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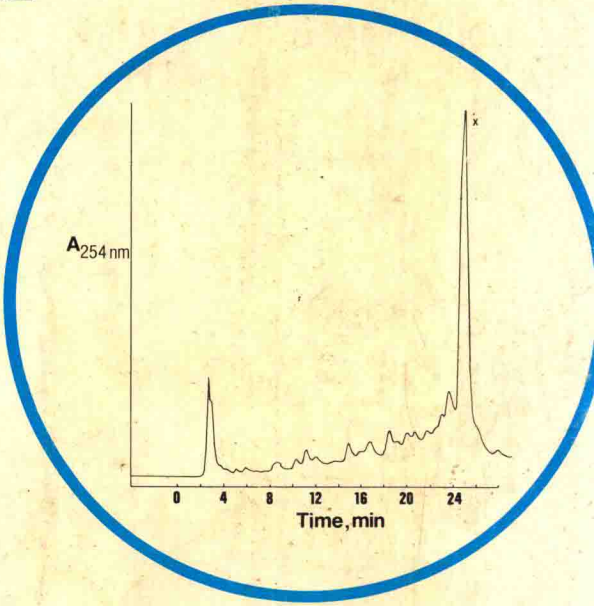
applications of HPLC in biochemistry

A. FALLON,
R.F.G. BOOTH
and L.D. BELL



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A. Fallon
British Bio-technology Limited
Brook House, Watlington Road
Oxford OX4 5LY, U.K.

R.F.G. Booth
The Wellcome Research Laboratories
Langley Court, Beckenham
Kent BR3 3BS, U.K.

and

L.D. Bell
Monsanto Company
700 Chesterfield Village Parkway
St. Louis, MO 63198, U.S.A.

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Edited by

R.H. BURDON—*Department of Bioscience and Biotechnology, University of Strathclyde, Glasgow*
P.H. van KNIPPENBERG—*Department of Biochemistry, University of Leiden, Leiden*

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Mahatma Gandhi (1869–1948)

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Contents

Acknowledgements . . . . . *VI*

Chapter 1. The origins and development of liquid chromatography . *1*

1.1. Origins 1
1.2. Recent advances in liquid chromatography 2
1.3. The advantages of HPLC over other chromatographic techniques 4
1.4. Outline of the book 7

Chapter 2. The theory of HPLC *8*

2.1. Introduction 8
2.2. Basic terms 10
2.3. Band broadening 14
2.4. Retention 16
2.5. Resolution 18
2.6. Separation time 19
2.7. Preparative separations 20

Chapter 3. Instrumentation *23*

3.1. Introduction 23
3.2. System design 24

3.3. Reservoir 24
3.4. Pumps 25
3.4.1. Gradient systems 27
3.5. Injectors 28
3.6. Corrosion 29
3.6.1. Proteins: a special case 29
3.7. Detectors 31
3.7.1. Ultra violet (UV) detection 31
3.7.2. Fluorescence detection 33
3.7.3. Refractive index (RI) detection 34
3.7.3.1. Fresnel prism 34
3.7.3.2. Deflection refractometer 35
3.7.3.3. Interferometric refractometer 35
3.7.4. Radioactivity monitors 36
3.7.5. Electrochemical detection 38
3.8. Fraction collectors 41
3.9. Automation 41
3.9.1. Autosampler 41
3.9.2. Microprocessor control 42

Chaper 4. High performance ion-exchange chromatography 43

4.1. Introduction 43
4.2. Mechanism 44
4.3. Effects of pH 47
4.3.1. Mobile phase effects 47
4.3.2. Stationary phase effects 50
4.4. Stationary phases 52
4.4.1. Cross-linked polystyrene stationary phases 53
4.4.2. Pellicular stationary phases 53
4.4.3. Silica-based stationary phases 53
4.4.4. Hydrophilic gels 53
4.5. Mobile phases 54
4.6. Added solvent 55

Chapter 5. High performance size exclusion chromatography 56

5.1. Introduction 56
5.2. Principles 57

5.3. Factors affecting resolution 59
5.3.1. Selectivity 59
5.3.2. Column capacity 60
5.3.3. Pore size distribution 60
5.3.4. Pore volume 61
5.4. Mobile phase effects 61
5.4.1. pH 61
5.4.2. Ionic strength 62
5.4.3. Flow rate 62
5.5. Molecular weight determination 62

Chapter 6. High performance normal phase chromatography 65

6.1. Introduction 65
6.2. Displacement model 66
6.3. Sorption model 67
6.4. Stationary phases effects 69
6.5. Mobile phases effects 70
6.6. Temperature effects 70
6.7. Other considerations 72

Chapter 7. High performance reversed phase chromatography . . . 73

7.1. Introduction 73
7.2. Stationary phases 74
7.2.1. Octadecylsilane (ODS) packings 75
7.2.2. C_2–C_8 packings 75
7.2.3. Phenyl packings 76
7.3. Factors affecting separations 76
7.3.1. Basic concepts 76
7.3.2. Solvophobic theory 78
7.3.3. Stationary phase effects 80
7.3.4. Parameters affecting chromatographic retention 81
7.3.4.1. Organic modifiers 81
7.3.4.2. Temperature 83
7.3.4.3. Added salts 84
7.3.4.4. pH 86
7.3.4.5. Buffers 87
7.3.4.6. Chain length 88

Chapter 8. High performance reverse phase ion-pair chromatography 90

8.1. Models of ion-pair chromatography 91
8.1.1. Normal phase liquid–liquid ion-pair chromatography 91
8.1.2. Reversed phase liquid–liquid ion-pair chromatography 91
8.1.3. Reversed phase ion-pair (RPIP) chromatography 92
8.2. Mechanism of reversed phase ion-pair chromatography 93
8.3. Choice of experimental parameters 95
8.3.1. Mobile phase composition 96
8.3.2. pH 97
8.3.3. Effect of added salts 98
8.3.4. Effect of counter-ion concentration and chain length 99
8.3.5. Effect of temperature 100

Chapter 9. High performance affinity chromatography 102

9.1. High performance liquid affinity chromatography (HPLAC) 102
9.1.1. Introduction 102
9.1.2. Principles 103
9.1.3. Stationary phase effects 104
9.1.3.1. Chemistry of ligand attachment 104
9.1.3.2. Other characteristics 104
9.1.4. Mobile phase effects 108
9.2. High performance ligand exchange chromatography (HPLEC) 108
9.2.1. Introduction 108
9.2.2. Principles 109
9.2.3. Stationary phase characteristics 109
9.2.4. Mobile phase effects 111
9.3. Summary 114

Chapter 10. Practical aspects 115

10.1. Introduction 115
10.2. General operation 116
10.3. Establishing an HPLC separation 116
10.3.1. Mode selection 117
10.3.1.1. Size exclusion chromatography 118
10.3.1.2. Adsorption chromatography 118
10.3.1.3. Partition chromatography 118
10.3.1.4. Ion-exchange chromatography 119

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10.4. Solvent 119
10.4.1. Solvent selection 119
10.4.1.1. Physicochemical properties of the sample 119
10.4.1.2. Physicochemical properties of the solvents 119
10.4.1.3. Mobility of the sample by TLC 121
10.4.2. Solvent purity 122
10.5. Isocratic vs. gradient elution 123
10.5.1. Low pressure systems 123
10.5.2. High pressure systems 124
10.6. Sample preparation 124
10.7. Derivatisation 125
10.7.1. Pre-column derivatisation 125
10.7.2. Post-column derivatisation 125
10.8. Column construction 127
10.8.1. Frits 127
10.9. Microcolumns in HPLC 128
10.9.1. Microbore packed columns 128
10.9.2. Open tubular capillary columns 129
10.9.3. Packed capillary columns 129
10.9.4. General considerations 130
10.10. Column packings 131
10.10.1. Particle size 131
10.10.2. Other aspects of particle size and shape 135
10.10.3. Pore size 135
10.11. Home-made column packings 136
10.11.1. Chemically bonded polymer phases 136
10.11.2. Preparation of chemically bonded phases 136
10.11.3. Chemically bonded silica phases 136
10.12. Column packing 138
10.13. Column assessment 139
10.14. Column protection 140
10.14.1. Column storage 141
10.15. Tubing 141
10.16. Detection 141
10.17. Peak identification 142
10.18. Data handling 142

Chapter 11. Applications of HPLC

Chapter 11.1. Nucleosides and nucleotides 144

11.1.1. Introduction 144
11.1.2. Sample preparation 146

11.1.3. Characterisation of eluent peaks 147
11.1.4. Nucleoside bases 148
11.1.5. Nucleosides 153
11.1.5.1. Effect of pH 153
11.1.5.2. Effect of organic modifier 154
11.1.5.3. Effect of temperature 154
11.1.5.4. Natural nucleosides 154
11.1.5.4.1. In biological fluids and tissues 154
11.1.5.4.2. As components of DNA 156
11.1.5.4.3. As components of RNA 157
11.1.5.5. Synthetic nucleosides 158
11.1.6. Nucleotides 159
11.1.6.1. Ion-exchange HPLC 160
11.1.6.2. Reversed phase HPLC 161
11.1.6.3. Reversed phase ion-pair HPLC 163
11.1.6.4. Normal phase HPLC 165
11.1.7. Oligo- and polynucleotides 165
11.1.7.1. Anion-exchange HPLC 166
11.1.7.2. Reversed phase HPLC 167
11.1.7.3. Reversed phase ion-pair HPLC 168
11.1.7.4. Size exclusion HPLC 168

Chapter 11.2. Proteins, peptides and amino acids 169

11.2.1. Introduction 169
11.2.2. Proteins 169
11.2.2.1. Introduction 169
11.2.2.2. Methods for purification 170
11.2.2.2.1. Physicochemical aspects 170
11.2.2.2.2. Novel chromatography 171
11.2.2.2.3. Protein engineering 172
11.2.2.3. Ion-exchange chromatography 172
11.2.2.4. Reversed phase chromatography 174
11.2.2.5. Normal phase chromatography 176
11.2.2.6. Affinity chromatography 177
11.2.2.7. Size exclusion chromatography 179
11.2.3. Peptides 180
11.2.3.1. Introduction 180
11.2.3.2. Ion-exchange chromatography 180
11.2.3.3. Reversed phase chromatography 182
11.2.3.4. Size exclusion chromatography 182
11.2.3.5. Normal phase chromatography 184

11.2.4. Amino acids 185
11.2.4.1. Introduction 185
11.2.4.2. Ion-exchange chromatography 185
11.2.4.3. Reversed phase chromatography 185
11.2.4.3.1. Pre-column derivatisation 187
11.2.4.3.2. Post-column derivatisation 187
11.2.4.4. Normal phase chromatography 191

Chapter 11.3. Lipids *193*

11.3.1. Fatty acids 193
11.3.2. Phospholipids 197
11.3.3. Sphingolipids 203
11.3.3.1. Long-chain bases and ceramides 203
11.3.3.2. Glycosylceramides 204
11.3.3.3. Gangliosides 206
11.3.4. Acylglycerols 207

Chapter 11.4. Carbohydrates *213*

11.4.1. Introduction 213
11.4.2. Modes of separation 215
11.4.3. Sample preparation 215
11.4.4. Pre-column derivatisation 216
11.4.5. Separation of simple saccharides 217
11.4.5.1. Chemically modified alkylamide columns 218
11.4.5.2. Physically modified amine columns 221
11.4.5.3. Cation-exchange columns 223
11.4.5.4. Reversed phase columns 226
11.4.6. Separation of oligosaccharides 226
11.4.7. Detection 228
11.4.8. Post-column derivatisation 229

Chapter 11.5. Prostaglandins, leukotrienes and hydroxyeicosatetraenoic acids *230*

11.5.1. HPLC of prostaglandins 231
11.5.2. Detection of prostaglandins and derivatives 237

11.5.3. Separation and detection of hydroxyeicosatetraenoic acids (HETEs) by HPLC 238
11.5.4. Separation of leukotrienes by HPLC 240
11.5.5. Detection of leukotrienes 243

Chapter 11.6. Steroids *244*

11.6.1. Sterols 244
11.6.2. Steroid hormones 248
11.6.2.1. Corticosteroids 248
11.6.2.2. Progestins 251
11.6.2.3. Androstanes 252
11.6.2.4. Oestranes 254

Chapter 11.7. Biogenic amines *260*

11.7.1. Chromatography 260
11.7.2. Detection 266

Chapter 11.8. Vitamins *271*

11.8.1. Introduction 271
11.8.2. Fat-soluble vitamins 273
11.8.2.1. A vitamins 273
11.8.2.2. D vitamins 275
11.8.2.3. E vitamins 276
11.8.2.4. K vitamins 277
11.8.3. Water-soluble vitamins 278
11.8.3.1. Introduction 278
11.8.3.2. B_1 vitamin 279
11.8.3.3. B_2 vitamins 280
11.8.3.4. B_6 vitamins 281
11.8.3.5. Folic acid 282
11.8.3.6. Ascorbic acid 284
11.8.3.7. Nicotinic acid 285
11.8.3.8. B_{12} vitamin 286
11.8.3.9. Biotin 287
11.8.3.10. Lipoic acid 288
11.8.3.11. Pantothenic acid 289
11.8.4. References 289

Chapter 11.9. Antibiotics *296*

11.9.1. General considerations 297
11.9.2. β-Lactams 297
11.9.3. Aminoglycosides 300
11.9.4. Tetracyclins 301
11.9.5. Peptide antibiotics 302
11.9.6. Anthracyclins 303
11.9.7. Other antibiotics 305

Appendix *306*

References *312*

Subject index *332*

The origins and development of liquid chromatography

1.1. Origins

The history of liquid chromatography and the influence of its pioneers have been the subject of several learned reviews (Sakodynskii, 1970; Kirchner, 1973; Ettre and Horvath, 1975). Indeed, the manner in which scientific attitudes and the turbulent history of Europe in the early decades of this century influenced the establishment of chromatography as a science would in itself be worthy of a textbook. In a book of this nature a detailed historical narrative would not be relevant but it is instructive to put the current state of the art of liquid chromatography within a historical perspective to provide the reader with a realisation of the explosive development of chromatographic science within the past fifteen years.

The earliest example of the use of chromatography to elicit a separation is credited to the highly gifted Russian botanist Michael Tswett who, in a period between 1903 and 1906, used adsorption chromatography on a calcium carbonate column to separate various plant pigments from leaf extracts. The further exploration of chromatographic science remained almost dormant until, in 1931, the technique was rediscovered (Kuhn et al., 1931). The cause of the twenty-year period of stagnation has been extensively reviewed by Ettre and Horvath (1975), who refer to the dominance of European organic chemistry by specific German universities where the research

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