The Nose Knows...
GC-Olfactory Solutions for Evaluating
Flavors, Aromas, & Odors

VOLATILE ANALYSIS
The Premier Provider of Innovative Solutions to Identify and Re-Create Off-odors, Flavors and Aromas.
Volatile Analysis is the leader in the development and utilization of GC-Olfactory techniques and ancillary devices to help resolve real world issues relating to aroma and odor.

When it comes to off odors or aroma profiling, many standard GC techniques cannot accurately identify the important odor causing components. The active aroma/odor component is often present at very low concentrations in a complex matrix of volatile constituents. In many cases, aromas/odors are found in the parts per billion and even parts per trillion concentration range. The challenge to identify the active odor components requires an integrated approach to the analysis. An integrated approach means combining sensory with multidimensional analytical instrumentation.

Crisis

“- determine what the real cause is behind off-odors & off-flavors”

Profiling

“- re-creating specific off-odors & aromas for repeatability & quality”

Applications:

Exploratory Flavor/Odorants
Food/Packaging Interaction
Packaging Related Flavors/Odors
Chemical Product Odors
Chemical Neutralization Studies
Filter Effectiveness
Polymer Film Odor Profile
Microwave Packaging Volatile Oxidation Odors
Adhesive Odors
Polymer Volatiles
Industrial Effluent Odors
Sulfur Odors in Paper
Swine Farm & Waste Stream Odors
Sensory Correlation Studies
Reverse Engineering of Flavors/Odors
Flavor/Odor Impact Ranking
Aging Studies
Hydrogen Sulfide Analysis
Cereal Flavors
Cheese Flavors
Citrus Flavors
Beer flavor Profiling
Hops, Grain Analysis
Yeast Comparisons
Raw Material Analysis
Spice & Herb Analysis
Aroma Extract Dilution
Candy & Gum Flavoring
Carbonated Beverages Off-Odor
Coffee Flavor Profiles
Odor Complaint Investigation
Dairy Flavor Profiling
Essential Oils
Pheromone Analysis
Natural Product Analysis
Fermentation Products
Food Industry
Fragrance Industry
Living Flowers & Fruits Profiling
Chiral Heart-Cut Separations
Cosmetic Aromas
Consulting & Analytical Services

Integrated Approach - Sensory / Analytical
- Rapid resolution to difficult flavor/aroma and off-odor identification
- Aroma profiling / Aroma dilution analysis
- Critical flavor component determination
- Food / Packaging interactions
- Aroma / flavor profiling foods, extracts, wines, beer and distilled spirits
- Hops, grain analysis, yeast comparisons
- Raw material analysis
- Aroma analysis and deformulation
- Competitor product analysis
- Trace impurities in LPG and VCM feedstock
- Methods development in QC-GC applications
- Methods development for multivariate analysis
- Chemical neutralization or masking studies
- Hydrogen sulfide analysis at ppb, ppt levels
- Sensory panels / Analytical correlation

Instrumentation

Integrated Approach - Sensory / Analytical
- Utilizes multidimensional GC's & Olfactory sensing
- Flame ionization
- Photoionization
- Olfactory
- Mass Spectrometer
- Single or Auto sampling
- Dual columns for fractionation
- Little or no preparation time
- Real time aroma characterization
- MS nose detectors for multivariate QA methods development

Aroma Characterization Software

The AromTrax screen shows up to 48 aroma character buttons, all editable for your application. An aromagram is compiled from the aroma characteristics, aroma intensities and retention time, which can then be compared to an original chromatographic profile. This software permits a real time assignment of aroma characteristics and intensity compared to specific peaks of the chromatographic profile. The chromatogram is derived from signals measured at the primary detector. This is how the analytical and sensory components of measurement come together to isolate and measure the compound responsible for the aroma characteristic.

Gas Collection

- Transport malodorous higher polar, semi-volatile compounds
- Thermal desorption tube
- High performance
- Cost efficient
- Made from Teflon FEP
- Prevents gas migration

SUMO bag
Volatile Analysis reserves the right to change specifications without notice as part of our continuous program of product improvement.