

New multimode inlet enables a single GC-MS system to support multiple analysis tasks

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Shimadzu UK Ltd has released the OPTIC-4 Multimode Inlet for Gas Chromatograph Mass Spectrometers to address the growing R&D demand for a single GC-MS system that can accommodate multiple analysis tasks. The introduction of the multimode inlet device is targeted at chemical manufacturers, food producers and university research departments.



Equipped with injection modes capable of accommodating a wide range of sample forms, the OPTIC-4 supports split/splitless injection modes. A further five inlet modes can also be accommodated with the single inlet. The additional modes include: large volume injection mode; inlet derivatization mode; thermal desorption mode; thermal extraction mode; thermal decomposition (pyrolysis) mode and DMI (Difficult Matrix Introduction) mode.

Utilizing a direct heating method, the OPTIC-4 is able to achieve a maximum heating speed of 60°C/sec which enables chromatogram peak spread in thermal decomposition analysis to be suppressed to a minimum. Equipping a system with an optional cryotrap will sharpen chromatogram peaks and improve separation and sensitivity. With a maximum heating speed of 60°C/sec, analysis is possible while the spread of sample bands trapped by the cryo unit can be suppressed to a minimum.

Compound adsorption due to cold spots can be minimized because the OPTIC-4 does not use switching valves or transfer lines, which is ideal for analysing compounds with a high boiling point, as well as adsorptive and degradable compounds.

The OPTIC-4 can also be used as an inlet for large volume injection analysis. The improved sensitivity due to large volume injection enables simple and easy sample concentration.

"By combining OPTIC-4 with Shimadzu's new AOC-5000 Plus GC sample injection system and the optional LINEX automatic liner exchange enables users to replace glass inserts automatically without having to halt their analysis procedure and thereby significantly improving analysis throughput rates," explained Alan Northage, GC/GCMS Business Manager for Shimadzu UK. "The unique features of the multimode injector also enable analyses that no other commercially available injector can perform. Whether that be the 'rapid-at-once' large volume injection of up to 150uL of sample for ultra trace analysis or in the pyrolysis mode where the direct resistive heating of the injector achieves a ramp rate of 60°C/s up to 600°C."

For more information visit www.shimadzu.co.uk

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