FIMAI Abstract

Odorous compounds monitoring, olfactometry, human noses? Which option should you choose?

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Odors are very distinct air contaminants as they generate nuisances and can affect nearby residents. The factors playing a role in the determination of odor annoyance are: odor concentration and intensity, frequency, appreciation, duration and location. Several solutions are available as sensory approach (dynamic olfactometry), sensor technologies (portable sensors, electronic noses, etc.). In Waste Water Treatment Plants (WWTP) odorous compounds is a crucial point. Amounts of installations may generate diffuse odor due to sulfur compound presence.
As human sense is very sensitive, due to dilution factors (meteorology, site topography, etc.) measurement solutions are located closed to the sources as it is difficult to track ppb or ppt as for H2S, Mercaptans or others molecules on environment.

Recently, Chromatotec® have provided an automated solution to identify correctly the origin and the level of odors based on chemical profiles. With MEDOR Gas chromatograph analyzer it is now possible to track and quantify very low concentration of sulfur compounds. It is possible to analyze molecules as: H2S/ MM/EM/DES/DMS/DMDS/PM/SO2 according to ISO6326/2 & DIN51855/7 ASTM D 7493-08.

It is possible now to quantify low detection limit down to 1ppb for H2S, Mercaptans and Sulfides, interference free and robust technologies (Detector lifetime is up to 10 years) with automatic calibration.
As soon as the interest is to evaluate chemical impact of odorous compounds on the neighborhood, Chromatotec® provides turnkey solution including data Reporting and modeling Software with integration of online Registration of Complains and recalculation of odor concentration at specific location and time.

The instruments network monitors ambient odors inside and outside waste water treatment plant and monitors also the deodorization process. One instrument, using a multi stream selector is able to measure compound concentrations and odor indexes before and after deodorization tower. These measurements allow the control and the adjustment of deodorization processes, the optimization of chemical treatment and to decrease effective costs.
As the replacement of calibration gas cylinders is expensive and time consuming, Chromatotec® has developed electrochemical gas generators (e.g. H2S, Cl2, O2, H2…). These generators will allow high level calibration and improve the robustness and reliability of the system.

During the presentation a quick tour of available solutions will be provided with a specific focus on a WWTP application.

To know more: www.chromatotec.com – To contact us: sales@chromatotec.com