

26.8.20

Semester. IV

(1)

Elective course IC

Unit 1. Terpenoids.

What are Terpenes and Terpenoids?

Give the general classification of Terpenoids.

Ans. Earlier, the terpene was considered as the mixture of isomeric hydrocarbons of the molecular formula $C_{10}H_{16}$ found in turpentine and many essential oils of plants. However, their oxygenated products were called Camphors. Now both terpenes and camphors have been given the common name terpenoids.

At present, terpenoids include hydrocarbons of the plant origin having the formula $(C_5H_8)_n$ as well as their oxygenated, hydrogenated and dehydrogenated products. Moreover, terpenoids are also called as isoterpenoids because their skeletons are composed of isoprene units.

citral, α -terpineol, camphor, carvone etc. are important terpenoids.

Terpenoids are classified according to the number of isoprene (C_5H_8) units they contain —

Class	No. of isoprene units
1. Monoterpenoids ($C_{10}H_{16}$)	2
2. Sesquiterpenoids ($C_{15}H_{24}$)	3
3. Diterpenoids	4
4. Sesterpenoids	5
5. Triterpenoids	6
6. Tetraterpenoids	8
7. Polyterpenoids	n

Each class of terpenoids is further subdivided according to the number of rings present in the molecule as —

- Acyclic Terpenoids (Open chain compounds)
- Monocyclic Terpenoids (One ring)
- Bicyclic (two rings) etc.