration for data validation, gas generators, cabinets.

Chromatotec's analyzers have gained specific certifications relating to the relevant standards by worldwide recognized tests (mCERTs, GOST, ASTM D7493-08).

#### **Monitoring Applications:**



- Ambient Air Monitoring indoor & outdoor (ppm or ppb)
- Odor Monitoring
- Emissions & Continuous Emissions Monitoring (CEM's)
- Pure Gases Manufacturer / Testing
- Natural Gases / LPG Monitoring
- Process Monitoring
- Water Surveillance

#### **VOC COMPOUNDS MONITORING**



#### √ airmOZONE solution

- PAMS 56 / TO14 & TO15
- Detection of VOC's  $C_2$ - $C_{12}$  or Ozone precursors
- 31 VOC European list
- · Cabinet systems
- Detection Limit < 0.05 ppb</li>
- Chinese certification achieved in 2010
- mCerts Name European certification EN 14662-3 (2015) / EN 15267-1 / EN 15267-2



### √ airmoVOC BTEX (FID)

- GC/FID analyzer with embedded PC with VISTACHROM software
- dedicated BTEX application
- Excellent separation
- High stability over the time
- TÜV approved in 1996. CNR 2007 Certification



#### ✓ airTOXIC BTX (PID)

- GC/PID analyzer for BTEX monitoring
- Embedded PC with VISTACHROM software
- Up to 8 compounds analysis (1.3 butadiene in option)
- Minimum detection limit: 10ppt
- · Robust with metallic capillary column
- · Excellent separation. Autocalibration
- High sensitivity
- CNR 2006 certification
- · European certification

EN 14662-3 (2013) / EN 15267-1 / EN 15267-2 US EPA tested and approved







All-in-one cabinet for VOC & odor monitoring airmOZONE



VOC analyzer airTOXIC system



# ON-LINE GC/MS FOR VOC MONITORING

airmoTWA / airmoSCAN<sub>XPERT</sub>
It is a combination of two robust instruments, airmo-VOC expert GC analyzer and Mass Spectrometry (QMS), which allows quantification and identification of chemicals from % to low ppt levels.

The complementarity of the instruments allows the monitoring of low concentrations in 30 minutes at ppm / ppb / ppt levels. airmoTWA is delivered with gas generators, calibration system (in compliance with ISO **17025** for Benzene) and multiplexer.



Cabinet integration

#### **SULFURS & ODOROUS COMPOUNDS**

#### O AMBIENT AIR MONITORING

# ✓ TRSMEDOR® analyzer:

TRSMEDOR® is a gas chromatograph for Sulfur compounds (H<sub>2</sub>S, Mercaptans, Sulfides and Disulfides) present in different matrices

- Specific wet cell detector
- Detection limit: 1 ppb
- Windows based software display for computer
- Mercaptans / sulfides: option 0.01 / 5 ppb
- PID detector as option for odor application
- SO<sub>2</sub> as option
- ISO 6326/2 / DIN 51855/7



EnergyMEDOR® system 5U

#### O PROCESS MONITORING

# ✓ energyMEDOR® / THT MEDOR® / H2S MEDOR®:

Dedicated solution for odorant Sulfur species in natural gas

- · Specific wet cell detector
- ASTM D7493-08 Method from April 2009

#### O PROCESS MONITORING IN HAZARDOUS AREAS

### ✓ MEDOR® Exp:

- Designed for hazardous areas
- CSA certified class 1, div 2 group B, C&D
- ATEX: Zones 1 and 2 GROUP IIB T4
- Rack / wall mounted version
- Pressure & temperature control in purged box
- Local and remote monitoring possible

# ✓ Chroma S (dual flame photometric detector):

Specific for detection of Sulfurous compounds in air, emissions and pure gases

- H<sub>2</sub>S, Mercaptans, Sulfides, TBM, SO<sub>2</sub> COS & CS<sub>2</sub>
- FPD detector
- Detection limit: 7 ppb (loop)
- LDL < ppb with trap (Mercaptans)
- Specific application (H2,CO2,CH4)





Medor® Exp ATEX



**Process GC** 



chromaS system 4U



# **SPECIFIC APPLICATIONS**

**Total Sulfur:** measurement: 1 ppb in ambient air

Purge and trap with method 502-2

**Cabinet for WWTP application** 

**Special applications upon request:** measurement at ppm or ppb levels for Formaldehyde and Acetaldehyde in air or pure gas (airmo H-CHO analyzer)

# <u>Chromatotec<sup>®</sup> Product Range Overview:</u>

Model	Compounds	Application	Conc	Loop/Trap	Detector	Carrier Gas
airmoVOC C <sub>2</sub> -C <sub>6</sub>	VOCs C <sub>2</sub> -C <sub>6</sub>	Ambient / general	ppt & ppb	Trap with Peltier cooler	FID	H <sub>2</sub>
airmoVOC C <sub>6</sub> -C <sub>12</sub>	VOCs C <sub>6</sub> -C <sub>12</sub> , BTEX	Ambient / general	ppt & ppb	Trap	FID	$H_2$
airmoVOC BTEX	BTEX	Contaminated land good separation	ppt & ppb	trap	FID	H <sub>2</sub>
airTOXIC	BTEX / 1.3-Butadiene	Ambient / good sensitivity	ppt & ppb	Trap	PID	N <sub>2</sub>
chromaFID	VOCs, BTEX, light compounds	General	ppb & ppm	Loop	FID	H <sub>2</sub>
chromaTHC	VOCs, CH₄, NMTHC	General	ppm	Loop	FID	H <sub>2</sub> or air
chromaTCD	HCs, CO, CO <sub>2</sub> , N <sub>2</sub> , He, H <sub>2</sub> , Ne	Pure gases	ppm & %	Loop	TCD	He or Ar
chroma S	Total Sulfurs, COS, SO <sub>2</sub> , CS <sub>2</sub> , H <sub>2</sub> S	Paper, waste water, Nat Gas CO <sub>2</sub>	ppb & ppm	Loop	FPD	H <sub>2</sub> or air
TRSMEDOR®	TRS, H <sub>2</sub> S, DMS, Mercaptans, SO <sub>2</sub>	WWTP / Ambient - Odor emissions	ppb & ppm	Loop	Specific wet cell detector	air or N <sub>2</sub>
energy MEDOR®	Sulfurs, H₂S, mercaptans, THT	Monitoring + control of odorization	ppb & ppm	Loop	Specific wet cell detector	air or N <sub>2</sub>
vigiNOSE	Sulfurs, H <sub>2</sub> S, mercaptans & VOCs	Odor monitoring	OU	Loop	Specific wet cell detector & PID	air



