

**STRUMENTAL METHOD:**

**HIGH-PERFORMANCE LIQUID CHROMATOGRAPHY  
OR HIGH-PRESSURE LIQUID CHROMATOGRAPHY**

- Is a chromatographic technique that can separate a mixture of compounds, and is used in biochemistry and analytical chemistry to identify , quantify and purify the individual components of the mixture.
- HPLC utilizes different types of stationary phase [ typically , hydrophobic saturated carbon chains ] .
- A pump that move the mobile phase(s) and analyte through the column.
- A detector that provides a characteristic retention time for the analyte , the detector may also provide other characteristic information ( i.e. UV / VIS spectroscopic data for analyte if so equipped).
- Analyte retention time varies depending on the strength of its interactions with the stationary phase the ratio /composition of solvent (s) used and the flow rate of the mobile phase.
- With HPLC , a pump (rather than gravity).
- Provides the higher pressure required to propel the mobile phase and analyte through the densely packed column . the increased density arises from smaller particle sizes.

This allows for a better separation on columns of shorter length when compared to ordinary column chromatography.

Thank you

