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"The Separation of Chiral Compounds by GC, SFC, and CE," in Column Watch. Ronald E. Majors. May, p. 412.

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"Is Your Chromatograph Really Qualified?" in Questions of Quality. C. Burgess and R.D. McDowall. February, p. 130.

THIN-LAYER CHROMATOGRAPHY

"New Chromatography Columns and Accessories at the 1997 Pittsburgh Conference, Part II," in Column Watch. Ronald E. Majors. April, p. 310.

Past Accomplishments, Present Status, and Future Challenges of Thin-Layer Chromatography. Huba Kalász, Leslie S. Etre, and Mária Báthori. November, p. 1044.

TRACE ANALYSIS

Automated SPE and Tandem MS without HPLC Columns for Quantifying Drugs at the Picogram Level. Gary D. Bowers, Caroline P. Clegg, Stephen C. Hughes, Andrew J. Harker, and Simon Lambert. January, p. 48.

VALIDATION VIEWPOINT COLUMN

"Introduction: National and International Guidelines," in Validation Viewpoint. Ira Krull and Michael Swartz. June, p. 534.

"Laboratory Notebook Documentation," in Validation Viewpoint. Ira Krull and Michael Swartz.

December, p. 1122.

"Method Validation Protocol — Required Data Elements, Method Transfer, and Revalidation," in Validation Viewpoint. Ira Krull and Michael Swartz. September, p. 842. ●