

Q.1087 Resins are amorphous products of complex chemical nature. These are mixtures of essential oils, oxygenated products of terpene and carboxylic acid.

Example:-

<i>Asafoetida :-

<ii> Benzoin.

Q.1088 Tannins :-

Tannins are group of complex organic substances which are widely distributed in the plant kingdom.

⇒ Tannin containing double functional group i.e. alcohol (-OH) and carboxylic acid (-COOH).

⇒ They are known as astringent substances because they combine with tissue proteins.

Classification :-

These are three types of Tannin :-

<a> Hydrolysable Tannin :-

These tannins are hydrolyzed by acid or enzyme quickly.
eg:- Rhubarb, clove, myrobalans.

 Nonhydrolysable Tannin :-

These are very resistant to hydrolysis.
eg:- Green tea, cinchona.

Nonhydrolysable Tannin

①

4c) pseudotammaris:-

It may be treated as subgroup because they do not obey to goldbeater's skin test.

4. Example of volatile oil :-

4a) Cardamom.

Synonyms:-

cardamom fruits, cardamom seed.

Biological source:-

cardamom consist of the dried ripe fruits of *Elettaria cardamom* maxim var.

Geographical source:-

It occurs wild in Sri Lanka and Malaysia.

Chemical constituents:-

Cardamom seeds contain volatile oil to the extent of 2% to 8%. The active constituents of the volatile oil is cineole.

Uses:-

It is used as an aromatic and carminative stimulants. It is a good flavoring agent.

Arman

5 Short note

(a) podophyllum :-

Synonyms :-

Indian podophyllum, podophyllum

Biological source :-

It consists of dried rhizome and root of podophyllum.

Family :- berberidaceae.

Geographical source :-

It grows in the forests of the Kashmir, Sikkim, Himachal Pradesh.

Chemical constituents :-

Indian podophyllum contains 7-15% resin also known as podophyllin.

Uses :-

- It is also used for treatment of cancer.
- It arrests the mitotic division of cells.

(b) myrobalan :-

Synonyms :-

chebuli myrobalan, Haode, Haode

Biological source :-

It consists of dried ripe and fully matured fruits of Terminalia chebuli Retz.

NR Singh

(3)

Family:- Combretaceae.

Geographical source:-

It is found in the

- ARBAM.
- madhya pradesh.

Chemical constituents:-

myrobalan fruits are an important source of tannin.

Uses:-

- (i) myrobalan is used mainly as an astringent, laxative, stomachic and tonic.
- (ii) It is also used as anthelmintic.

(C) Myroch:-

Synonyms:-

Gum, myroch, Bol

Biological source:-

Myroch is an oleo-gum-res obtained from Commiphora and/or Eugenia and from other Commiphora species.

Uses:-

- It is used as stimulant and antiseptic.
- It is also protective.
- It is astringent to the mucous membrane.

Prant

5 Q1 > Gambier :-

Synonyms :-

pale catechu . Gambir .

Biological source :-

It is a dried aqueous extract of the leaves and young shoots of *Uncaria gambier*.

Family :-

Rubiaceae .

Geographical source :-

- Singapore .
- Indonesia .

Chemical constituents :-

The drug contains condensed tannin in the form of catechins .

- catechutannic acid - 22-50% .

Uses :-

It is used as an astringent in treatment of diarrhoea .

- local astringent used in the form of lozenges .

3 Q2 > Extraction of volatile oils :-

volatile oils are extracted by steam distillation, solvent extraction or .

Steam distillation/distillation :-

NRB (2)

- ⇒ In this process leaves are collected dried in shade for about 3 days and sent to steam distillation. The distillation unit consist of a false perforated bottom and is made up of copper. A charge for distillation consist of about 250 kg of leaves.
- ⇒ Sufficiently quantity of water is charged in the still and steam under pressure is passed through it.
- ⇒ It also about 6 hours for complete distillation.
- ⇒ produced oil is collected in the receiver.

Answer