

1. Record Nr.	UNINA9910144120303321
Autore	Berezkin V. G (Viktor Grigorevich), <1931->
Titolo	Capillary gas adsorption chromatography [[electronic resource] /] / by V.G. Berezkin and J. de Zeeuw
Pubbl/distr/stampa	Heidelberg, : Huthig Verlag, c1996
ISBN	1-281-84262-1 9786611842628 3-527-61475-3 3-527-61474-5
Descrizione fisica	1 online resource (334 p.)
Collana	Chromatographic methods
Altri autori (Persone)	ZeeuwJ. de (Jaap)
Disciplina	543.0896 622
Soggetti	Gas chromatography Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Capillary Gas Adsorption Chromatography; Contents; 1. Introduction; 1.1 Advantages and Limitations of Gas-Solid Chromatography; 1.2 Discovery of Gas-Solid Open Tubular Capillary Columns; 1.3 Classification of Capillary Columns in Gas Chromatography; References; 2. Capillary Gas-Solid Chromatography (Advantages and Limitations); 2.1 On the Role of Gas-Solid Chromatography; 2.2 Comparison of Open Tubular and Packed Gas Adsorption Columns; 2.3 Some Peculiarities of Capillary Adsorption Columns; 2.4 Uncoated Capillaries as Capillary Adsorption Columns; References 3. Fundamentals of Gas-Solid Chromatography3.1 Retention in Gas-Solid Chromatography; 3.2 Chromatographic Zone Broadening in ALOT Columns; 3.3 Dependence of Column Efficiency on Sample Size; 3.4 Resolution of Analyzed Compounds; References; 4. Chromatographic Adsorbents; 4.1 Carbon Adsorbents; 4.2 Molybdenite (MoS ₂); 4.3 Porous Polymer Adsorbents; 4.4 Silica Gels; 4.5 Alumina; 4.6 Molecular Sieves; 4.7 Ionic Adsorbents; References; 5. Modified Gas-Solid Chromatography; 5.1 Solid Adsorbents Modified by Non-volatile Organic Compounds; 5.2 Adsorbents Modified by Inorganic Salts

5.3 Chemically Modified Adsorbents (Bonded-Phase Silica as Adsorbent in Gas Chromatography); 5.4 Adsorbents Modified by Volatile Compounds; 5.4.1 The Role of Volatile Modifier in Gas Chromatography; 5.4.2 Water Vapor as Carrier Gas and Modifying Agent; 5.4.3 Water Vapor (Carrier Gas) and Inorganic Salts (Stationary Phase) in Gas Chromatography; 5.4.4 Carbon Dioxide as Carrier Gas and Modifying Agent; 5.4.5 Use of Volatile Modifier ("Transparent" to the Flame Ionization Detector); 5.4.6 Using Volatile Modifier with Super-selective Detector

5.5 Adsorption Open Tubular Columns with Modified Adsorbents

References; 6. Preparation of Adsorbent Layer Open Tubular Columns; 6.1 Suspension Method; 6.1.1 ALOT Columns with Graphitized Carbon Black; 6.1.2 ALOT Columns with Alumina; 6.1.3 ALOT Columns with other Oxide Adsorbents; 6.1.4 ALOT Columns with Molecular Sieves; 6.1.5 SCOT Columns; 6.2 Preparation of Adsorbent Layer by Synthesis from Materials of the Inner Capillary Walls; 6.3 Preparation of ALOT Columns by Sorbent Synthesis inside the Capillary Column; 6.4 Formation of Adsorption Layer during Glass Capillary Drawing; 6.5 Conclusion

References

7. Applications of ALOT Columns; 7.1 The Carrier Gas; 7.1.1 Use of Hydrogen; 7.1.2 Optimum Carrier Gas Velocity; 7.2 Release of Particles from the Column Wall upon Application; 7.2.1 Use of Pre-columns; 7.2.2 Use of Particle Traps; 7.3 Separation of Gases; 7.3.1 Inert Gases; 7.3.2 Carbon Monoxide; 7.3.3 Carbon Dioxide; 7.3.4 Carbon Monoxide, Carbon Dioxide and Air; 7.3.5 Carbon Dioxide, C1-C4 Hydrocarbons and Inert Gases; 7.3.6 Sulfur Gases; 7.4 Separation of C1-C5 Hydrocarbons; 7.4.1 C1-C2 Hydrocarbons; 7.4.2 C1-C4 Hydrocarbons

7.4.3 Hydrocarbon Impurity Analysis in Main Hydrocarbon Streams
