

Liquid Chromatography

- 1. Introduction and Column Packing Material**
- 2. Retention Mechanisms in Liquid Chromatography**
- 3. Method Development**
- 4. Column Preparation**
- 5. General Instrumental aspects**
- 6. Detectors**

(Chapter 4 and 5 in The essence of chromatography)

Detectors in Liquid Chromatography

- A. Refractive Index Detector**
- B. Absorption Detector (UV/Vis)**
- C. Fluorescence Detector**
- D. Conductivity Detector**
- E. Electrochemical Detector**

These detectors differ from those used in GC in that most of them are nondestructive. This makes LC more attractive for purification or preparative-scale work than GC. LC does lag behind GC, however, in the fact that it does not currently have a good universal detector available for its use.

A. Refractive Index Detector

1. The RI detector is one of the few universal detector available in LC

2. Principle:

The RI detectors measure a bulk property of the mobile phase leaving the column: its ability to refract to bend light (i.e., its refractive index). This property changes as the composition of the mobile phase changes, such as when solutes from the column. By detecting this change, the presence of solutes can be detected.

3. Detector Design:

i. One of simplest of RI detectors is the deflection RI detector

