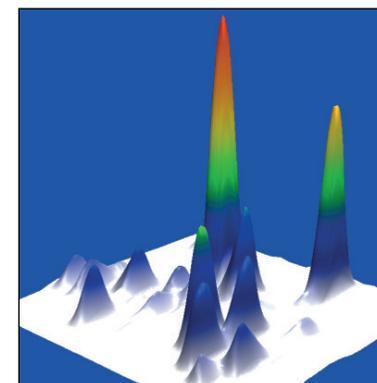
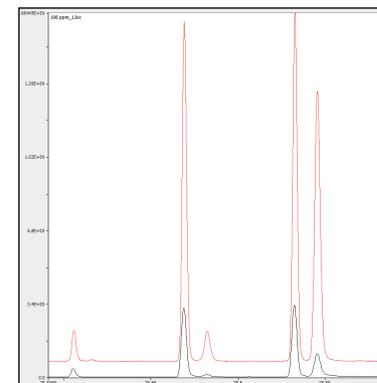


INSIGHT™ flow modulator

Outstanding performance for routine multi-dimensional GC



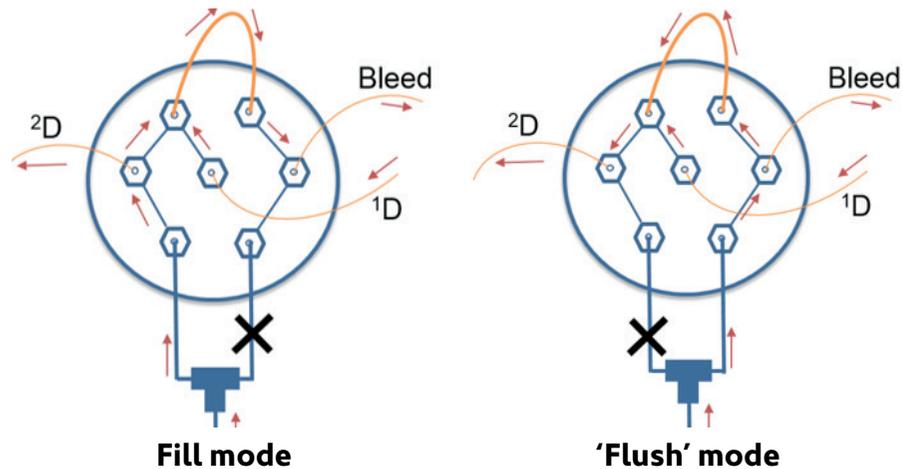
Robust and routine solutions for complex GC and GC-MS...

INSIGHT™ the new flow modulator from SepSolve Analytical unlocks a range of multidimensional GC separations without the hassle and expense of liquid cryogen.

The innovative design uses reverse fill/flush dynamics to provide increased peak capacity for GC×GC compared to first generation flow modulators.

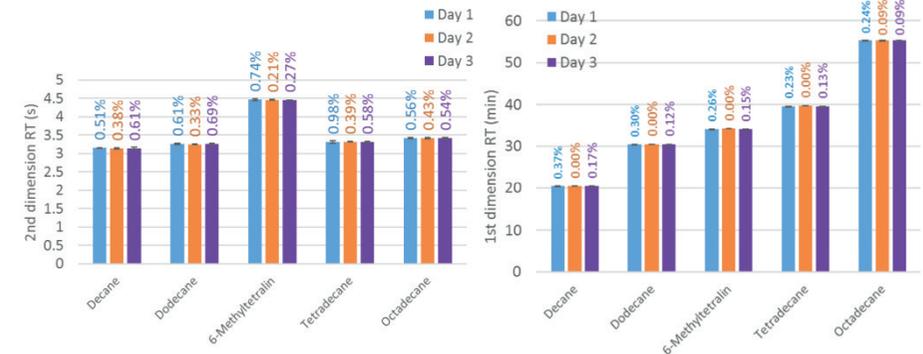
In keeping with SepSolve's bespoke GC and GC-MS solutions, the Insight modulator integrates seamlessly into any commercial GC, with its compact design easily mounted within the oven.

The Insight modulator not only offers the widest possible volatility separation for GC×GC modulation, but has the flexibility to perform heart-cutting, splitting for parallel detection, back flushing and critical component peak compression.



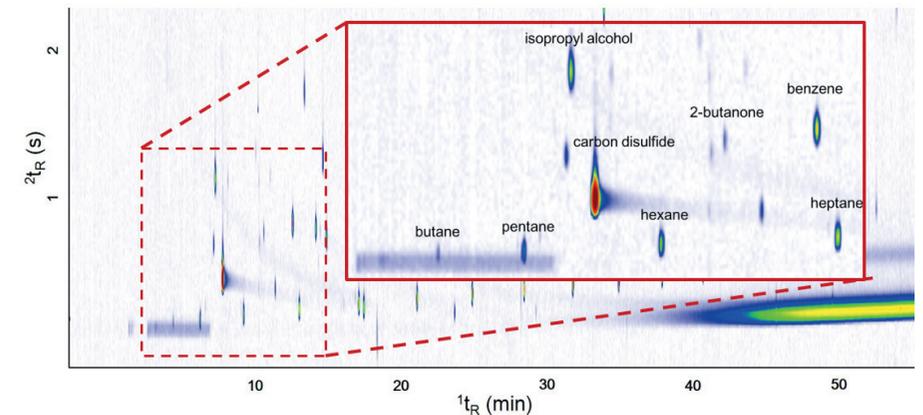
The valve-based Insight modulator uses differential flows to simply 'fill' and 'flush' a sample loop – meaning low running costs for routine GC×GC and none of the logistical issues associated with liquid cryogen.

Delivering the confidence required for routine applications



Excellent repeatability of retention times due to the use of a dedicated EPC for each column. The charts show retention time repeatability in the first and second dimensions for 24 injections over a 3-day period (n = 8 injections/day), with all RSD <1%.

Tackle a wider range of samples



Insight provides efficient modulation of volatiles <C₅. Here we show volatile compounds that are unable to be modulated by thermal devices.

Gain insight into your most challenging samples...

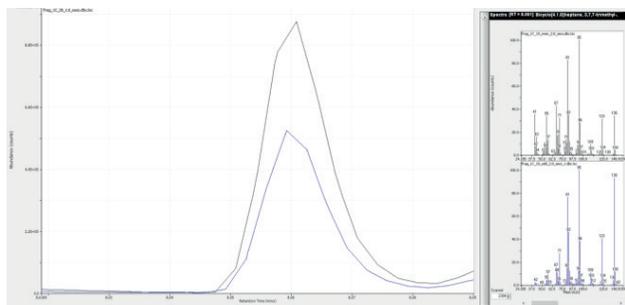
SepSolve delivers bespoke systems designed to meet your analytical needs, with the INSIGHT modulator integrating seamlessly into these multifunctional platforms

Fragrance profiling

Hundreds of similar terpenes, diverse sample types and complex matrices make monitoring allergens in cosmetics a challenging prospect.

Insight keeps labs ahead of the regulations, by providing the separation required for confident identification and quantitation of an extended suite of allergens.

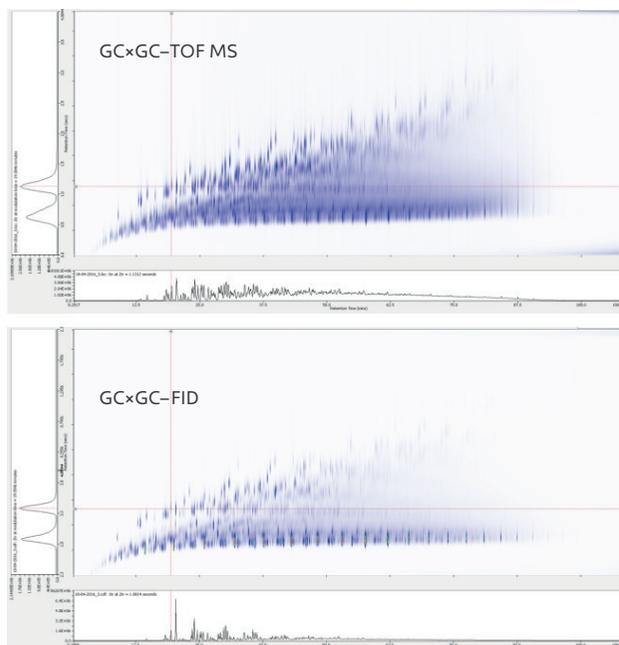
The ability to couple with ground-breaking MS, such as Markes International's BenchTOF-Select with Tandem Ionisation[®], enables speciation of isomers that cannot be distinguished by any other GC-MS system.



GC×GC-TOF MS of fragrance allergens, with Tandem Ionisation providing complementary soft electron ionisation for confident sample characterisation in a single run.

Petrochemical analyses

The Insight modulator enables GC×GC with parallel detection by MS and FID – the ideal approach for qualitative and quantitative analysis of complex petrochemicals in a single run.

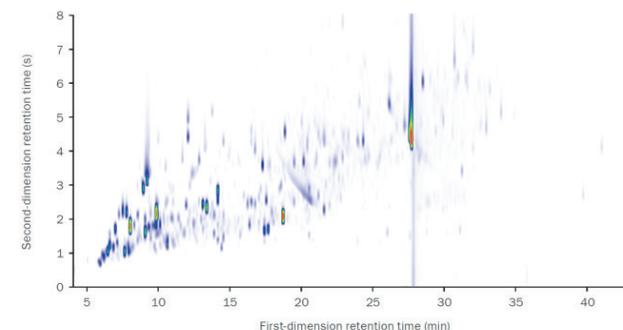


Fast and simple cross-validation, due to excellent retention time alignment between FID and TOF MS in this diesel sample analysed by parallel detection GC×GC.

Tobacco & e-cigarettes

Insight provides the flexibility required to tackle a range of challenging analyses encountered in the tobacco industry, for regulatory purposes as well as in research & development.

The valves can easily be configured for heart-cutting and backflushing, providing a truly multi-functional system for the tobacco industry – where many other products, such as e-cigarettes and their resulting aerosols, may require high-throughput evaluation.



Here we show the analysis of whole smoke by thermal desorption-GC×GC-MS, with efficient modulation of volatiles. INSIGHT's flexible loop volume enables optimisation to minimise breakthrough of high-loading components, such as nicotine.

About SepSolve Analytical

SepSolve provides expertise, advice and equipment to the analytical chemistry sector on the characterisation of complex mixtures by gas chromatography (GC).

With many years of experience in the field and access to a range of leading equipment suppliers, SepSolve is very well-placed to tackle the most difficult challenges in analytical science, from environmental monitoring to food aroma analysis.

Key areas of expertise are in sample preparation, separation and detection – combining all of these aspects is essential to achieve the outstanding analytical performance and productivity that will set your business apart from your competitors and prepare you for the challenges ahead.



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