Practical Pharmacognosy

3rd. Stage

1st semester

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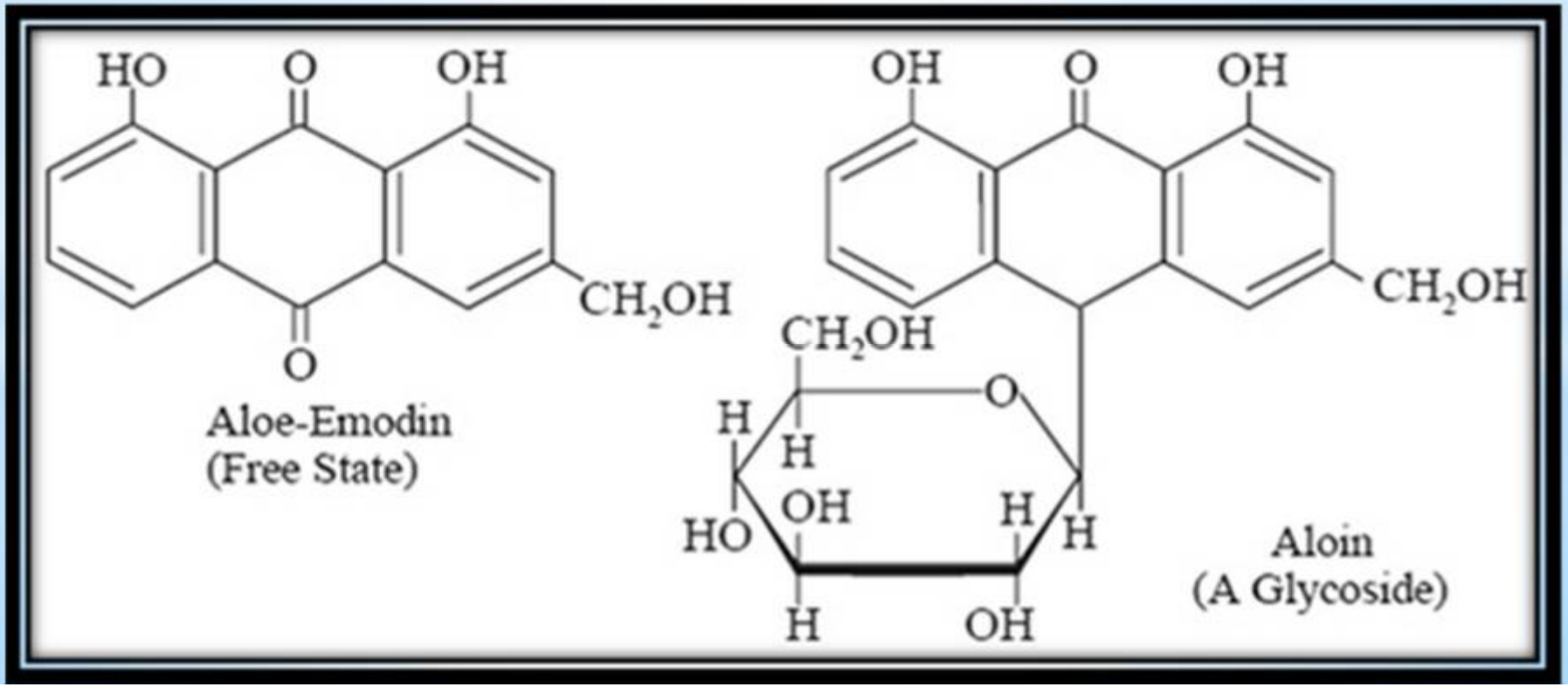
Lab.6

TheChemical Tests

A. General Reaction:

For the following tests, boil **1 gm** of the crude drugs **(Aloe)** given with 100 ml of water, add a little of **kieselghur**, filter and use the solution for the following tests:



1. Schontetens Reaction (Borax test):

Aim: Identification of the anthraquinone glycosides in general.

Equipments& Reagents:

- Test tube.
- Small beaker.
- Water bath.
- Borax.

Procedure:

To **2ml** of the **Aloe** extract, add **0.1gm of Borax** and heat until dissolved. Pour a fewdrops of the liquid into test tube nearly full of water.

Results:

A green fluorescence is produced.

2. Bromine Test for Aloin:

Aim: Identification of the anthraquinone glycosides in general.

Equipments& Reagents:

- Test tube.
- Bromine solution.

Procedure:

Take **2ml of the Aloe extract**, add an equal volume or an excess of **freshly prepared solution of bromine**.

Record the color.

B.SpecificReaction:

Borntrager's test :

Aim: Identity test for aglycone part of anthraquinone glycosides.

Equipments& Reagents:

- Separatory funnel.
- Test tube.
- Dilute HCl.
- Benzene.
- Dilute ammonia (10%).

Procedure:

To5ml of the Senna extract (fraction A), add 5ml dilute HCl, then place the mixture in a separatory funnel and partitioning with 5ml of benzene for 1min.

Take the upper benzene layer (free aglycone) and shake it with dilute ammonia (10%).Check the intensity of the color.

Results:

Pink color will be produced which is very clear with monoanthrones than dianthrones.

The Identification of Anthraquinone Glycosides By Chromatography:

By the use of thin layer chromatography (T.L.C)

- The stationary phase = Silica gel G.
- The mobile phase = n-propanol: Ethyl acetate: Water (60:30:30).
- The standard compound =Sennoside.
- The spray reagent = Alcoholic KOH 5%w/v.
- Mechanism of separation = Adsorption.
- Developing = Ascending.
- NOTE/ for the best result spray first with 25%w/v nitric acid then heat in the oven after that spray with KOH reagent. This step is done to intensity the color of the spot.

Thank you