

EXPERTS IN GAS ANALYSIS

Explosive area: Chromatotec® solutions

Since 2009 Chromatotec® produces MEDOR® in Exp cabinet for hazardous areas. First with CSA certification for Class 1 Div 2, group C&D for USA. Then we have extended this certification to CSA international world-wide excluding Europe. Now we are glad to offer our MEDOR®, chromaTCD and chromENERGY certified for ATEX zone 2 Ex II 3G Ex pz IIC T4 for world-wide use.

The Exp cabinet is protected by continuous flow with a z-purge system. This purging system is composed of a pressure regulator with a flow restrictor to control the inlet dilution. A flow controller is located at the valve outlet to validate the flow out of the cabinet. The cabinet is pressurized and diluted continuously. The worst case is taken into account to calculate the dilution flow to stay under the explosive condition. If pressure inside the cabinet is not higher than ambient pressure the power is switched off by the Z-purge system. For service there is a by-pass key to open the cabinet without pressure inside.

For complete natural gas or process analysis, Chromatotec® proposes MEDOR® for sulfur analysis, chromaTCD

for impurities in pure gas and chromENERGY for C1C6+ and calorific value. Due to its new improvements, Chromatotec® provides a full analytical solution for natural gas monitoring in hazardous area.

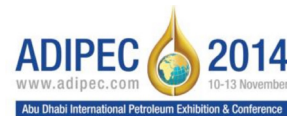


Medor® Exp in explosive area : LNG port

Exhibitions in November 2014



French Pavillon, Stand n° 16C



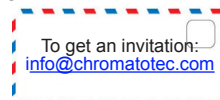
Stand n° 9324C

Exhibitions in 2015

• **PITTCO - USA**
New Orleans, LA, 8 - 12 March 2015

• **ARAB LAB - UAE**
Dubai, 23 - 26 March 2015

• **CIEPEC - CHINA**
Pekin, 9 - 12 June 2015



• **WORLD GAS CONFERENCE - FRANCE**
Paris, 1 - 5 June 2015

• **ACHEMA - GERMANY**
Frankfurt, 15 - 19 June 2015

US EPA airmOzone tests: Chromatotec® selected after lab evaluation

In order to replace old equipment at PAMS Monitoring sites (Photochemicals Assessment Monitoring Stations that represent more or less 40 sites), The US EPA has conducted a material review of fully automatic GC units able to analyse the 56 VOC ozone precursors of the PAMS list; they are performing an evaluation in two steps.

Phase 1: laboratory evaluation of selected units; 8 candidates selected including Chromatotec® with CAS our distributor in the USA.

Phase 2: field evaluation of three selected units after laboratory evaluation: deployment at PAMS field stations. RTI International based at Research Triangle Park in Durham (North Carolina) has been chosen by US EPA to organize the tests.

Results of phase 1: lab tests

The phase 1 lab test took place in April 2014 at Research Triangle Park. US EPA has informed us last July that Chromatotec® has been selected within the 3 last candidates to move on to the field evaluation phase. Each system was evaluated based on performance criterias such as precision, bias, detection limit, chromatogra-

phic performances... and also based on operational criterias such as size, field ruggedness, reliability and cost. Each system was scored on all those criterias based on data and observations collected during the lab tests.

Organization of phase 2: field tests

US EPA has purchased one airmOzone system from Chromatotec® for the field evaluation phase. The 3 systems selected will be placed in a mobile laboratory to be moved to the different monitoring sites. The test plan consists in a four months evaluation, one month in each



airmOzone at US EPA laboratory

of the 4 PAMS sites chosen. First site is the same site as Lab test: RTI RTP with US EPA and RTI as agency, the second site is in Houston at Deer park with Texas Commission on Environmental Quality (TCEQ) as Agency, the third site is in Los Angeles at Rubidoux with South Coast Air Quality Management District (SCAQMD) as Agency and the last site is to be determined in the North East region of the USA: NY, RI or MA.

Chromatotec®/CAS team has been required to supply SOPs documents (Standard Operating Procedures) to RTI and EPA staff before the starting of the tests and then RTI will train each monitoring agency field team. RTI is considered to have been trained during the lab test evaluation.

Michel Robert, Member of European Working Group 12 of benzene & VOC

The final US EPA report from the laboratory phase:
www.chromatotec.com

MEDOR® for online monitoring of sulfurs ppt to ppb or ppm levels



Chromatotec® offers a complete and turnkey solution with the TRS MEDOR® which is a 24/7 unattended online air monitoring system dedicated to sulfur compounds quantification.



Equipment offers excellent linearity over its entire range of measurement. Alert thresholds are defined to start or stop process. Several Waste Water Treatment Plants (WWTP) as prestigious as SIAAP in France or stations in the UAE have placed for years a lot of trust in Chromatotec® solutions.

A measurement network has been deployed onsite and data was centralized on SCADA systems. The quantification of gases was conducted according to the methods ISO 6326/2 & DIN51855/7 ASTM D 7493-08. It was possible to monitor with one unique instrument and multiplexer several points of interest focusing on Mercaptans (H₂S/MM/ EM/PM), sulfurs (DES/DMS/DMDS) or SO₂. Recently, the solution allows for the integration of meteorological data from wea-

ther stations and enables the dispersion modelling software to display odor and chemical plume to evaluate the odor and chemical impact of the site in the neighborhood. It is now possible to integrate data coming from other complementary technologies, display all the results and manage complaints on a unique interface offering the user at-a-glance results from source to environment.

TRS MEDOR® has obtained the GOST accreditation!

Delivered by the Russian Federal Agency on Technical Regulating and Metrology, this certificate demonstrates the recognition of our solution by the Russian market.

This TRS MEDOR® accreditation completes the certificates obtained for our GC 866 range.

Chromatotec® trainings



Commercial training in July 2014, Saint-Antoine

Sales and technical seminars were held recently in Chromatotec®'s headquarters in Saint-Antoine in France last July and in Beijing last September. It was a successful meeting with more than 30 distributors joining us during those days.

It was a nice opportunity to exchange and discuss about Chromatotec®'s new solutions regarding product line, software, maintenance packages, as well as the specific needs of our partners to prepare future generations of analyzers.

These seminars are very important to train our partners to maintain the installed analytical analyzers and provide new solutions. For

example, our GC/FID/MS for fast and on-line quantification of VOC even in the presence of co-eluted peaks.

We also took this opportunity to present our latest development regarding odor and chemical monitoring. It warns users when levels of concentration exceed defined values at the source or in the Environment.



Technical training in September 2014, Beijing office

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Chromatotec® is ISO certified

Background

The Chromatotec®/airmotec goal is to obtain COFRAC accreditation (within ISO 17025) for calibration in Benzene of their BTEX and VOCs analyzers. Nobody in France is accredited for this test. Several laboratories or networks are accredited for benzene measurement in situ or cylinder certifications but not for benzene calibration. This accreditation is a plus that Chromatotec®/airmotec wants to offer to its customers and distributors to outdo its competitors. But to be COFRAC accredited, it is necessary to comply with the same requirements as ISO 9001 for the organizational part.

ISO 9001 certification



Since the beginning of 2013 Chromatotec®/airmotec has invested heavily in the development of the quality approach because of all the R&D in the lab. We also provide quality control on 100% of the analyzers we produce. A representative of the Board and a quality facilitator were named by the top management. The certification audit was lead last July 2014 and Chromatotec®/airmotec passed the audit with success without any non-conformities. All staff are aware of their role in improving the quality management system in place.

ISO 17025 implementation

After the organizational step, Chromatotec®/airmotec is now involved in the technical step to comply with the ISO 17025 standard requirements including standard operating procedure for benzene calibration and uncertainty budget determination.

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