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ACCEPTED MANUSCRIPT

Implications of Phase Ratio for Maximizing Peak Capacity in Comprehensive Two-Dimensional Gas Chromatography Time-of-Flight Mass Spectrometry

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Highlights

- Implications of phase ratio, β, between the primary and secondary separations are studied.
- Two-dimensional-peak capacity optimization depends upon the β of both columns.
- The pseudo-isothermal nature of the secondary column separation is verified.
- The β of commercially available columns is a key constraint in peak capacity optimization.
- Full use of the two-dimensional separation space is emphasized.

Abstract

The relationship between the phase ratio, β, of the primary (^{1}D) and secondary (^{2}D) separation dimensions of comprehensive two-dimensional (2D) gas chromatography (GC×GC)

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