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# Le Bulletin

**NEW ASTM D7493-08 and EXP medor**

Gaseous fuels, such as natural gas, petroleum gases and bio-gases, contain varying amounts and types of odorous sulphur compounds. Their accurate on-line measurement is essential to gas processing, operation and utilization, and of regulatory interest.



**New medor EX**

ASTM has recently developed a new Standard TEST METHOD for online Measurement of Sulphur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Electrochemical detection.

The energymedor manufactured by Chromatotec is the perfect equipment to fulfill this new ASTM method. Some of the features of the analyzer are: separation by chromatography technique, user friendly software, auto-calibration, calibration on each analysis via permeation tubes for safety reasons, robustness and reliability.



Now, Chromatotec has also engineered and manufactured the new EXP Medor designed to operate in hazardous area environment such as Class I, Division 2, group C & D.

**Process optimisation**

The sulphur compounds such as hydrogen sulphide or mercaptans are present in the industrial environment and generate not only smells to be treated in an environmental purpose but also represent an important risk of toxicity.



We find them for example in the water in fermentation and consequently throughout the process of waste water in treatment plant.

For optimisation of deodorization installation we analyse before and after chemical cleaning with the **chroma S** analyser

We can find typically this type of concentrations:

Sulfur pollutants to be treated	Maximum concentrations inlet (mg/m3)	Average concentrations inlet (mg/m3)	Guaranties outlet (mg/m3)
H2S	10	2	0,07
R-SH	1,5	0,5	0,04
Total Sulfur	12	2,5	0,12

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**FENCELINE MONITORING FOR VOCs AND SULFURS**

Chromatotec is offering an automatic and turn-key solution to monitor pollutants released in ambient air on the outskirts of a factory.

The system combines 2 airmoVOC analyzers (C<sub>2</sub> to C<sub>6</sub> and C<sub>6</sub> to C<sub>12</sub> by FID detection) and also sulphur speciation with Chroma-S analyzer (FPD detection).



**AirmoZONE cabinet**

The industrial PC is able to handle the signal from all 3 on-line gas chromatographs. Thanks to gas generators for hydrogen and air supply and internal permeation tubes, the system is fully autonomous.

**On-line measurement Toxic Organics Air Pollutants (TO-14 and TO-15)**

US EPA has developed Methods TO-14 (39 compounds) and TO-15 (75 compounds) to measure Toxic Organics Air Pollutants. Sampling is done typically via canisters and then analyzed typically in the laboratory by gas chromatography coupled with mass spectrometry (GC-MS).

The airTOXIC VOC manufactured by Chromatotec works automatically and can measure in 30 minutes most TO-14 VOC compounds by direct on-line gas chromatography, thus reducing drastically cost and delay necessary to measure Toxic Organics Pollutants.



**airTOXIC system**

**EXHIBITIONS 2009**

**MCERTS 2009 - UK**

Bretby - 29 – 30 April 2009

<http://www.mcerts.uk.com/>

**ACHEMA 2009 – GERMANY**

Frankfort - 11 - 15 May 2009

<http://www.achema.de/>

**WREC – THAILAND**

Bangkok – 20 – 23 May 2009

<http://www.thai-exhibition.com/entech/>

**CIEPEC 2009 – CHINA**

Beijing – 3 – 6 June, 2009

<http://www.chinaenvironment.org/>

**AWMA 2009 – USA**

Détroit – MI - 16 – 19 June 2009

<http://www.awma.org/ACE2009/>

**Congrès International de métrologie – FRANCE**

Paris – 22 – 25 June 2009

<http://www.metrologie2009.com/>

**ASGMT - USA**

Houston – 21 – 24 September 2009

<http://www.asgmt.com>

**CEM – ITALY**

Milan – 23 – 25 September 2009

**WGC – ARGENTINA**

Buenos Aires – 5-9 October 2009

<http://www.igu.org/wgc2009>

**CERTECH - BELGIUM**

Brussels – 7-8 October 2009

<http://www.certtech.be/>

**POLLUTEC 2009 – FRANCE**

Paris – 1 – 4 December 2009

<http://www.pollutec.com/>

**Customer care: from 9 am to 6 pm (CES Time), we are at your disposal for service gas analyser/software/computer/ maintenance and calibration. To receive our news, send your email to [info@chromatotec.com](mailto:info@chromatotec.com)**

**New instrument for measurement of formaldehyde : Airmo HCHO**

**1. Why measuring the formaldehyde**

The HCHO is part of the COV ozone precursors list as a substance listed by the Directive 2002/3/CE and PAMS (US). It is dangerous for health, mainly by inhalation and cutaneous contact in indoor ambient air in the professional environment. It can cause irritations and the corrosion of mucous membranes and can have carcinogenic effects. Toxicological Index: VME: 500 ppb, VLE: 1000 ppb. Some sources of emission: exhaust gas of motor vehicles, binding materials of wood.

**2. Chromatotec's analyser AirmoHCHO**



**AirmoHCHO system**

This instrument which detects and quantifies formaldehyde on-line and in continuous as well as other compounds such as acetaldehyde, methanol and acetone, is articulated around the model airmoVOC: 6 ways valve, 3 phase trap, capillary column, methanisation oven and FID detector.

Permeation oven and tube inside instrument all permits to achieve autocalibration. N2 is the carrier gas. -The minimum of detection is from 1 to 2 ppb of HCHO in ambient air (background pollution, background noises). Measurement range is 1 to 100 ppb with good linearity and without interferences. Data are displayed and stored on hard disk of the integrated computer thanks to the analyser software "Vistachrom". Two models are available: one with trap (ppb range), one with loop (ppm range). Results are available on request  
Ref: A13000

**CO<sub>2</sub> ANALYSIS**

There are different modes of CO<sub>2</sub> production frequently used in foods and beverages industry. Carbon dioxide is a by-product of many different natural and chemical processing mechanisms. This capability of multiple source types makes it unique in the industrial gas market. The variation of sources results in a variety of specific impurities that may be anticipated to be present in carbon dioxide. Specific institutions provide recommendations for good practice in order to provide guidance on the key characteristics for the quality and purity of carbon dioxide for use in foods and beverages:



Analytical method mainly used to prove compliance with the specification is gas chromatography for these parameters:

Component	Concentration
Acetaldehyde	0,2 ppm v/v max.
Benzene	0,02 ppm v/v max.
Total sulphur ( as S ) *	0,1 ppm v/v max.
* if the total sulphur content exceeds 0,1 ppm v/v as sulphur then the species must be determined separately and the following limits apply :	
Carbonyl Sulphide	0,1 ppm v/v max.
Hydrogen Sulphide	0,1 ppm v/v max.
Sulphur dioxide	1,0 ppm v/v max.

*source : CGA/EIGA limiting characteristics commodity specification for carbon dioxide from "carbon dioxide source certification, quality standards and verification", IGC Doc 70/99/E*

For this type of analysis Chromatotec propose our range of on-line and continuous analyzer :

- **airmoBTX** with FID detector
- **chroma S** analyzer with FPD detector

**NEW BUILDINGS**

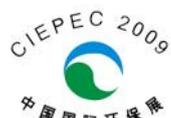
In 2008 Chromatotec made the acquisition of new buildings close to the administrative structure in Saint Antoine (Gironde). The architecture of buildings dates back to the 18<sup>th</sup>/19<sup>th</sup> century. At the beginning of 2009 these buildings have been arranged in two parts: on the second floor commercial offices and on the first floor 2 training rooms. Production site remains in Virsac.

The first room is an open space with: a work station intended for the remote communications: A software and a modem installed in the supervisor of the analyzer allow piloting remotely anywhere in the world, of complete operating cabinets of analysis to make demonstrations. It is also a friendly space for discussion and exchanges with our collaborators and our visitors. The second room is arranged to receive customers and distributors during technical trainings sessions or commercial presentations.

It is equipped with a lab table with gas arrivals in order to install up to three running analyzers and to make them function, of a powerful video material to accompany the various interventions.



**Commercial buildings**



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**Customer care: from 9 am to 6 pm (CES Time), we are at your disposal for service gas analyser/software/computer/maintenance and calibration. To receive our news, send your email to [info@chromatotec.com](mailto:info@chromatotec.com)**

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