E. Affinity Chromatography

This is the most selective type of chromatography employed. It utilizes the specific interaction between one kind of solute molecule and a second molecule that is immobilized on a stationary phase. For example, the immobilized molecule may be an antibody to some specific protein. When solute containing a mixture of proteins are passed by this molecule, only the specific protein is reacted to this antibody, binding it to the stationary phase. This protein is later extracted by changing the ionic strength or pH.

1.6.2 Advantages of HPLC over other chromatographic techniques:

- Higher sensitivity e technique.
- Can be applied for various types of samples.
- Time effective (speed of analysis).
- Automated with Greater Reproducibility.
- Accurate.
- Higher resolution (Snyder L. *Et al*.., 2011; Daniel J. Cziczo, 2004).
- Disadvantages of HPLC
- Cost.
- Complexity.
- Low sensitivity for some compounds.
- Irreversibly adsorbed compounds not detected.
- Coelution difficult to detect (Daniel J. Cziczo, 2004; Monika *et al*.. 2011).