

CHROMATOGRAPHY

By

Dr. Muhammad Asif Hanif

MSc, M.Phil, PhD (UAF)
Assistant Professor (TTS)
Department of Chemistry
University of Agriculture,
Faisalabad, Pakistan.
Visiting Researcher,
Sultan Qaboos University,
Muscat, Oman.

Prof. Dr. Haq Nawaz Bhatti

MSc (PU). Gold Medalist
PhD (UAF), Postdoc (Canada)
President's Medal for Technology,
Fellow Pakistan Academy of Sciences,
Chairman, Department of Chemistry
University of Agriculture,
Faisalabad, Pakistan



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MUHAMMAD ASIF HANIF AND HAQ NAWAZ BHATTI

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Table of Contents

1 INTRODUCTION TO CHROMATOGRAPHY **Error! Bookmark not defined.**

1.1 What is chromatography? **Error! Bookmark not defined.**

1.2 IUPAC definition of chromatography..... **Error! Bookmark not defined.**

1.3 Brief history of chromatography..... **Error! Bookmark not defined.**

1.4 Introduction to chromatography..... **Error! Bookmark not defined.**

1.5 Important terms used in chromatography **Error! Bookmark not defined.**

1.6 Classification of chromatography **Error! Bookmark not defined.**

1.7 Recent developments in chromatographic separations**Error! Bookmark not defined.**

2 THEORETICAL CONSIDERATIONS OF CHROMATOGRAPHY**Error! Bookmark not defined.**

Bookmark not defined.

2.1 Chromatography **Error! Bookmark not defined.**

2.2 Processes occurring in the column..... **Error! Bookmark not defined.**

2.3 Distribution coefficient **Error! Bookmark not defined.**

2.4 Chromatographic paramters/terms..... **Error! Bookmark not defined.**

2.5 Coulomb’s Law..... **Error! Bookmark not defined.**

2.6 Retention and equilibrium in chromatography . **Error! Bookmark not defined.**

2.7 Retention and separation factor for the two compounds..**Error! Bookmark not defined.**

2.8 The plate theory **Error! Bookmark not defined.**

2.9 The rate theory **Error! Bookmark not defined.**

2.10 Peak asymmetry **Error! Bookmark not defined.**

2.11 Van Deemter’s equation..... **Error! Bookmark not defined.**

2.12 Eddy diffusion (Multipath, A term) **Error! Bookmark not defined.**

2.13 Molecular diffusion (B term) **Error! Bookmark not defined.**

2.14 Resistance to mass transfer (C term)..... **Error! Bookmark not defined.**

2.15 Optimum velocity **Error! Bookmark not defined.**

2.16 Golay’s equation **Error! Bookmark not defined.**

CHROMATOGRAPHY

2.17	Gidding's contribution	Error! Bookmark not defined.
2.18	Resolution	Error! Bookmark not defined.
2.19	Valley resolution (10%)	Error! Bookmark not defined.
2.20	Separation number (SN).....	Error! Bookmark not defined.
2.21	Resolution and selectivity	Error! Bookmark not defined.
2.22	Quantification in chromatography	Error! Bookmark not defined.
2.23	Internal standard.....	Error! Bookmark not defined.
2.24	Response Factor (RF)	Error! Bookmark not defined.
2.25	External standards	Error! Bookmark not defined.
2.26	Standard addition	Error! Bookmark not defined.
3	PAPER CHROMATOGRAPHY	Error! Bookmark not defined.
3.1	Introduction.....	Error! Bookmark not defined.
3.2	Principle of paper chromatography	Error! Bookmark not defined.
3.3	Types of Paper chromatography	Error! Bookmark not defined.
3.4	Theory of paper chromatography.....	Error! Bookmark not defined.
3.5	Development of chromatogram	Error! Bookmark not defined.
3.6	Applications of paper chromatography	Error! Bookmark not defined.
3.7	Drawbacks of paper chromatography	Error! Bookmark not defined.
4	THIN LAYER CHROMATOGRPHY	Error! Bookmark not defined.
4.1	Introduction.....	Error! Bookmark not defined.
4.2	Development of TLC plates	Error! Bookmark not defined.
4.3	Applications of the TLC	Error! Bookmark not defined.
4.4	Advantages of thin layer chromatography (TLC)	Error! Bookmark not defined.
4.5	Disadvantages of thin layer chromatography (TLC)	Error! Bookmark not defined.
5	COLUMN AND ION EXCHANGE CHROMATOGRAPHY	Error! Bookmark not defined.
5.1	Column chromatography.....	Error! Bookmark not defined.

CHROMATOGRAPHY

5.2	Adsorbents	Error! Bookmark not defined.
5.3	Solvent	Error! Bookmark not defined.
5.4	Preparation of a column	Error! Bookmark not defined.
5.5	Applications	Error! Bookmark not defined.
5.6	Ion exchange chromatography	Error! Bookmark not defined.
5.7	Principle of ion exchange chromatography.....	Error! Bookmark not defined.
5.8	Procedure of ion exchange chromatographic separations	Error! Bookmark not defined.
		defined.
5.9	Components of ion exchange media	Error! Bookmark not defined.
5.10	Binding capacity and recovery	Error! Bookmark not defined.
6	GAS CHROMATOGRAPHY	Error! Bookmark not defined.
6.1	Introduction.....	Error! Bookmark not defined.
6.2	History of gas chromatography.....	Error! Bookmark not defined.
6.3	Process of gas chromatography.....	Error! Bookmark not defined.
6.4	Principle of gas chromatography	Error! Bookmark not defined.
6.5	Theory	Error! Bookmark not defined.
6.6	Instrumentation	Error! Bookmark not defined.
6.7	Identification of compounds	Error! Bookmark not defined.
6.8	Types of the detectors used in GC	Error! Bookmark not defined.
6.9	Applications of gas chromatography	Error! Bookmark not defined.
7	HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC)	Error!
		Bookmark not defined.
7.1	Introduction.....	Error! Bookmark not defined.
7.2	Principle of HPLC.....	Error! Bookmark not defined.
7.3	HPLC instrumentation	Error! Bookmark not defined.
7.4	Qualitative analysis.....	Error! Bookmark not defined.
7.5	Quantitative analysis.....	Error! Bookmark not defined.
7.6	Applications of HPLC.....	Error! Bookmark not defined.
7.7	HPLC advantages and disadvantages	Error! Bookmark not defined.

CHROMATOGRAPHY

- 7.8 Recent advances in HPLC..... **Error! Bookmark not defined.**
- 7.9 Summary and Conclusions: **Error! Bookmark not defined.**
- 8 SUPERCRITICAL FLUID CHROMATOGRAPHY**Error! Bookmark not defined.**
 - 8.1 Introduction..... **Error! Bookmark not defined.**
 - 8.2 Physical properties of supercritical fluids **Error! Bookmark not defined.**
 - 8.3 Supercritical fluid chromatography (SFC)..... **Error! Bookmark not defined.**
 - 8.4 Instrumentation for SFC..... **Error! Bookmark not defined.**
 - 8.5 Applications of SFC..... **Error! Bookmark not defined.**
 - 8.6 Drawbacks of SFC **Error! Bookmark not defined.**
- 9 MICELLAR CHROMATOGRAPHY **Error! Bookmark not defined.**
 - 9.1 Introduction..... **Error! Bookmark not defined.**
 - 9.2 Surfactants..... **Error! Bookmark not defined.**
 - 9.3 Micelle formation..... **Error! Bookmark not defined.**
 - 9.4 Micellar liquid chromatography (MLC) **Error! Bookmark not defined.**
 - 9.5 Micellar Electro kinetic Chromatography (MECK)**Error! Bookmark not defined.**
 - 9.6 Recent Advances..... **Error! Bookmark not defined.**
- 10 ELECTROPHORESIS AND POTENTIAL DRIVEN CHROMATOGRAPHY
Error! Bookmark not defined.
 - 10.1 Introduction..... **Error! Bookmark not defined.**
 - 10.2 History..... **Error! Bookmark not defined.**
 - 10.3 General principle..... **Error! Bookmark not defined.**
 - 10.4 Electrophoretic mobility (μ) **Error! Bookmark not defined.**
 - 10.5 Significance/ applications **Error! Bookmark not defined.**
 - 10.6 TYPES **Error! Bookmark not defined.**
- 11 GEL EXCLUSION CHROMATOGRAPHY **Error! Bookmark not defined.**
 - 11.2 Principle and theory of gel filtration **Error! Bookmark not defined.**
 - 11.3 Characterization of gel chromatography **Error! Bookmark not defined.**
 - 11.4 Chemical composition and properties of gels ... **Error! Bookmark not defined.**

CHROMATOGRAPHY

- 11.5 Selecting a gel **Error! Bookmark not defined.**
- 11.6 Gel preparation and storage **Error! Bookmark not defined.**
- 11.7 Operation of a gel filtration column..... **Error! Bookmark not defined.**
- 11.8 Applications of exclusion chromatography **Error! Bookmark not defined.**
- 12 EXPERIMENTS IN CHROMATOGRAPHY..... **Error! Bookmark not defined.**
 - 12.1 Experiment 1: Separation of black ink components by paper chromatography
Error! Bookmark not defined.
 - 12.2 Experiment 2: Separation of plant pigments using paper chromatography**Error!
Bookmark not defined.**
 - 12.3 Experiment 3: Qualitative separation of mixture of cobalt (II), manganese (II),
nickel (II), and zinc (II) by ascending and horizontal paper chromatography**Error!
Bookmark not defined.**
 - 12.4 Experiment 4: Quantitative separation of copper, cobalt and nickel cations by
ascending development..... **Error! Bookmark not defined.**
 - 12.5 Experiment 5: Ascending chromatography on ion exchange paper.....**Error!
Bookmark not defined.**
 - 12.6 Experiment 6: Cellulose acetate and polyamide gel electrophoresis of proteins
Error! Bookmark not defined.
 - 12.7 Experiment 7: Horizontal agarose gel electrophoresis of DNA.....**Error!
Bookmark not defined.**
 - 12.8 Experiment 8: Preparation of microplates and separation of aromatic amines by
TLC **Error! Bookmark not defined.**
 - 12.9 Experiment 9: *Separation of simple organic compounds on fluorescent silica
plates* **Error! Bookmark not defined.**
 - 12.10 Experiment 10: Separation of sugars on bisulphite and acetate modified silica
by TLC **Error! Bookmark not defined.**
 - 12.11 Experiment 11: Analysis of analgesics using normal phase TLC.....**Error!
Bookmark not defined.**
 - 12.12 Experiment 12: Separation of dichromate ion and permanganate ion using an
alumina column..... **Error! Bookmark not defined.**
 - 12.13 Experiment 13: Purification of proteins on DEAE- cellulose.....**Error!
Bookmark not defined.**

CHROMATOGRAPHY

- 12.14 Experiment 14: Determination of ethanol in an aqueous solution by GC
Error! Bookmark not defined.
- 12.15 Experiment 15: Determination of barbiturates using an internal standard
Error! Bookmark not defined.
- 12.16 Experiment 16: Determination of whisky congeners by capillary GC **Error!
Bookmark not defined.**
- 12.17 Experiment 17: Qualitative analysis by GC using retention data from two columns (polar and non-polar)..... **Error! Bookmark not defined.**
- 12.18 Experiment 18: The determination of some chlorinated insecticides by capillary GC using an electron capture detector **Error! Bookmark not defined.**
- 12.19 Experiment 19: Determination of water content in solvents by capillary and packed GC using thermal conductivity detection **Error! Bookmark not defined.**
- 12.20 Experiment 20: HPLC analysis of analgesics **Error! Bookmark not defined.**

ABOUT EDITORS

Dr. Muhammad Asif Hanif is working as Assistant Professor and Group Leader of Nano and Biomaterials Group at Department of Chemistry, University of Agriculture, Faisalabad, Pakistan. He also serves Sultan Qaboos University, Muscat, Oman as a visiting Researcher and Intruspa Portugal as a visiting consultant. He is incharge of Analytical Chemistry Laboratory and has practical experience of working with advanced analytical instruments. Professor Dr. Haq Nawaz Bhatti is author of several books and has insight into theoretical and practical aspects of chromatography. Chromatography book is prepared for use in advanced chemistry courses. This book is intended for faculty and students who are wishing to learn experimental chromatography. This book will be helpful in maximizing their laboratory experience and skills. The sequence of chapters in this book is designed to make it understandable for all students. This book will help students to learn the basics of chemistry with special emphasis on the subject of chromatography. We welcome any suggestions for improvements in the organization, scope, and content of this book, as well as notification of any errors.

PREFACE

The subject of chromatography has emerged as a very powerful separation tool for chemists and biologists with an array of instrumentation available for routine as well as research work. Since its inception more than century age it has passed through several developmental stages that now chromatography is considered as a fully matured technique essential for every research and development laboratory. Looking through the contents of the book, I can say that the authors have elegantly tried to collect and explain theoretical as well as practical aspects of chromatography at one place. This is something useful for graduate students who can familiarize themselves with the theory and then perform practical exercises of chromatography. A set of twenty experiments in paper chromatography, thin layer chromatography, electrophoresis, HPLC and GLC are described for young researchers who wish to familiarize themselves with chromatography as a part of their M.Phil / Ph.D. courses. Besides students, junior faculty of the universities can also use this basic book on chromatography for teaching, since it covers the area to a reasonable

CHROMATOGRAPHY

depth. I hope this book will receive due attention by students and teachers in basic sciences.

Prof. Dr. Muhammad Iqbal Bhangar
Aezaz-e-Fazeelat, Pride of Performance

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CHROMATOGRAPHY

INDEX

- 10% valley resolution, 56
- Acidic alumina, 92
- Adsorbent, 91
- Adsorption Chromatography, 10
- Adsorption paper chromatography, 70
- Advantages of thin layer chromatography (TLC), 87
- Affinity Chromatography, 14
- Analyte, 8
- Analytical Chromatography, 23
- Applications, 95
- Applications of Gas chromatography, 132
- Applications of HPLC, 159
- Applications of MLC, 191
- Applications of paper chromatography, 81
- Applications of SFC, 175
- Applications of the TLC, 86
- Ascending development, 75, 233
- Atomic emission detector, 128
- Auto sampler, 108
- Automatic injection, 145
- Baseline, 35
- Binding capacity and recovery, 100
- Brief History of Chromatography, 4
- Broader peak, 46
- Bulk property detectors, 148
- Capillary Electrophoresis, 205
- Carrier gas, 108
- Cellulose acetate electrophoresis Materials*, 236
- Characterization of Gel Chromatography, 221
- Charged aerosol detection, 165
- Chemical Composition and properties of Gels, 223
- Chemical methods, 78
- Chemiluminescence detector, 155
- Chemiluminescence Detectors, 129
- Chiral Chromatography, 14
- chlorophyll, 233
- Chromatogram, 8
- Chromatograph, 7
- chromatography, 2
- Chromatography, 32
- Classification of chromatography, 9
- Column and oven, 110
- Column chromatography, 90
- Column Chromatography (CC), 17
- Column efficiency, 45
- Column for biomolecules, 164
- Column thermostats, 146
- Columns, 190
- Components of ion exchange media, 98
- Conductivity Detector, 154
- Coulomb's Law, 39
- Countercurrent chromatography (CCC), 28, 29
- Critical point, 169
- Dead point, 35
- Dead time, 35
- Derivatization, 157
- Descending development, 75
- Detector, 112, 147
- Development of Chromatogram, 73
- Disadvantages of thin layer chromatography (TLC), 88
- Displacement Development, 24
- Distribution coefficient, 33
- Drawbacks of paper chromatography, 81
- Drawbacks of SFC, 176
- Drying the chromatogram, 77

CHROMATOGRAPHY

- Eddy diffusion, 51
- Efficiency of separation, 46
- Electro Chemical Detector, 155
- Electro chromatography, 28
- Electrolytic conductivity detector, 130
- Electron capture detector, 118
- Electrophoresis, 13, 196
- Electrophoresis buffer, 239
- Electrophoretic Mobility (μ), 200
- Eluate, 8
- Eluent, 8
- Eluotropic series, 9
- Elution development, 37
- Elution Development, 25
- Elution Method, 80
- Elution time, 36
- Energy changes, 38
- Enzyme assays, 248
- Equilibrium Conditions, 37
- Evaporative Light Scattering Detector, 152
- External Standard, 158
- External standards, 61
- Fast protein liquid chromatography (FPLC), 28
- Flame photometric detector, 120
- Flash Chromatography (FC), 29
- Fluorescence detector, 154
- Free Flow Electrophoresis (FFE), 204
- Frontal Displacement, 24
- Functional groups, 99
- Gas chromatography (GC), 104
- Gas Chromatography (GC), 18
- Gaussian peaks, 55
- Gel electrophoresis, 208
- Gel Preparation and Storage, 224
- Gidding's contribution, 54
- Golay's equation, 54
- Gradient elution mode, 156
- Guard column, 146
- Helium discharge ionization detector, 126
- Helium ionization detector, 124
- High resolution mass spectrometry, 165
- Horizontal development, 234
- HPLC Advantages and Disadvantages, 161
- HPLC column, 145
- HPLC instrumentation, 141
- Hydrophilic interaction chromatography, 164
- Injection point, 35
- Injector, 144
- Injectors, 189
- Instrumentation for SFC, 173
- Internal standard, 60
- Internal Standard, 158
- Introduction of ion exchange chromatography, 95
- Introduction to Chromatography, 5
- Ion Exchange Chromatography, 11
- Isocratic elution mode, 156
- IUPAC definition of chromatography, 3
- Liquid Chromatography (LC), 19
- Location of the Compound, 77
- Manual injection, 145
- Mass spectrometer, 131
- Mass spectrometric detector, 153
- Micellar chromatography, 179
- Micellar Electro kinetic Chromatography (MECK), 193
- Micellar Liquid Chromatography (MLC), 183
- Mobile and immobilized phase, 9
- Mobile Phase, 3
- Molecular diffusion, 52
- Moving Boundary Electrophoresis (MBE), 202
- Multi-Angle Light Detector, 153
- Multiple development normal phase TLC, 245

CHROMATOGRAPHY

- Nitrogen Phosphorus detector, 121
- Non-polar retention forces, 39
- Normalization of peak areas, 60
- Novel bonding chemistries, 163
- Operation of a Gel Filtration Column, 225
- Optical Rotation Detector, 155
- Optimum velocity, 53
- Paper Chromatography (PC), 16
- Paper Electrophoresis, 207
- Paper partition chromatography, 70
- Partition Chromatography, 11
- Peak asymmetry, 49
- Peak maximum, 35
- Peak width, 46
- Photo Densitometer, 80
- Photo Diode Array Detectors, 150
- Photo ionization detector, 123
- Physical methods for the detections of sample components, 79
- Physical Properties of Supercritical Fluids, 171
- Planner Chromatography, 14
- Polar retention forces, 40
- Polyacrylamide gel electrophoresis*, 237
- Preparation of a column, 93
- Preparation of gels, 238
- Preparations of microchromatoplates, 240
- Preparative Chromatography, 23
- Principle and Theory of Gel filtration, 221
- Principle of gas chromatography, 106
- Principle of HPLC, 139
- Principle of MLC, 183
- Principle of paper chromatography, 66
- Principles of ion exchange chromatography, 95
- Procedure of ion exchange chromatographic separations, 97
- Process of gas chromatography, 105
- Pulsed Helium Discharge Detector, 127
- Pumping system, 142
- Pumps, 188
- Purification of proteins on DEAE-cellulose, 247
- Pyrolysis gas chromatography, 27
- Qualitative analysis, 36
- Qualitative Chromatography, 23
- Quantification in chromatography, 57
- Quantitative analysis, 36
- Quantitative Chromatography, 23
- Radial or Disc Development, 76
- Recent Advances in HPLC, 162
- Refractive Index Detector, 150
- Resistance to mass transfer, 53
- Resolution, 54
- Resolution and selectivity, 57
- Response Factor (RF), 61
- Retention factor, 44
- Rf Value, 71
- same solvents, 259
- Sample injection port, 109
- Scavenger column, 146
- SDS-PAGE, 214
- Selecting a Gel, 224
- Separation factor, 44
- Separation number (SN), 56
- Simulated moving bed chromatography, 26
- Size Exclusion Chromatography / Gel Filtration chromatography, 12
- Size of the gel filtration column, 226
- Solute property detectors, 148
- Solvent, 93
- Solvent delivery system, 189
- Staining of serum strips*, 237
- Standard addition, 62
- Standard Addition Method, 158
- Stationary Phase, 3
- Supercritical fluid chromatography (SFC), 21

CHROMATOGRAPHY

- Supercritical Fluid Chromatography (SFC), 173
- Surfactants, 180
- The Chromatogram, 35
- The Column Inlets, 111
- The plate theory, 47
- The Rate theory, 48
- Theory of paper chromatography, 70
- Thermal conductivity detector, 117
- Thin Layer Chromatography (TLC), 15, 83
- Two-dimensional chromatography, 26
- Two-Dimensional Paper Chromatography, 77
- Types of Paper chromatography, 69
- Types of the detectors used in GC, 114
- Ultra-high pressure liquid chromatography, 162
- UV/VIS Detectors, 149
- Validation, 158
- Van Demeter's equation, 50
- Visual estimation, 80