

# Pharmacognosy Lab 8

## PHG112





# Faculty of **Pharmacy**

# Unorganised drugs





# Definition

Crude drugs of **animals or plant origin** have no cellular or definite structure.



**They are produced either normally or pathologically due to injuries or incision.**

# Classification

**Group I**

**Group II**

**Group III**

**Group IV**

**Group V**

**Resins and  
resin  
combinations**

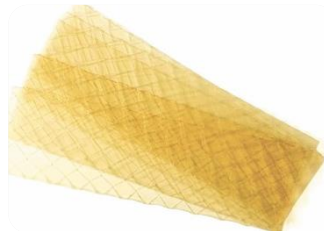


**Myrrh**

**Gums**



**Dried  
extracts**



**Gelatin**

**Dried  
latices**



**Opium**

**Juices**



**Aloe**

# Resins and resin combinations

**Resins are hard, solid or semisolid amorphous organic substances of complex nature.**

**They are insoluble in water but dissolve in alcohol, chloroform and ether and then on evaporation deposit the resins.**





# Myrrh

It is an **oleo-gum-resin** obtained from the stems and branches of *Commiphora myrrha*, *C. molmol* and other species of *Commiphora*, Fam. **Burseraceae**



# Chemical tests

## 1- Emulsion test:

Mix powder myrrh+ water → **Yellow brown** emulsion is formed.

## 2- Test for identity

Triturate about 0.5g of Myrrh with 1g of sand.

Then shake with 10ml of ether.

Filter and evaporate in a porcelain dish.

Add few drops of nitric acid to the residue.

A **purplish violet** color is produced.



# **Dried Latex**

**Latex is an emulsion or suspension where the continuous phase is an aqueous solution of mineral salts, protein, tannins, gum, proteins and starch.**

**Latex is often white in colour e.g. Opium.**



# Opium

It is the latex obtained by incision from the **unripe capsules** of *papaver somniferum* Fam. **Papaveraceae** and dried partly by spontaneous evaporation and partly by artificial heat.



## **Test for identity (test for meconic acid):**

**Warm 20-30mg of powdered opium in 2-3ml of water for few minutes and then filtering.**

**Add few drops of 5% ferric chloride where a purplish red colour is produced.**

**The color will not be destroyed by addition of hydrochloric acid or 5% mercuric chloride.**



# Dried juice

## Aloe

It is the solid residue obtained by evaporating the liquid, which drains from the cut leaves of *Aloe vera* Fam. *Liliaceae*.



## **Test for identity:**

### **1- Borax test:**

**Boil 0.5g of powdered aloe with 50ml of water for 2-3 mins. Filter then add 0.2 g of borax to 5ml of filtrate and heat.**

**Pour 2-3 drops of the heated filtrate into water where a green fluorescence is produced.**

### **2- Modified Borntrager's test**

**Mix 0.1g of powder with 5ml of 5%FeCl<sub>3</sub> and 5ml dil. HCl. Heat for 5 mins in boiling water bath and cool. Shake with benzene and separate the benzene layer and add NH<sub>4</sub>OH —————> pink to red colour is formed in the ammonical layer.**

# Dried Extracts

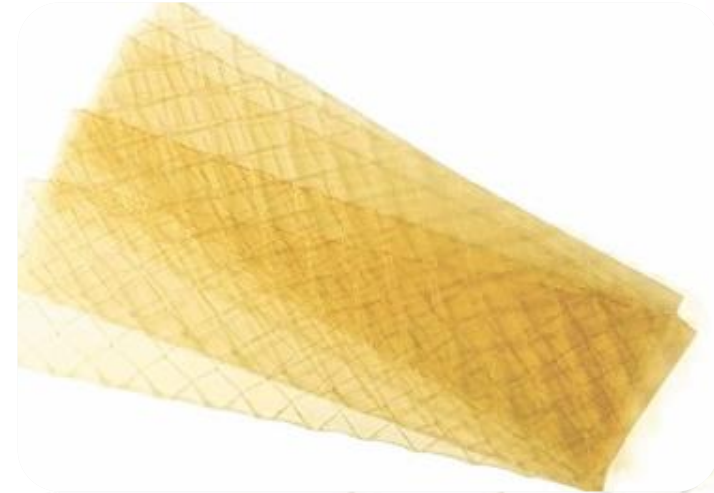
This group includes drugs prepared by evaporating aqueous decoction of whole or parts of certain plants or animals.





# Gelatin

**It is the protein obtained by boiling the collagenous tissues of animals such as skin, tendons, ligaments and bones with water, evaporating the aqueous extract and drying the residue in air.**



## Tests for identity:

- 1- On heating with **soda lime**, ammonia odour is evolved.
- 2- 2% hot aqueous solution gelatinize on cooling.
- 3- The aqueous solution gives a precipitate with solution of **tannic acid** and **lead subacetate**.

