

**ALMUSTAQBAL UNIVERSITY COLLAGE PHARMACY DEPARTMANT**

**Practical pharmacognosy / Second year**

**Experiment No.9**

EFFECT OF SOLVENT POLARITY UPON RF- VALUES OF ALKALOIDS

Object: To demonstrate the effect of solvent composition upon solute migration by TLC.

Method:

-Slides: Silica gel adsorbent – prepare microscope slides using silica gel G slurry in acetone. The slides should be air – dried at room temp.

-Samples: 0.5% solution of the following alkaloids provided in methanol: a- Strychnine.

b-Brucine.

-Solvent systems: The following solvent systems are provided:

1. Chloroform.
2. Ethyl acetate: Iso-propanol: Conc.ammonia (100:4:2).
3. Ethyl acetate: Iso-propanol: Conc.ammonia (80:15:5).
4. Ethyl acetate: Iso-propanol: Conc.ammonia (60:30:10).
5. Ethyl acetate: Iso-propanol: 5%.ammonia (45:35:20).

* Run chromatograms of the alkaloids in solvent systems from 1-5.
* Detection: Spray with Dragendorff’s reagent.

\* Ensure that ammonia is removed from a slide before spraying.

- Calculate the RF values for each alkaloid in each solvent system.

-Construct a graph for strychnine and brucine alkaloids plotting RF values against solvent system from 1-5.

-Conclusions:

Discuss the effect of solvent polarity upon RF value.