

the logic behind many of the separations that others have made. Also reviewed are the interfaces of HPLC systems to computers and robotic work stations. This section, entitled "HPLC Utilization," has six chapters titled as follows:

- (11) Preparative chromatography.
- (12) Sample preparation and methods development.
- (13) Application logics: separations overview.
- (14) Automation.
- (15) Recent advances in LC/MS separations.
- (16) New directions in HPLC.

The book ends with seven appendices titled as follows:

- (A) Personal separations guide.
- (B) FAQs for HPLC systems and columns.
- (C) Tables of solvents and volatile buffers.
- (D) Glossary of HPLC terms.
- (E) HPLC troubleshooting quick reference.
- (F) HPLC laboratory experiments.
- (G) Selected reference list.

A CD-ROM with the author's PowerPoint presentation entitled "A Practical Course in HPLC" is included with the book.

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Applied Thin-Layer Chromatography: Best Practice and Avoidance of Mistakes, 2nd ed., H.-D. Elke. Wiley-VCH, Verlag GmbH & Co., KgaA, Weinheim, Germany (2007). 330 pp., US\$ 165.00, ISBN: 978-3-527-31553-6

Thin-layer chromatography is a powerful, fast and inexpensive analytical method for the analysis of pharmaceuticals, food and environmental samples. Developed more than 30 years ago, it has proven its utility in laboratory analysis.

This book, which has been translated from German, appears to be an excellent practical guide to the utilization of this useful analytical procedure. The author notes that she has paid special attention to possible sources of error. Theoretical aspects are not emphasized in order to focus on the current state of technology and the scope of modern TLC. The author also notes that TLC is used if:

- the substances are nonvolatile or of low volatility,
- the substances are strongly polar, of medium polarity, nonpolar or ionic,
- a large number of samples must be analyzed simultaneously, cost-effectively, and within a limited period of time,
- the samples to be analyzed would damage or destroy the columns of LC (liquid chromatography) or GC (gas chromatography),
- the solvents used would attack the sorbents in LC column packings,
- the substances in the material being analyzed cannot be detected by the methods of LC or GC or only with great difficulty,
- after the chromatography, all the components of the sample have to be detectable (remain at the start or migrate with the front),
- the components of a mixture of substances after separation have to be detected individually or have to be subjected to various detection methods one after the other (e.g. in drug screening), and
- no source of electricity is available.

Hahn–Deinstrop notes that TLC is used for analysis of: pharmaceuticals and drugs; clinical chemistry, forensic chemistry and biochemistry; cosmetology; food analysis; environmental analysis; and analysis of inorganic substances and electrolytic technology.

The book is divided into the following chapters:

1. Introduction
2. Precoated layers
3. Before the TLC development process
4. Solvent systems, developing chambers and development
5. Evaluation without derivatization
6. Derivatization
7. Evaluation after derivatization
8. Documentation
9. GMP/GLP-conforming operations in TLC
10. Effects of stress
11. Special methods in TLC
12. Appendix

Never having used this technique myself, I am not able to write a comprehensive analysis of the text's material. However, as an editor, I was impressed by the author's techniques used to convey information:

- Inclusion in Chapter 1 of a comprehensive literature review, listing books in German, in English and in Chinese. In addition to books, the author also has compiled a list of relevant journals both in English and in German.
- Clearly identified practical tips.
- Use of cartoon characterizations to make her point.
- Photographs and sketches of equipment.
- 102 color photographs of results of TLC analysis.

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