



19CH103- ENGINEERING CHEMISTRY

Unit-5 INSTRUMENTAL METHODS OF ANALYSIS

Chromatography

The substances in a mixture are not chemically combined, so therefore they can be separated through some physical process.

chromatography, technique for separating the components, or solutes, of a mixture on the basis of the relative amounts of each solute distributed between a moving fluid stream, called the mobile phase, and a contiguous stationary phase.

The mobile phase may be either a liquid or a gas, while the stationary phase is either a solid or a liquid. Chromatography is the ability to separate molecules using partitioning characteristics of molecule to remain in a stationary phase versus a mobile phase. Once a molecule is separated from the mixture, it can be isolated and quantified.

Different Chromatographic Techniques

Chromatography Stationary Phase

1. Thin Layer Chromatography
2. Paper Chromatography
3. Column Chromatography

Mobile Phase

1. Liquid chromatography
2. Gas Chromatography

Classification according to the force of separation

- 1- Adsorption chromatography.
- 2- Partition chromatography.
- 3- Ion exchange chromatography.
- 4- Gel filtration chromatography.
- 5- Affinity chromatography