

Displacement Versus Elution Chromatography

Elution

Displacement

Component Loading Usually within linear portion of binding curve (isotherm), i.e., very few sites on the stationary phase occupied

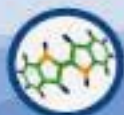
Always within non-linear range of isotherm, i.e., approaching stationary phase saturation

Separation mechanism Interactions of individual analytes with stationary phase

Competition of analytes for stationary phase binding

Dynamic range of analysis Limited, due to loading conditions imposed by linear constraints and peak broadening at higher loading

Theoretically wider, because the high loading capacity and concentration enhancement of minor components



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