



MAKING LABS WORK

The Selectable 1D/2D-GC-Olfactometry Mass Spectrometry System

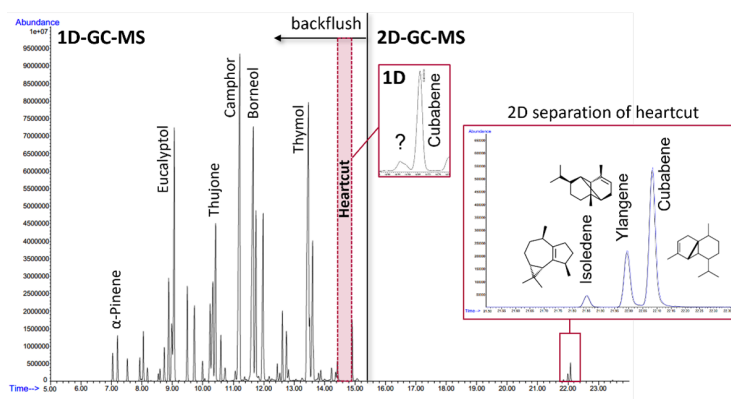
Enhanced separation and identification
of key odor compounds



GERSTEL Selectable 1D/2D-GC-MS System

- Enables multidimensional GC with simultaneous olfactometry (GERSTEL ODP) and analytical detection, including MSD, ODP, and PFPD, for both 1D and 2D-GC analysis (1D/2D-GC-O/MS) enabling identification of odor active compounds
- Provides a solution for enhanced separation with a much smaller footprint than traditional setups (e.g. two GC ovens)
- Used for routine 1D-GC-MS analysis in addition to two-dimensional heartcutting GC (2D-GC) for more complex problem-solving without hardware changes

Features and Advantages over Comprehensive 2D-GC:



- The selection of 1D-GC or 2D-GC operation is easily performed by simple changes in the method, providing the analyst with the flexibility to run 1D-GC separately when heartcutting is not required
- Chromatographic fractions that are affected by co-elution of matrix or other analytes can be identified with 1D-GC and subsequently heartcut to the second column for additional separation
- The first column can be backflushed following the heartcut(s) to accelerate analysis and eliminate potential interferences in the 2D chromatogram

Combined 1D and 2D chromatogram obtained from multidimensional GC-MS analysis of poultry seasoning. The heartcut fraction is highlighted in the 1D chromatogram and the separation of the coeluting peaks (isolodene and ylangene) is demonstrated in the 2D chromatogram.

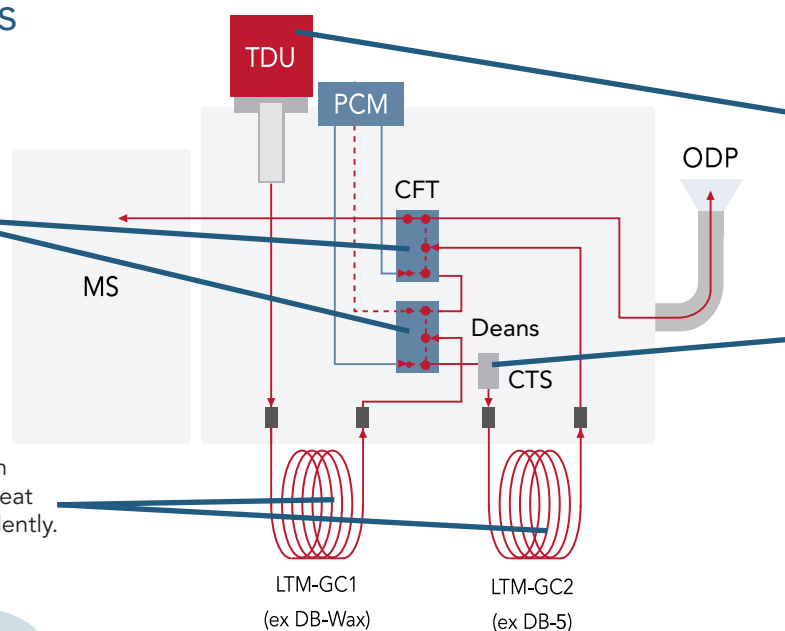
Technical Features

Flow

Agilent Technologies' capillary flow technology enables the transfer of chromatographic fractions of interest to a second column.

Heating & Cooling

Low thermal mass (LTM) GC column modules are employed to rapidly heat and cool each dimension independently.



Compatibility

Compatible with any GERSTEL sample introduction technique.

Cryofocusing

Lower detection limits can be achieved by heartcutting from replicate injections with cryofocusing using the GERSTEL Cryogenic Trapping System (CTS).