

Shimadzu launches 2D liquid chromatograph

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A New Chromatography System by Shimadzu

Shimadzu Scientific Instruments introduces the Nexera-e Comprehensive Two-Dimensional Liquid Chromatograph (2D-LC), a powerful separation method for the most complex sample matrices.

Comprehensive 2D-LC combines two independent separation modes orthogonally in combination with a dual-loop/dual-valve alternate switching system to increase separation efficiency. The combination of different modes enables the separation of peaks that are difficult to separate using conventional LC. In addition, the system achieves the highest possible theoretical plates for LC separation.

Ultra-high-speed analysis of comprehensive 2D-LC requires quick data sampling. The Nexera-e incorporates the Nexera X2 photo-diode array detector, SPD-M30A, which features high sampling rates up to 200 Hz. The Nexera-e may also be used with the LCMS-8050 triple quadrupole LC-MS/MS, which features ultra-high-speed data scanning using ultra-fast mass spectrometry (UFMS) technologies. Combining comprehensive 2D-LC with mass spectrometry detection provides an additional orthogonal dimension to this powerful chromatography separation technology.

LCxLC-Assist software is the dedicated software for setting up configuration settings. This intuitive software provides easy set-up of all the 2D-LC instrument parameters. Acquired data is converted to 2D contour plotting using ChromSquare, the dedicated software for 2D-LC analysis. In addition, ChromSquare software displays an MS spectrum in real time, and can calculate a standard curve for quantitative analysis based on the contour spot.