The mobile phase is the liquid phase solvent that contain the analyte to be tested, it flows continually through the stationary phase, the composition of the mobile phase depends on the composition of both analyte and stationary phase. (Molnár etal,2013)

HPLC operation based on the bases of a pump that pumps pressurized liquid "mobile phase" and analyt sample through a column filled with sorbent, then the sample components will separated from each other due to their degree of interaction with the used sorbent.

The HPLC instrument typically includes:

- mobile phase reservoir (stors the mobile phase to be used).
- Degresser.
- Pump(which enable the flow of mobile phase through the system).
- Injector (introduce the sample in to the system).
- Column compartment (control the temperature of the column).
- Detector(detects each component in separated mixture after it has eluted from the column).
- Data processor(converts the data from the detector into meaningful results).
- Waste reservoir(collects the liquid waste).(Huber, U.,2006; Nägele, E,2002; Rathore, A.S., 2003; Rosentreter U., 2004).

1.6.1 Types of HPLC

Classification of HPLC is based on the nature of the stationary phase and the separation process.

A. Adsorption chromatography (liquid-solid): is one of the oldest types of chromatography. Mobile phase is adsorbed onto the surface of a stationary solid