

CONTENTS

Series Editor's Preface	xxxix
Preface	xxxiii
Sampling	
Chapter 1 Sampling and sample preparation for indoor air analysis	1
Chapter 2 Sampling water and aqueous solutions	33
Chapter 3 Sampling selected solid materials	61
Chapter 4 Analyte losses during storage	87
Sample Matrices	
Chapter 5 Automated diffusion-based collection and measurement of atmospheric trace gases	97
Chapter 6 Automated measurement of atmospheric particle composition	161
Chapter 7 Physicochemical properties of aqueous and solid environmental matrices	219
Chapter 8 Characterization of analyte binding and freely dissolved concentrations in environmental and biological materials	241
Extraction Technology Fundamentals	
Chapter 9 Unified theory of extraction	253
Chapter 10 Headspace gas chromatography	279
Chapter 11 Liquid – liquid extraction	297
Chapter 12 Principles and practice of solid-phase extraction	341
Chapter 13 Solid phase microextraction	389
Chapter 14 Membrane extraction	479
Chapter 15 Liquid membrane techniques	503
Chapter 16 Membrane inlet mass spectrometry	531
Chapter 17 Extraction techniques for solid samples	559
Chapter 18 Hot (subcritical) water extraction	587
Chapter 19 Recent developments in the chemistry and application of analytical derivatizations	609
Applications	
Chapter 20 Sampling and sample preparation for pheromone analysis	669
Chapter 21 Sampling and sample preparation for fragrance analysis	699
Chapter 22 Sample preparation for water analysis	721
Chapter 23 Sampling and sample preparation for clinical and pharmaceutical analysis	779
Chapter 24 Automation of sample preparation for pharmaceutical and clinical analysis	837
Chapter 25 Sampling and sample preparation for food analysis	869

Chapter 26	Sample preparation techniques for soil analysis	895
Chapter 27	New developments in sampling and sample preparation for forensic analysis	919
Chapter 28	Sampling and sample preparation for trace element speciation	939
Chapter 29	Sample cleanup and concentration techniques for capillary eletrophoresis	967
New Materials		
Chapter 30	Recent progresses in membrane separation science and technologies : a review	983
Chapter 31	Novel fibrous systems for contaminant removal	1005
Chapter 32	New Polymeric extraction materials	1023
Chapter 33	Immunosorbents in sample preparation	1081
	Abbreviations	1101
	Index	1107