phase, the separation is based on equilibration between the mobile and stationary phase of different solutes, adsorbent material such as silica gel or any other silica based packing may be used. (B. S. Baharin etal, 1998).

B.partition Chromatography

This form of chromatography is based on a thin film formed on the surface of a solid support by a liquid stationary phase. Solute equilibrates between the mobile phase and the stationary liquid.

C. Ion-exchange chromatography: In this type of chromatography, the mechanism is to use the stationary phase which is ionized (with opposite charge to the sample) at the surface to covalently attach anions or cations onto it, where as The mobile phase is an aqueous buffer Solute ions of the opposite charge in the mobile liquid phase are attracted to the resin by electrostatic forces. The stronger sample charge, the attachment to the stationary surface will be stronger, so longer time is needed to elute. Figure 6 (Tatjana Weiss, 2005; Gjerde, 2000).

D. molecular exclusion chromatography :aka gel filtration chromatography

The technique is used for compounds with high molecular weight like proteins and polymers.

The mechanism of Separation is sieving not partitioning so larger molecules is to be eluted rapidly where as smaller molecules will be trapped inside the poruose packing material to be eluted later.

Stationary phase porous silica or polymer particles(polystyrene, polyacrylamide) (510mm) (Monika *et al.*. 2011).