



VOLATILE ORGANIC COMPOUND CHARACTERIZATION

Impact Analytical offers several state-of-the-art characterization protocols, depending on the complexity of the volatile profile, and the levels to be determined.

Headspace Analysis facilitates the analysis of vapor above a sample, either liquid or solid, which is maintained at static equilibrium conditions. When combined with capillary gas chromatography-mass spectrometry, the technique allows identification and quantitation of volatile components as low as 1 ppm (v/v).

Cryofocus-Headspace Analysis is similar to conventional headspace analysis, except the sample is larger and cryogenically focused "on-column" prior to capillary gas chromatographic separation. Cryofocusing facilitates volatiles characterization at concentrations as low as 10 ppb (v/v) and is useful as a rapid screening protocol for profiling odor causing volatile components.

Thermogravimetric Analysis (TGA) measures weight loss as a function of temperature. Typically, at lower temperatures, the technique is used to estimate volatile's concentration in polymers or polymeric blends. At higher temperatures, TGA can be used to determine relative thermal stability of polymeric formulation or to measure initial thermal degradation products.



Trace Levels - Polymeric substances with extremely low levels of volatiles are often demanded in packaging of gourmet foods, electronics, pharmaceutical, or medical products. **Impact Analytical** offers several selective concentration techniques to extract, separate, isolate and characterize trace levels of volatiles. Simultaneous extraction and closed-loop vapor phase stripping allow for subsequent liquid chromatographic class separation that isolates hydrocarbons, olefins, aromatics, aldehydes, ketones, alcohols, esters, and acids into separate fractions for further characterization.

Impact Analytical
1910 W. St. Andrews Road, Midland, MI 48640-2696
Phone: (989) 832-5555 Fax: (989) 832-5560
Web: www.impactanalytical.com

