

Mass Spectrometry Olfactometry

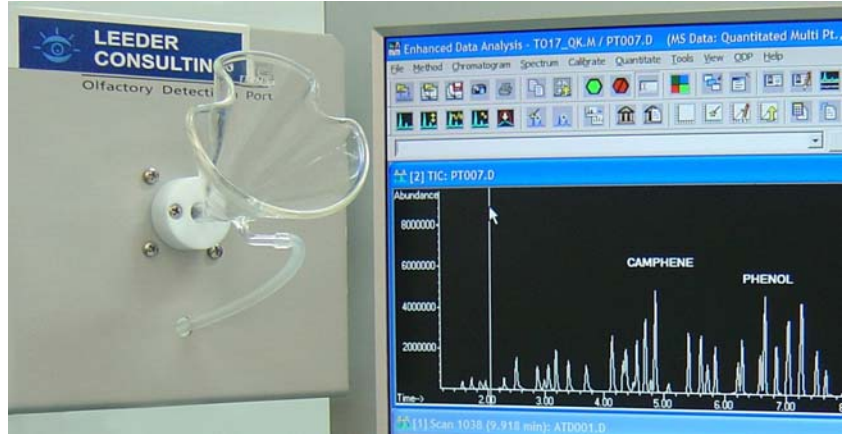
Specialist Analytical Services.

Powerful new technique for identifying and linking odorous compounds.

Effective odour management should begin with understanding the composition of odourant compounds responsible for creating the human perception of odours.

The relationship between odourant compounds and odour perception can be very difficult to establish. Traditionally, the analysis of odourants and measurement of odours are performed separately.

New Technology now enables the identification and linking of odourant compounds and human sensory perception.



Simultaneous GCMS Olfactometry enables identification of specific odourant compounds creating the perception of odour.

By separating the individual components of odorous mixtures and combining the perception of the human nose with simultaneous Mass Spectrometry, odourants within very complex mixtures can be isolated and identified.

The technique is called "High Resolution Gas Chromatography Mass Spectrometry Olfactometry" or more simply GC-MS-0. High Resolution Gas Chromatography is used to separate complex mixtures into individual components. The separated compounds are then split and simultaneously directed to a Mass Spectrometer coupled with an Olfactory Port or "sniffer".

The Olfactory Port allows a "human nose" to assess the components making up the mixture and creating the perception of odour. Simultaneous analysis by the Mass Spectrometer enables the odorous molecules to be identified using sophisticated chemical library software. Voice recognition software allows the human receptor or "nose" to describe their perceptions of the odour. The descriptions are directly notated in real-time identifying the individual compounds on the chromatogram.

The combined techniques link the odourant compound to the corresponding perception of odour.

Once the offending "odourant" compounds have been identified at a molecular level, odour management and reduction strategies can be effectively investigated and implemented.

This new procedure provides a very powerful analytical tool for investigating odours.

Quality Assurance and Quality Control are primary considerations when undertaking specialist analytical work. Leeder Consulting's Management Systems are **AS/NZS ISO 9001 Certified**, the laboratory is **NATA Accredited** and is a **Registered Quarantine Laboratory**.

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