

Press Release

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New OPTIC-4 injector

Most powerful multimode inlet for GC and GCMS

Applicable as Large Volume injector, Pyrolysis or Thermal Desorption injection system/

Fully automated analysis with AOC-5000 Plus/

Improved detection limits using cold injection system

Shimadzu, one of the worldwide leading manufacturers in analytical instrumentation, introduces the new OPTIC-4 injector, the 4th generation of the highly successful OPTIC multimode injection system from Atas GL, Eindhoven, Netherlands. This versatile tool increases application range and detection limits of the Shimadzu GC and GCMS series.

Additional operation modes

In addition to the standard sampling modes, the programmable OPTIC-4 can be operated as Large Volume injector, Pyrolysis or Thermal Desorption injection system. DMI (Difficult Matrix Introduction) is also possible by injecting μ -vials filled with sample (solid or highly matrix-loaded) into the OPTIC-4 liner, allowing direct analysis of the compounds in the sample.

Highest temperature ramps by direct resistive heating

The patented low thermal mass design together with direct resistive heating provides a linear temperature range up to 600 °C at rates as high as 60 °C/sec, opening the possibility to apply the OPTIC-4 for a wide range of applications. Combined with the AOC-5000 Plus auto

sampler, fully automated sample injection can be utilized using an automatic liner exchanger (LINEX). The variety of different liners supports the wide range of applications using the OPTIC-4.

Improved detection limits

Using the OPTIC-4 injector as a cold injection system, compounds which usually degrade in hot injectors, e.g. thermal labile pesticides, can be analyzed without any difficulty. Precise and reproducible results can therefore be obtained for low boiling point compounds. The OPTIC-4 temperature range is +10 °C above RT to 600 °C (alternatively -180 °C or -50 °C to 600 °C with the injector cooling option using direct LN₂ or CO₂ cooling, respectively).

The unique solvent monitor enables easy method development for Large Volume injections, which improves detection limits and can be used in all application areas with a need for high sensitivity.



Figure 1: New OPTIC-4 injector increases application range and detection limits of Shimadzu GC and GCMS systems.



Figure 2: GCMS-QP2010 Ultra combined with OPTIC-4 injector.

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