Practical pharmacognosy

3rd stage 1st term

# Identification of anthraquinone glycosides

# Chemical test :

## Borntrager's test:

## For whole anthraquinone glycoside

1- 5 ml of fraction A (aqueous: whole)
2- 5ml of dilute **HCl**
3- Put the mixture in **separatory funnel**
4- Partition with 5ml of **benzene** for 1 min
5-Take the upper benzene layer (**free aglycon**) and shake with **dilute ammonia (10%)**

- **Result:**

**Pink color will be produced which is very clear**

# Discussion :

The acid HCl **hydrolyzes** the glycosidic linkage of the whole glycoside liberating the aglycon (sennoside A/B).

Liquid Partitioning with **benzene** will extract the aglycon.

**Due to the acidic nature of the aglycon (phenolic) then** with **ammonia it forms anthraquinone salt** which have **pink color.**

# Thin Layer Chromatography
# TLC

- The stationary phase = *Silica gel G.*
- **Put on your T.L.C. Three spots (A-B-C)**
- The mobile phase = ***n-propanol: Ethyl acetate: Water (60:30:30).***
- The spray reagent = Alcoholic KOH 5%w/v.
- Mechanism of separation = *Adsorption*.
- Developing = *Ascending.*

# ***Procedure***

- 1) Prepare 3 ml of mobile phase, and place it in the glass jar .
- 2) Cover the tank with glass lid and allow standing for ***5 minutes*** before use.
- 3) Apply the sample spots (fraction A, fraction B& fraction C) on the silica gel plates, on the base line.
- 4) Put the silica gel plate in the glass tank and allow the mobile phase to rise to about *two-third* of the plate.
- 5) Remove the plate from the tank, and allow drying at room temperature.
- 6) spray with ***5% w/v*** alcoholic ***KOH*** solution. Detect the spot formed and calculate the Rf values .

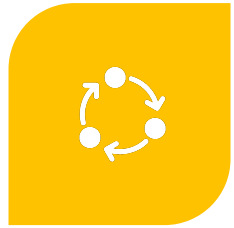
7) we can use UV to detect the spots .



**Name of experiment:**



**Aim of experiment**:



**Procedure:**



**Results:**



**Discussion: discuss the results (test /TLC).**