

CONTENTS

Part I: Principles and Practice of Thin-Layer Chromatography	1
1. Basic Techniques, Materials, and Apparatus	3
2. Theory and Mechanism of Thin-Layer Chromatography	49
3. Optimization	81
4. Sorbents and Precoated Layers in Thin-Layer Chromatography	101
5. Planar Chromatography (Instrumental Thin-Layer Chromatography)	129
6. Gradient Development in Thin-Layer Chromatography	149
7. Overpressured Layer Chromatography	171
8. Detection, Identification, and Documentation	205
9. Thin-Layer Chromatography Coupled with Mass Spectrometry	241
10. Basic Principles of Optical Quantitation in TLC	273
11. Preparative Layer Chromatography	307
12. Thin-Layer Radiochromatography	341
13. Applications of Flame Ionization Detectors in Thin-Layer Chromatography	361
14. Automation and Robotics in Planar Chromatography	373
Part II: Applications of Thin-Layer Chromatography	387
15. Amino Acids and Their Derivatives	389
16. Peptides and Proteins	427
17. Antibiotics	445
18. Carbohydrates	481
19. Inorganics and Organometallics	507
20. Enantiomer Separations	621
21. Lipids	683
22. Natural Pigments	715
23. Pesticides	753
24. Pharmaceuticals and Drugs	819
25. Phenols, Aromatic Carboxylic Acids, and Indoles	877
26. Nucleic Acids and Their Derivatives	921
27. Steroids	971
28. Synthetic Dyes	1001
29. Toxins	1033
30. Hydrophilic Vitamins	1047
31. Lipophilic Vitamins	1055