



# Chromatotec Solutions

***Chromatotec is a family owned company started in 1986 by the AMIET family***

With its main offices in Bordeaux area, Houston and Beijing, Chromatotec has reached several milestones over 40 years and developed his business worldwide thanks to a network of distributors. With more than 95% of internal revenue collected through export, Chromatotec is oriented for international business and has a multinational culture

- 2300 m<sup>2</sup> on 4 offices
- 2 in Europe, 1 in Asia and 1 in America

#### **Saint-Antoine (33), France**

- Chromatotec Group Holding
- Airmotec AG SAS: sales, R&D
- Chromatotec®: cust. & admin. Services



#### **Virsac (33), France**

- Chromato-Sud SARL:  
Production site



#### **Houston (USA)**

Chromatotec Inc :  
Sales and cust. Service  
New Office fully operational  
beginning of 2019



#### **Beijing (China)**

Chromatotec Trading Co., Ltd. :  
Sales and cust. Service  
Expansion planned in 2018  
for laboratory and customer support



# Customer needs...

- Collectivities and national environmental agencies need solutions for online air or water monitoring to control the level of pollutant in urban and industrial areas for public safety
- International industries like refineries, chemical plants, pulp & paper mills,... need solution to monitor the level of pollutant and malodorous chemicals released in the air or liquids



- Oil and Gas companies need solutions to monitor 24/7 the level of odorant in natural gas, gaseous fuels and for example the composition of biogas
- Waste water treatment plants, drinking water companies, effluent management companies, need solution to monitor the level of pollutant in liquid matrices
- Specific customer requesting custom made solutions for gas or liquid analysis

# Your expertise with Chromatotec product line

## *Expertise*

- Auto GC analyzers for online monitoring
- Automatic data validation and calibration
- Sensitive solutions (ppt/ppb/ppm)
- Compounds speciation
- Turnkey solutions (cylinders free)
- Proprietary technology

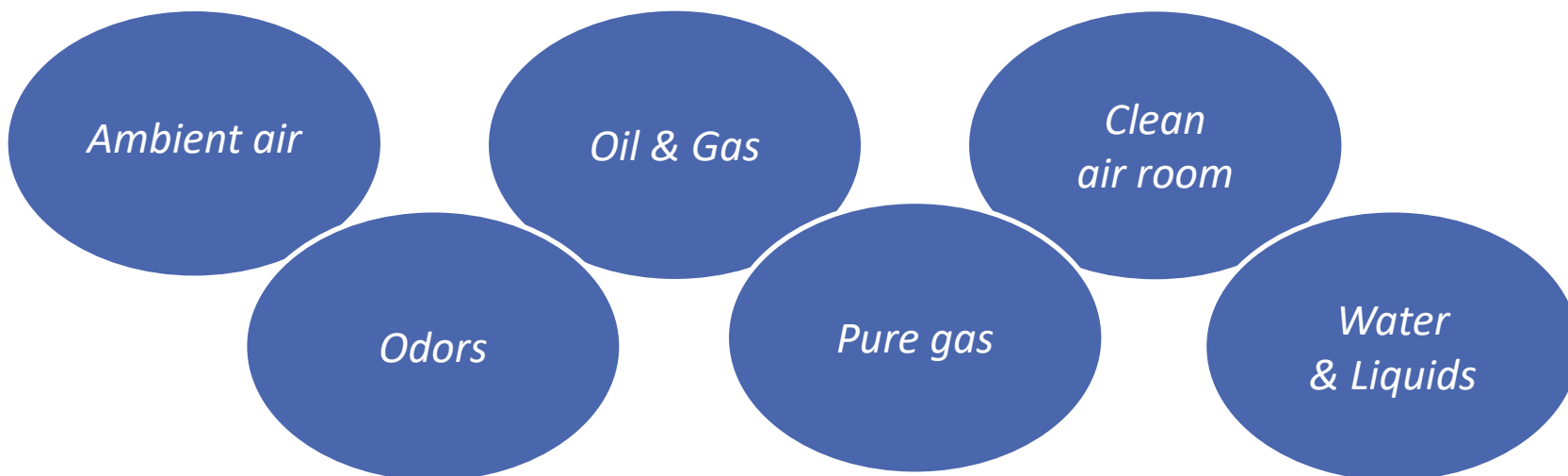


## *Specific design*

- Capabilities to design specific solution for specific application
- Expertise in VOCs (more than **120 VOCs @ppt in 30mins**, Sulfur compounds (H<sub>2</sub>S, Mercaptans and more than **14 sulfurs @ppb levels**), Odors & NH<sub>3</sub>

Provider of all-in-one analytical solutions

# Main market of expertise



*Tailor made GC solutions*

*Additive parameters of conventional ones: NO<sub>x</sub>, SO<sub>x</sub>, PM 2.5 or PM 10*

## **Chromatotec offers :**

VOC parameters: BTEX, ozone precursors

Sulfur compounds and mercaptans parameters with speciation

Odor parameter

### ***Key Solutions***

- BTEX analyzer (ppt, ppb, ppm)  
airmoVOC BTEX, Chroma, airToxic
- Sulfur compounds and mercaptans analyzer  
MEDOR range, airmoS, ChromaS
- CH<sub>4</sub>/NMTHC  
ChromaTHC
- Ozone Precursors  
airmOzone, airmOzone + MS
- Formaldehyde  
airmoHCHO

### ***Key Customers***

- Local, National and International regulation bodies (EPA, ARPA, ...)
- Chemical industries to monitor air quality around the property limits (fence line)

*Alternative or complementary solution of sensory spot measurement (olfactometry) or standard enoses using sensors (MOS or EC)*

---

## ***Chromatotec offers :***

Odorants compositions with chemical profiles

VOCs speciation up to 123 different molecules

Sulfur compounds odorants speciation: H<sub>2</sub>S, Mercaptans, Sulfides...up to 16 parameters with same analysis

Odor concentration on site and on neighborhood

### ***Key Solutions***

- Sulfur compounds analyzer + tVOCs + NH<sub>3</sub>
- Vigi e-nose , Vigi Odor software
- Sulfur compounds analyzer
- Medor range, airmoS, ChromaS

### ***Key Customers***

- Waste Water Treatment Plants
- Landfill sites
- Mines
- Rendering plant / slaughterhouse
- Breedings / intensive farming
- ...and anywhere for industrials activities that can generate odors (Pulp & paper plant, tank storage...)

*Alternative solution of total sulfur measurement with the speciation of sulfur compounds for odorization control*

---

## ***Chromatotec offers :***

Odorants compositions with chemical profiles

Sulfur compounds speciation: H<sub>2</sub>S, Mercaptans, Sulfides...up to 16 parameters with same analysis

Automatic data validation at each analysis

Specific housing for hazardous and dangerous areas (ATEX, CSA,...)

### ***Key Solutions***

- Sulfur compounds analyzer EnergyMedor
- C1-C6 analyzer ChromEnergy

### ***Key Customers***

- Gas producers
- Gas transportation companies
- Desulfuration system integrator
- Gas quality control



*Solution for the measurement of impurities in pure CO<sub>2</sub> to ensure the compliance of the gas with the limit defined by the International Society of Beverage Technologists (ISBT)*

---

## ***Chromatotec offers :***

VOCs speciation Acetaldehyde and aromatic compounds measurement up to 123 different molecules

Sulfur compounds speciation: H<sub>2</sub>S, Mercaptans, Sulfides...up to 16 parameters with same analysis

Multiplexing system to control the quality of the gas at different location of the cleaning process

### ***Key Solutions***

- Sulfur compounds analyzer : ChromaS COS, airmoS, medor range
- VOCs with airmoVOC (FID) or airTOXIC (PID)
- Impurities in pure gases (Ar, H<sub>2</sub>, He, CO<sub>2</sub>, N<sub>2</sub>,...) : Chroma TCD, DID

### ***Key Customers***

- Food industries (CO<sub>2</sub> QC)
- Medical
- Clean room
- Nuclear power plants
- Pure gases manufacturer (Air Liquid, Messer,...)

*Solution for the continuous air quality monitoring inside clean air rooms for people safety and airborne molecular contaminants of industrial processes*

---

## ***Chromatotec offers :***

Worldwide unique technology to track 123 VOCs in 30 minutes at ppt concentration level  
Multiplexing system to control the quality of air at different location of the clean room

### ***Key Solutions***

- VOC analyzer

airmoVOC C6C12, airmoVOC + MS, airmoVOC expert

### ***Key Customers***

- Micro processor companies
- Industrial sites
- Clean room: lithography process

*Solution for the continuous VOCs analysis in liquid matrices for pollution monitoring and people safety*

---

## ***Chromatotec offers :***

Worldwide unique technology to track 123 VOCs in 30 minutes at ppt concentration level  
Unique Purge and Trap system to volatilize VOCs dissolved in liquid matrix and inject in autoGC

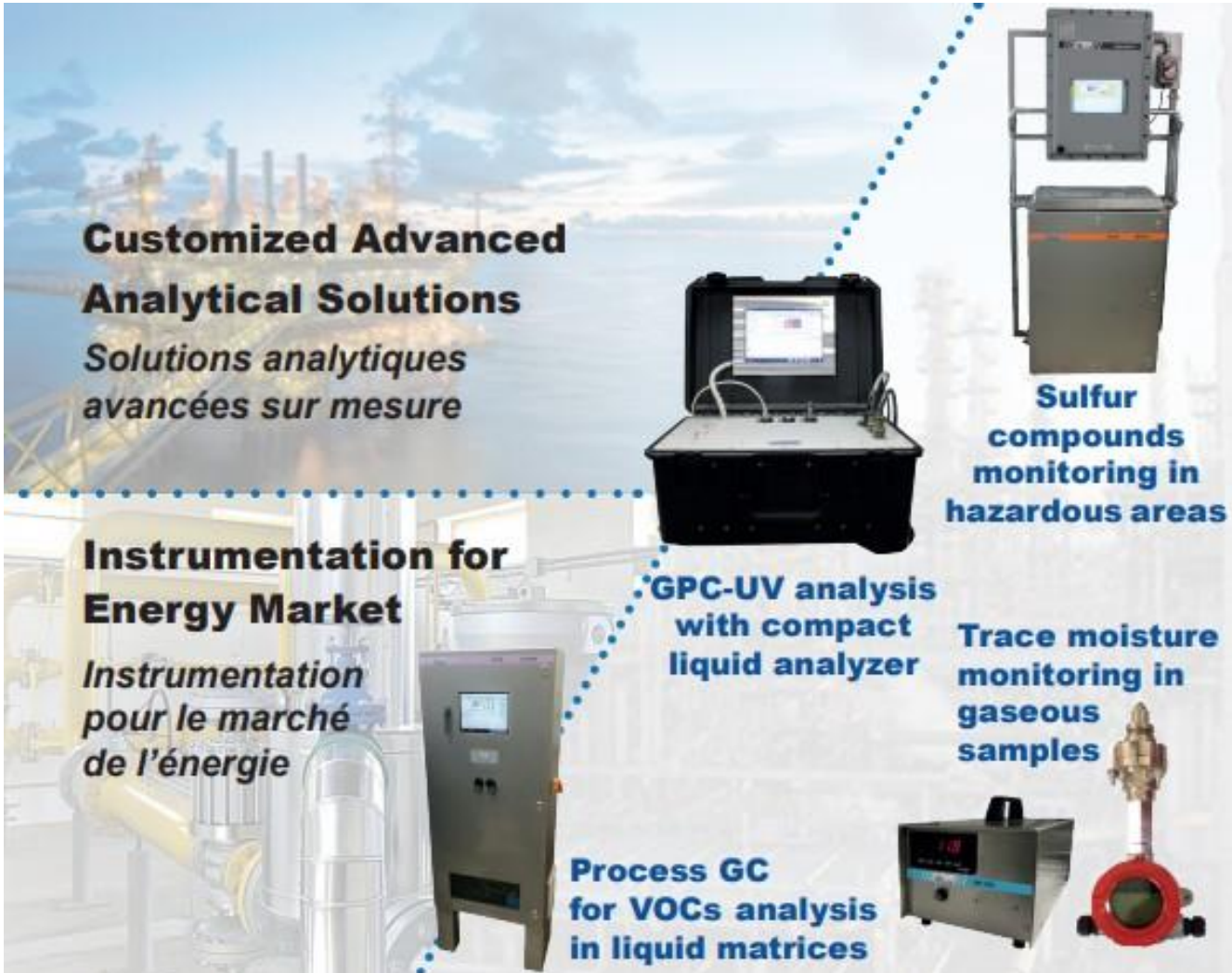
### ***Key Solutions***

- Transportable HPLC
- VOC analyzer with purge and trap system  
airmoVOC C6C12, airmoVOC + MS, airmoVOC expert

### ***Key Customers***

- Waste water treatment plants
- Effluent management companies
- Industrial sites
- Drinking water companies

# Tailor-made GC solutions for gas and liquid analysis



**Customized Advanced Analytical Solutions**  
*Solutions analytiques avancées sur mesure*

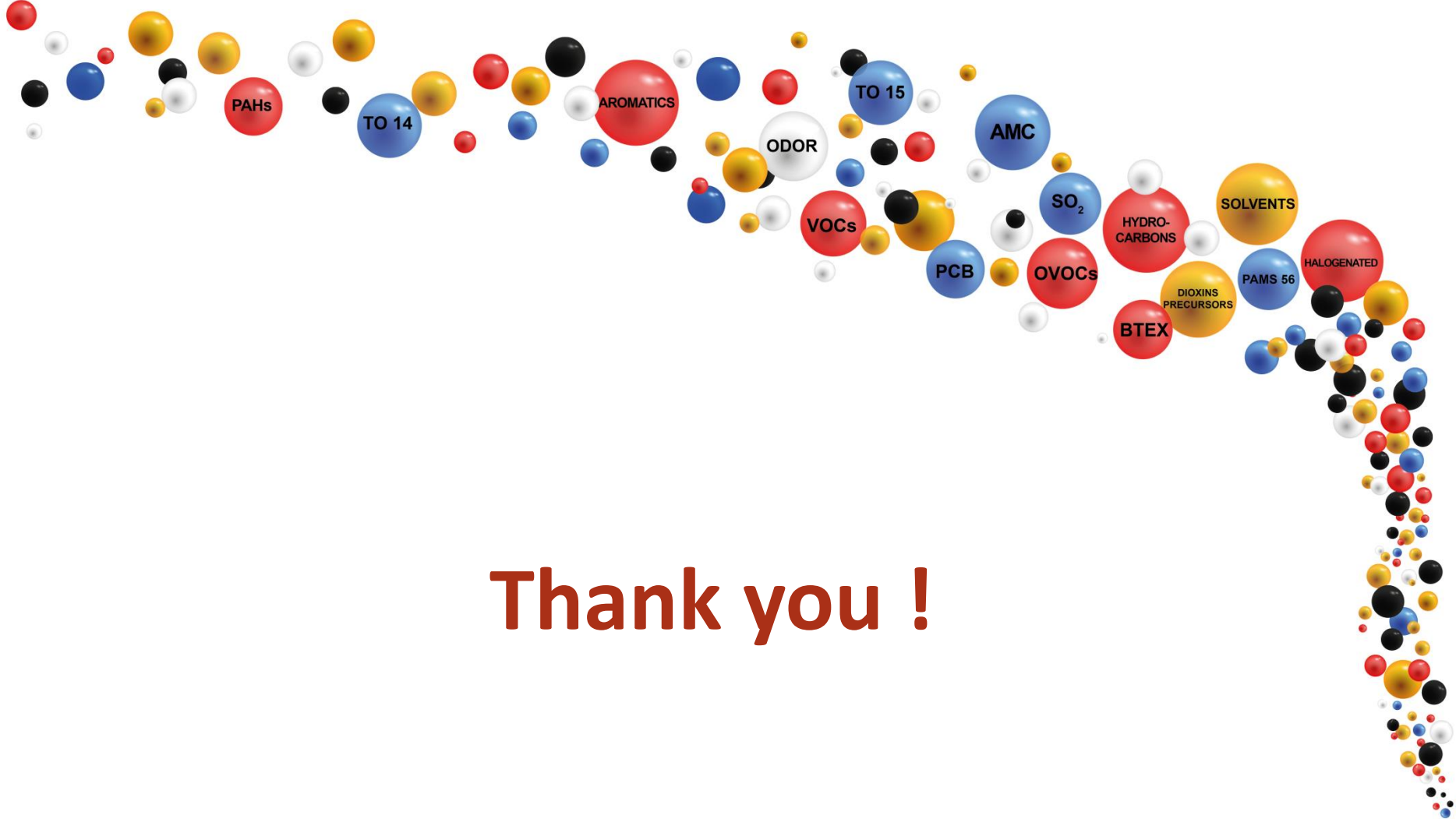
**Sulfur compounds monitoring in hazardous areas**

**Instrumentation for Energy Market**  
*Instrumentation pour le marché de l'énergie*

**Trace moisture monitoring in gaseous samples**

**Process GC for VOCs analysis in liquid matrices**

**GPC-UV analysis with compact liquid analyzer**



**Thank you !**

# 40 years of expertise in gas analysis

- 1975** Medor range launched on the market by RN Electronique with « Gaz De France », (Research Center)
- 1986** **Foundation of the firm CHROMATO-SUD by the current managers in BORDEAUX**
- 1990** Creation of airmotec AG SAS, Switzerland (Instruments dedicated to the analysis of ambient air - technology coming from the Swiss pharmaceutical industry).
- 1992** GIRA instruments revival (Elf Aquitaine)
- 1996** **airmotec AG, Chromato-Sud and RN Electronique integrated in Chromatotec Group**
- 1998** Electron captur with LETI
- 2001** airmOZONE and VistaCHROM development  
Chromatotec Inc in Houston
- 2002** Launching of air toxic range with new PID detection in ambient air and industrial hygiene
- 2005** **New Office in Beijing**
- 2009** ASTM Standard Test Method for Online Measurement of Sulfur Compounds in Natural Gas (MEDOR range)  
Analyzers for Hazardous areas range launched
- 2010** Chinese certification for VOCs system
- 2011** European mCERTs certification for VOCs analyser EN 14662-3
- 2012** Auto GC/MS analyzer for industrial or laboratory application with trap

# 40 years of expertise in gas analysis

- 2013**      **Establishment of a Chinese subsidiary in Beijing**  
European mCERTs certifications: EN 14662-3 / EN 15267-1 / EN 15267-2
- 2014**      ISO 9001 certification / GOST certification  
US EPA autoGC evaluation test: the only rack mounted autoGC selected by the national US EPA for VOCs monitoring
- 2015**      ATEX certification for Zone 1 and 2
- 2016**      Introduction of PAH analyzer on AQMS market
- 2017**      Introduction of Formaldehyde analyzer on AQMS market  
**Expansion of the production site in Virsac**  
New building for IT department : software, hardware and network team
- 2018**      New Office in Houston for customer support improvement in Americas  
Extension of the Beijing Office for increased customer support in Asia including India
- 2019**      **Own technology-based gas and liquid generators**
- 2020**      New H<sub>2</sub>O detector, probes and sampling