

Types of Chromatography

Dr. Anil Batta

Department Of Medical Biochemistry
Govt. Medical College, Amritsar



Abstract

1. **NORMAL PHASE HPLC:** This method separates analytes on the basis of polarity. NP-HPLC uses polar stationary phase and non-polar mobile phase. Therefore, the stationary phase is usually silica and typical mobile phases are hexane, methylene chloride, chloroform, diethyl ether, and mixtures of these. Polar samples are thus retained on the polar surface of the column packing longer than less polar materials.
2. **REVERSE PHASE HPLC:** The stationary phase is nonpolar (hydrophobic) in nature, while the mobile phase is a polar liquid, such as mixtures of water and methanol or acetonitrile. It works on the principle of hydrophobic interactions hence the more nonpolar the material is, the longer it will be retained.
3. **SIZE-EXCLUSION HPLC :** The column is filled with material having precisely controlled pore sizes, and the particles are separated according to their molecular size. Larger molecules are rapidly washed through the column; smaller molecules penetrate inside the porous of the packing particles and elute later.
4. **ION-EXCHANGE HPLC :** The stationary phase has an ionically charged surface of opposite charge to the sample ions. This technique is used almost exclusively with ionic or ionizable samples. The stronger the charge on the sample, the stronger it will be attracted to the ionic surface and thus, the longer it will take to elute. The mobile phase is an aqueous buffer, where both pH and ionic strength are used to control elution time.

Biography:

Prof. Dr. Anil Batta is presently professor & Head with senior consultant in Govt. Medical College, Amritsar. He did his M.B.B.S. and M.D. in Medical Biochemistry from Govt. Medical College, Patiala in 1984 and 1991, respectively. His research interest is mainly in clinical application especially cancer and drug de-addiction. He has supervised more than 25 M.D., M.Sc. and Doctorate researches and published more than 130 international research papers. He is the chief editor of America's Journal of Biochemistry. He is also working as advisor to the editorial board of International Journal of Biological and Medical Research. He has been deputed member Editorial Board of numerous International & National Medical Journals of Biochemistry. He has also been attached as technical advisor to various national and international conferences in Biochemistry. He has been attached as hi-tech endocrinal, genetics and automated labs of Baba Farid Univ. of Health Sciences, Faridkot. He has chaired various sessions in the Biochemistry meets. He has been designated as member Editorial Board of various in US and other European Countries. He is also involved in various research projects at Govt. Medical, Amritsar. He has done superspecialisation in Drug-de-addiction from PGIMER, Chandigarh.

Speaker Publications:

1. Anil Batta Biochemical diagnosis of acute appendicitis International Journal of Medical and Health Research ISSN: 2454-9142 Volume 4; Issue 7; July 2018; Page No. 77-80
2. Anil Batta Burnout Syndrome in Medical Fraternity ISSN 2518-3389 (Print) ISSN 2518-3397(Online) Scholars Middle East Publishers, Dubai, United Arab Emirates
3. Anil Batta Depression, Anxiety and Distress in Patients of Cancer Starting Chemotherapy Scholars International Journal of Biochemistry Abbreviated Key Title: Sch Int J Biochem ISSN 2616-8650(Print)|ISSN 2617-3476(Online) Scholars Middle East Publishers, Dubai, United Arab Emirates
4. Anil Batta Biochemical Diagnosis of Dupuytren's Disease East African Scholars J Med Sci ISSN 2617-4421 (Print) | ISSN 2617-7188 Original Research Article

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