

CONTENTS

Preface	xi
1. Introduction	1
<i>Robert L. Grob</i>	
 PART I THEORY AND BASICS	
2. Theory of Gas Chromatography	25
<i>Robert L. Grob</i>	
3. Columns: Packed and Capillary; Column Selection in Gas Chromatography	65
<i>Eugene F. Barry</i>	
4. Optimization of Separations and Computer Assistance	193
<i>John V. Hinshaw</i>	
5. High-Speed Gas Chromatography	229
<i>Richard D. Sacks</i>	
 PART II TECHNIQUES AND INSTRUMENTATION	
6. Detectors in Modern Gas Chromatography	277
<i>Luis A. Colón and Lisa J. Baird</i>	
7. Techniques for Gas Chromatography/Mass Spectrometry	339
<i>John A. Masucci and Gary W. Caldwell</i>	
8. Qualitative and Quantitative Analysis by Gas Chromatography	403
<i>Robert L. Grob and Mary A. Kaiser</i>	
9. Inlet Systems for Gas Chromatography	461
<i>Nicholas H. Snow</i>	
10. Gas Management Systems for Gas Chromatography	491
<i>Reginald J. Bartram</i>	

PART III APPLICATIONS

- 11. Sample Preparation Techniques for Gas Chromatography** 547
Nicholas H. Snow and Gregory C. Slack
- 12. Physicochemical Measurements by Gas Chromatography** 605
Mary A. Kaiser and Cecil R. Dybowski
- 13. Petroleum and Petrochemical Analysis by Gas Chromatography** 643
Edward F. Smith, Mark E. Craig, and Clifford C. Walters
- 14. Clinical and Pharmaceutical Applications of Gas Chromatography** 739
Juan G. Alvarez
- 15. Environmental Applications of Gas Chromatography** 769
John L. Snyder
- 16. Forensic Science Applications of Gas Chromatography** 883
Thomas A. Brettell
- 17. Validation and QA/QC of Gas Chromatographic Methods** 969
Thomas A. Brettell and Richard E. Lester

APPENDIXES

- Appendix A. Effect of Detector Attenuation Change and Chart Speed on Peak Height, Peak Width, and Peak Area** 991
Robert L. Grob and Eugene F. Barry
- Appendix B. Gas Chromatographic Acronyms and Symbols and Their Definitions** 995
Robert L. Grob and Eugene F. Barry
- Appendix C. Useful Hints for Gas Chromatography** 1007
Robert L. Grob and Eugene F. Barry

- INDEX** 1011