CY-507 ADVANCED CHROMATOGRAPHIC TECHNIQES

Capillary electrophoresis (CE): Basic CE concepts, instrumentation (power supply, injectors, capillaries, detectors), CE modes (CZE, CGE, MECC, CEC, chiral CE).

Membrane separation: Technology and applications of membrane separation processes, structure and characteristics of membranes, principles of various membrane separation processes (reverse osmosis, nanofiltration, ultrafiltration, microfiltration, electrodialysis, membrane distillation, pervaporation and gaseous separations), design consideration for reverse osmosis, ultrafiltration and electrodialysis pervaporation, gaseous separations, liquid membranes, supported liquid membrane, membrane reactors.

Adsorptive separation: Types of adsorption, adsorbents types, preparation and properties, adsorption isotherms and their importance, mathematical modelling.

Other Methods of Separations: Reactive distillation, supercritical fluid extraction, surfactant based separations and bio filtration.

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