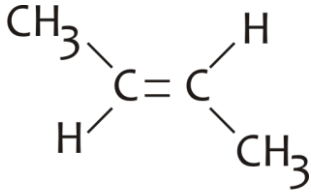
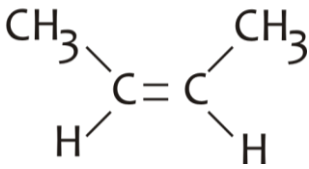
GEOMETRIC ISOMERISM

Geometric Isomerism is the existence of compounds with the same molecular formula but is not identical because of different spatial arrangement of the compound's atoms. For example: but-2-ene may exist in two forms:



trans-but-2-ene

and



cis-but-2-ene

In but-2-ene, the presence of the double bond between the carbon atoms hinders free rotation. So the two forms, cis- and trans- are locked in shaped giving rise to geometric isomerism.

Geometric isomers have similar chemical properties, but their physical properties, but their physical properties are different, e.g. the trans-form of 1,2, di-chloroethane boils at 48°C while the cis-form boils at 60°C.

Geometric isomerism is common among alkenes. An alkane where each carbon atom joined by a double bond is attached to two different atoms or groups can exist in the cis- and trans- forms.