

Press Release

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Real breakthrough

Easy quantitation with new Multi-Deans Switch technology

Renaissance of the multidimensional GC method / High precision of retention times / Quantitation of co-eluting peaks

Shimadzu, one of the world's leading developers of analytical instrumentation, introduces the new multidimensional MDGC-2010. The system serves a wide range of applications in environmental, food and clinical analysis or other complex sample type analyses. This multiple heart-cut multidimensional system was particularly designed for the transfer of co-eluting peaks to a second column ("cut") and makes quantitation very easy.

The MDGC-2010 represents the renaissance of the multidimensional GC method. It applies the well-known Deans Switch technology, but in a totally different way than in the past. Using different restrictors, the pressure at the end of the first column always remains constant, whether or not a cut is used. It is a real breakthrough that the user may perform as many cuts as required without any shifts of retention time and with excellent precision of the retention times. This allows for easy method development. Just three steps are needed to set up a multidimensional method:

- 1) Run the standard (1 run).
- 2) Define the cut times graphically in the specially developed MDGCsolution software.
- 3) Run the sample.

Quantitation of co-eluting peaks

Quantitation with the MDGC-2010 system is very easy. A calibration curve can be run using the cut times with a standard sample.

Calibration curves are calculated in a conventional way by integration of the peaks in the chromatogram from the second column.

GC meets GC-MS

All operation parameters for multidimensional chromatography are controlled via the MDGCsolution software. All conventional GC detectors as well as the extremely sensitive and fast GCMS-QP2010 series instruments can be used for detection, making the system even more powerful by using full mass spectral information.



Caption: GC meets GC-MS: the new MDGC-2010 system from Shimadzu

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