

Customer care: from 9 am to 6 pm, 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)

## Chromatotec Newsletter

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Come to visit us



27 - 30 novembre 2007 HORIZONS  
 PARIS-NORD VILLEPINTE

Hall 5A Aisle P Booth 164

### CHROMA S application: emission monitoring in a paper mill

The paper industry uses large quantities of sulphur substances particularly during the process of cellulose cooking (Kraft burning). The release of these substances in the air is an issue for the environment in terms of odors and toxicity. These factories have to be equipped with gas cleaning systems to limit their emissions.

Chromatotec recently installed two CHROMA S analyzers to validate and follow up the operation of bioactive cleaning systems ; a CHROMA S analyzer was installed upstream of the cleaning system and another one downstream to monitor the concentrations of COS and H<sub>2</sub>S between 0 and 1000 mg / m<sup>3</sup>.

Ref: C51000 ChromaS.



Bioactive cleaning system

### airMEDOR : integration in an industrial process

The recycling and valuation of wastes is a major challenge for the conservation of the environment. Chromatotec currently works with the research center of a large French industrial group to add an analyzer in their composting process.

The system includes a supervisor, a multiplexer and a cabinet of analysis with an airMEDOR, an analyzer for total hydrocarbons and an analyzer for ammonia.

The airMEDOR along with the industrial system enables the follow-up of the concentrations of sulphur compounds (DMDS, H<sub>2</sub>S, Methyl-SH, DMS) from 10 ppb to 20 ppm.

Ref: M11000 airMEDOR.



Analysis cabinet for water cleaning plant

### EXHIBITIONS 2008

**POLLUTEC 2007**  
 Paris Nord Villepinte  
 27 - 30 November 2007  
<http://www.pollutec.com/>

**ANALYSE INDUSTRIELLE 2008**  
 CNIT – Paris la Défense  
 5 – 7 February 2008  
<http://www.mci-salons.fr/ai2008/>

**ARAB LAB 2008**  
 Dubai - Emirats Arabes Unis  
 10 – 13 February 2008  
<http://www.arablab.com/>

**A&WMA 2008**  
 Portland (Oregon) - USA  
 24 – 28 June 2008  
<http://www.awma.org/ACE2008/>

### Option 1,3 Butadiene with GC 866 airmoBTEX and GC 866 airTOXIC

Some VOC's like 1,3 butadiene or benzene are known to be carcinogenic.

The ministerial recommendation (DGS / SD 7 B no 2005-273 of February 25<sup>th</sup>, 2005) relating to the evaluation of the consequences on health of air pollution due to traffic showed that those two compounds are critical. In petrochemicals, these compounds are also closely monitored.

Today, Chromatotec offers a new option for the simultaneous analysis of 1,3 Butadiene and the BTEX (Benzene, Toluene, Ethylbenzene, Xylene) with the analysers GC 866 airmoBTX (FID) and GC 866 airTOXIC(PID).

These instruments enable also to separate two interfering species : Cyclohexane (car traffic) and Styrene (petrochemicals).

Ref: A31022 or A34022 airmoBTX1000 / A73022 or A74022 airTOXIC BTX.



New generation of our airTOXIC

## VOC Days 2007

The main purpose of the day organised in Bordeaux in March 2007 at the office of the Air Quality Monitoring Network was to make a technical inventory of interviews with several users of our analysers.



Following these first edition users expressed what they were looking for:

- **Communication between Chromatotec and the various networks in France.**
- **Further training on our analysers**

Therefore we wished to organise a **second day**, but this time in **Paris**, on October 4<sup>th</sup> 2007 in the « Maison Aquitaine ». The tackled issues during this day concerned, in the form of practical workshops, the following points:

- **the Vistachrom software and its features**
- **accessories used with our analyzers**
- **the maintenance**

Besides we wish to keep on organising in the following months this type of meetings but also to propose similar events for our analyzers of sulphur compounds.

## Certifications 2007: CNR approval for AirmoBTX1000

In the **FID range** our **airmoBTX 1000** has just received the **CNR Certification** in Roma, on **July 30<sup>th</sup> 2007**.



This **European certification** made in Italy is an **update of our TÜV certification (Germany)** obtained in 1996 which deals with the **automatic monitoring of benzene in ambient air** but also of **Toluene, Ethylbenzene and Xylenes**.



This certification refers to the **European Directive 2000/69/CE** relative to the **limit values of benzene in ambient air** and follows the requirements of the measuring methods mentioned in the **Norm CEN 14 662 - 3** " active automatic sampling with analysis in situ ".

## CHROMATOTEC

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## New instrument for measurement of formaldehyde: Airmo HCHO

### 2. 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)**.



AirmoHCHO model

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.

### 3. Chromatotec's analyser AirmoHCHO

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**.

The minimum of detection is from **1 to 2 PPB of HCHO** in pure air (background pollution, background noises).

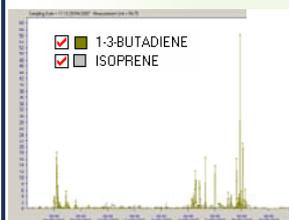
**Data are stored** on hard disk of the integrated computer thanks to the analyser functioning software and the presentation of the results "**Vistachrom**". The oven and the permeation tube allow auto-calibration of the analyser in continuous.

**Advantage:** automatic software of presentation of the results in  $\mu\text{g} / \text{m}^3$  or **PPB**. **Ref: A13000 airmoHCHO**.

## Measurement campaign on Ozone precursors

Our complete system **airmoOzone** is the solution chosen by most of our customers to monitor in continuous the **VOC concentration in ambient air**.

In Europe, the **European directive 2002/3/CE** recommends the monitoring of **31 VOC**; **56 VOC in the US (PAMS program)** and **58 VOC in Asia ( $\alpha$  and  $\beta$ -pinene added up to the US 56 VOC)**. Our **airmoOzone** system has been tested to be able to identify all of these compounds, through **1-hour** or **30-minute cycle times** for the analysis.



**1,3-BUTADIENE and ISOPRENE** concentration trend ( $\mu\text{g}/\text{m}^3$ ) over **1 month** (May 2007) on a site in an outer-urban zone (Bordeaux): **airmoVOC C2-C6, 30-minute method 31 COV**

We have currently several months of non-stop follow-up on several sites all over the world, which proves the **reliability and stability** of our analysers. **Ref: A52000 airmoOzone C<sub>2</sub>-C<sub>12</sub>**.



**VOC measure campaign :**  
Beijing - July 2007

## New product for emission: the SO<sub>2</sub> Medor

### 1. Where do the emissions from SO<sub>2</sub> come from and which are the consequences

**Sulphur dioxide (SO<sub>2</sub>)** mainly results from the combustion of the sulphur contained within fossil fuels. It is associated with various respiratory pathologies, often in combination with particles present in ambient air. **SO<sub>2</sub> emissions** contribute to **water and ground acidification**.

The decline in emissions that began in the 90s should continue thanks to the implementation of rules to lower the limit values of emission of big combustion installations and to reduce sulphur content of liquid fuels especially from diesel oil since 2005.

### 2. Chromatotec's analyser SO<sub>2</sub> Medor

The **SO<sub>2</sub> MEDOR** is a gas chromatograph dedicated to the analysis of **SO<sub>2</sub> / H<sub>2</sub>S / RSH** on-line and in continuous from combustions or incinerations emission.

- The **detection** is made by a specific **wet cell** for the sulphur molecule.
- The detection is done by a gas – liquid reaction which avoids all maintenance and alteration of the cell. Life time of the cell is **> 10 years**.
- **Data are stored** on hard disk of the integrated computer thanks to the analyser functioning software and the presentation of the results "**Vistachrom**". This software can also recalculate and export data.
- Low detection limit is **0.5 PPB**