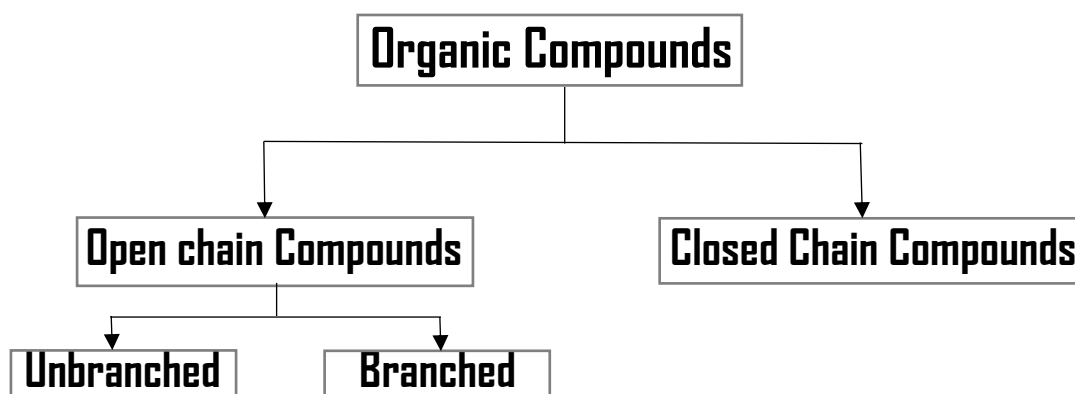


CONCEPT-03 : Classification of Organic Compound

TOPIC - 01 : Acyclic or Open Chain Compounds and Alicyclic or Closed Chain or Ring Compounds

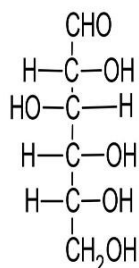
The list of organic compounds is so vast in itself. There are numerous numbers of organic compounds and also some are synthesized in the laboratory. Here, we would try streamline the list of organic compounds and classify them into same main categories. Although those classes can be further classified into more subclasses our collective effort will be to learn the most relevant ones & not just beating around the bushes .

Organic compounds are classified as open -chain compounds and closed compounds in terms of carbon chain. Also termed as organic compounds A cyclic or Open Chain or aliphatic compounds, cyclic or Closed Chain or Ring Compounds.



1. Open chain compounds : In organic chemistry, an open chain compound is a compound with linear structure, rather than a cyclic one. Here, two ends of the series are not fixed, terminal ends are always open & independent. They could be branched and unbranched.

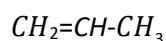
Example :



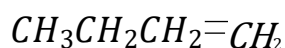
Glucose



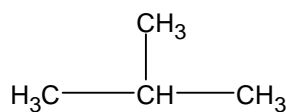
Propane
[unbranched]



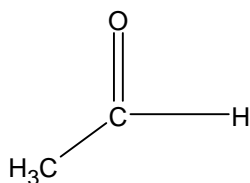
Propene
[unbranched]



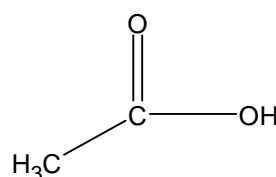
Butene
[unbranched]



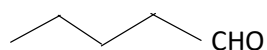
Isobutene
[unbranched]



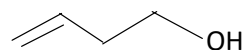
Acetaldehyde
[unbranched]



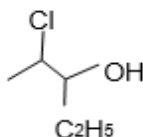
Acetic Acid
[unbranched]



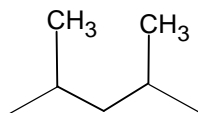
Pentanaldehyde
[unbranched]



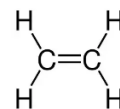
But-3-en-1-ol
[unbranched]



2-chloro-1-ethylpropan-1-ol
[branched]



2,4-dimethylpentane
[branched]



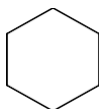
Ethene
[unbranched]

2. Closed Chain Compounds : Closed chain compounds or cyclic compounds are those in which the carbon chain forms a cycle or ring. Such compounds can also be referred to as ring compounds. Here, two ends of the series are linked and they are not open nor independent

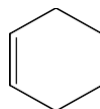
Example:



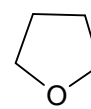
Cyclopropane



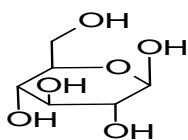
Cyclohexane



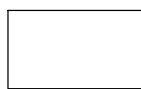
cyclohexene



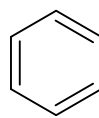
Tetrahydrofuran



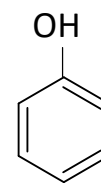
Glucose



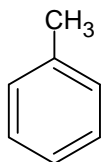
Cyclobutane



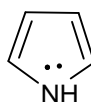
Benzene



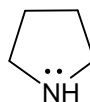
Phenol



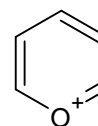
Toluene



Pyrrole



Piperidine



Pyridine

