

# TOTAL ODOUR MANAGEMENT System

A Complete Solution of online Odour Monitoring, Dispersion Modeling and Complaints Management



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### In a human being, there is

- ❖ 1 gene to hear
- ❖ 3 genes to see
- ❖ 12 genes to taste
- ❖ Close to 1000 genes to smell
- ❖ A human nose can discern up to a trillion (1000 billiards) of different scents
- ❖ Human Nose Odor threshold for H<sub>2</sub>S is 0.47 ppb



Odors are very distinct air contaminants as they are easily detected by the public and quickly generate nuisances. The factors playing a role in the determination of the annoyance of an odor are:

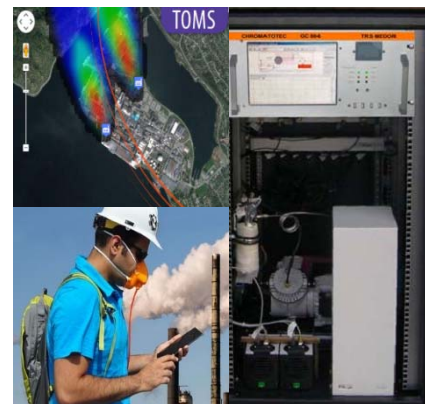
- ❖ Odor Concentration & Intensity
- ❖ Frequency of Odors
- ❖ Offensiveness
- ❖ Duration
- ❖ Location
- ❖ Ambient background Levels



### Total Odour Management System

Scentroid offer a comprehensive and novel solution for Odor Monitoring and complaint management, including:

- ❖ Predictive and live modeling software
- ❖ complaint management module
- ❖ Odour Monitoring Station
- ❖ Automatic self-calibration system
- ❖ Data acquisition and transmission
- ❖ Meteorological stations

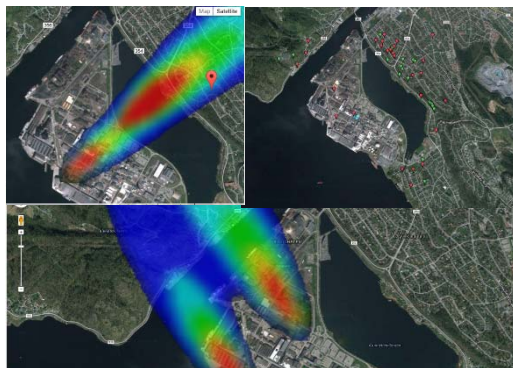




## On-Line Modelling & Complaint Management

TOMS provides a comprehensive suite of **real-time dispersion modeling** and complaint management.

- ❖ Automatic notification for odour exceedance
- ❖ Online registration of complains
- ❖ Recalculation of odor concentration at specific location & time
- ❖ Daily, weekly, monthly & yearly Report
- ❖ Automatic complaint logging
- ❖ Plant data mapped automatically against the complaint.
- ❖ Complain risk forecast based on predictive modeling



Tuesday Jan 27	evening		0	SSE	
Wednesday Jan 28	night		-1	SSE	
Wednesday Jan 28	morning		4	S	
Wednesday Jan 28	afternoon		5	S	
Wednesday Jan 28	evening		4	S	
Thursday Jan 29	night		1	WNI	

## Odour Monitoring Station

TOMS dispersion modeling software is created based on an initial odour inventory and updated continuously based on:

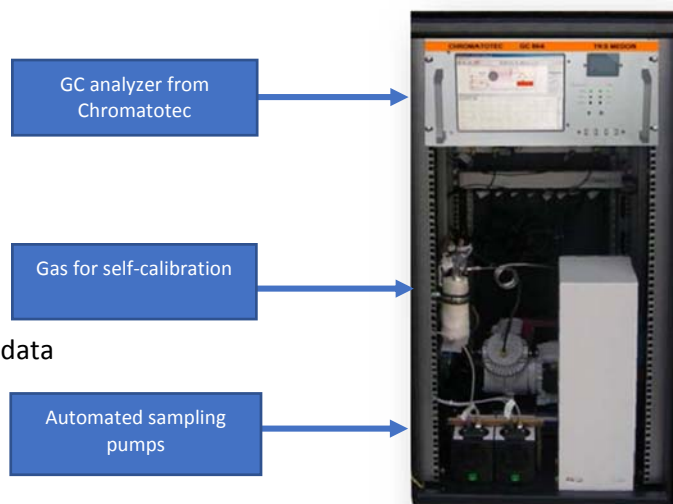
- ❖ Scentroid SM100 field olfactometer, and/or
- ❖ GC based odour Monitoring Station, and
- ❖ Meteorological station



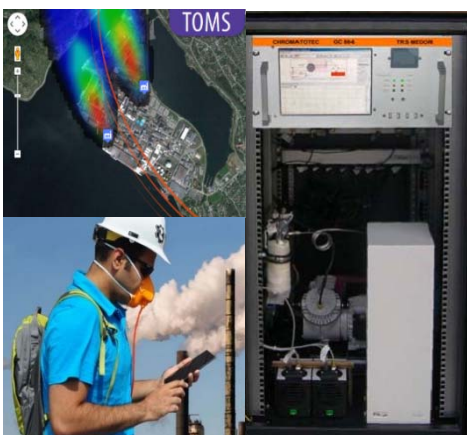
### A truly unique solution

- ❖ Based on GC Analyzer and not chemical sensors
- ❖ According to ISO6326/2 & DIN51855/7
- ❖ Lower Detectable Limit < 1ppb for H2S and DMS
- ❖ Interference Free

- ❖ No drift or change in sensitivity over time.
- ❖ Detector Lifetime : up to 10 years
- ❖ Air Conditioned Cabinet (if needed)
- ❖ Corrosion proof GRP/SS Cabinet
- ❖ Calibration system embedded as an option
- ❖ Portable Odour Monitoring Unit to cross validate data
- ❖ Field Olfactometer SM100i
- ❖ Integrated cross referencing in TOMS software



## Advantage over Existing Technology



### TOMS with GC Analyzers

- ✓ Based on GC Analyzer and not chemical sensors
- ✓ Detectable Limit < 1 ppb for H<sub>2</sub>S and DMS
- ✓ Interference Free
- ✓ Zero drift
- ✓ Self-calibration
- ✓ Chemical to odour correlation is continuously improved with use based on SM100 readings
- ✓ 10 year sensor life

### E-NOSE Technology

- ✗ Based on a handful of electro chemical sensors
- ✗ High detection limit (e.g. dozens of ppb of H<sub>2</sub>S)
- ✗ Cross interference
- ✗ Continuous sensor drift
- ✗ Short sensor life (1 year typical)
- ✗ Sensitive to temperature or humidity
- ✗ Chemical to odour correlation based on a few samples
- ✗ Significant loss of accuracy over time

