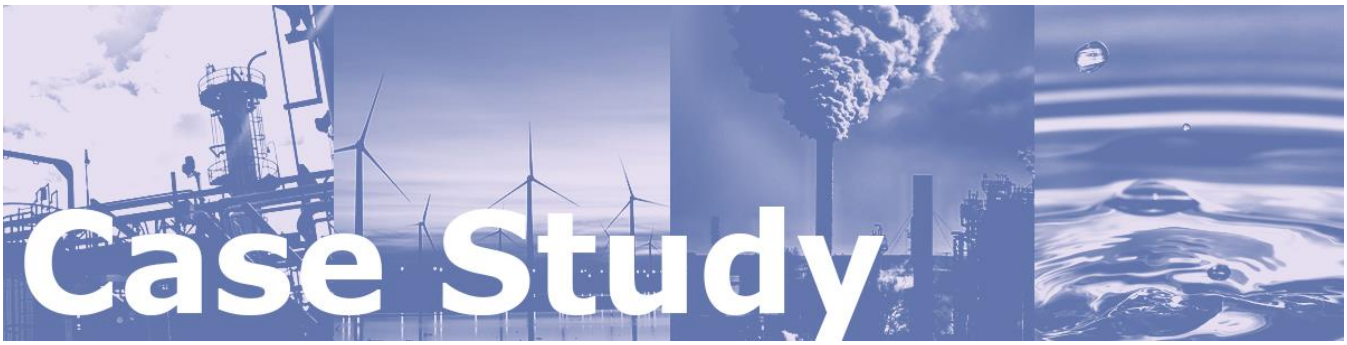


Analysis and monitoring of source water quality

Context & Challenges

The water may contain chemical species such as Benzene, Toluene, Ethylbenzene and Xylene, as well as other VOCs, including halogens. These compounds can result from various treatment processes, including iron removal. It is made by reaction with Ozone which also reacts with various compounds present in the water, such as Bromides and Chlorides, to form Bromoform and Chloroform. Subject to regulation, these levels, although minimal, must be followed closely, before and after the process.

Chromatotec® Solutions

Chromatotec® has developed a solution equipped with an MCERTS certified GC FID, analyzing VOCs dissolved in liquids, by purge & trap sampling system (according to the EPA 502-2 standard) or headspace. This system makes the extraction of VOCs from a liquid and analyze them by a GC, in order to identify and quantify the contaminantes in the water with BTEX and light SVOCs, at very low levels (µg/L or ppb).

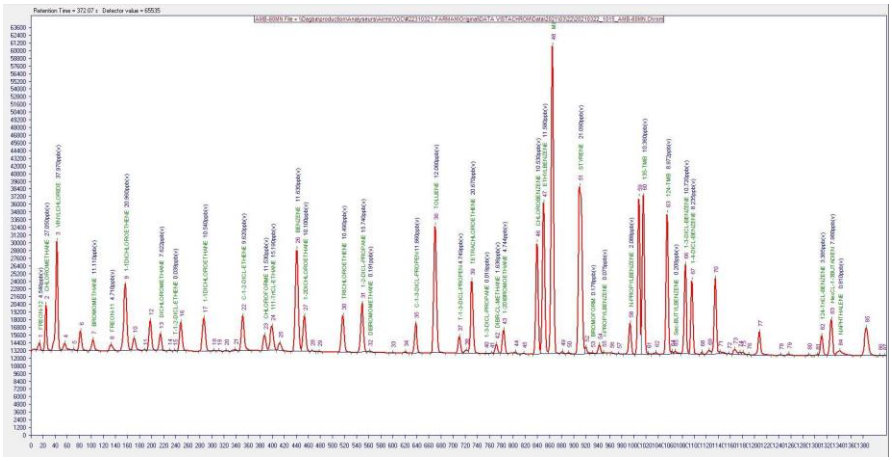
The airmoVOC WMS can both be adapted to take liquid samples in standing water or with a continuous and controlled flow.

This all in one solution is composed of an airmoVOC analyzer, hydrogen generators and zero air catalyzer, an internal calibration allowing to obtain reliable results, in real time and without human intervention.

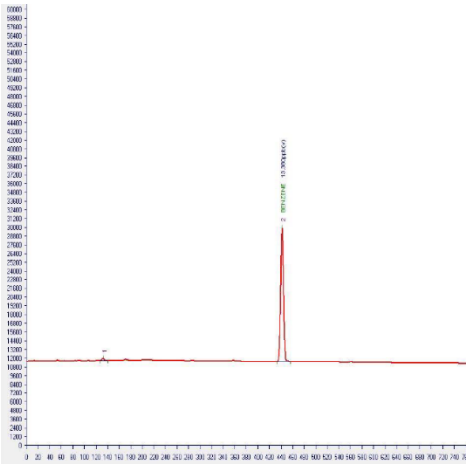
The airmoVOC WMS is used in the water markets of the food processing, the pharmaceutical industry, cosmetics and perfumery and also in the analysis of drinking water, beverages and drinking water, surfaces, food liquids (milk, soda, wines, spirits…).

airmoVOC WMS

sales@chromatotec.com
www.chromatotec.com



Chromatogram obtained with airmoVOC WMS



Focus on Benzene

Ease of use

- Waterproof cabinet, protected from wet projections and aggressive atmospheres
- No auxiliary gas needed for operation and calibration
- Hydrogen, nitrogen and air consumption
- Reliable FID detector
- Integrated sampling pump enables analysis of atmosphere pressurized sample
- Automatic internal calibration with certified permeation tubes at ppb or ppm level

Data acquisition and treatment

Data are automatically collected by Vistachrom software and interface. Datas like concentrations, retention times, analyzer status … can be transferred by Modbus protocol or 4-20mA analog output, directly to a supervision room. With the inbuilt LCD color touchscreen, the edition, viewing and transfer of the chromatograms becomes a lot easier. A calculation module manages the results to perform a daily average of the concentrations, retention times, etc … of the selected compounds.

Conclusion

- Autonomous analyzer
- Compounds speciation with chromatography technique
- Linearity for each component
- Robust instrument, minimum maintenance needed
- State of the art PC and software solutions (Modbus, calculation modules, Windows embedded based software)
- Integrated calibration device with permeation tube for automatic data validation
- ppb or ppm analyzer version available
- Certified by Mcerts