



Form of stereoisomerism

Enantiomers have the same structural formula but have a different arrangement of atoms in space

Often referred to as enantiomers

Optical isomers have a chiral carbon atom

Optical isomers are mirror images

Cannot be superimposed no matter which way they are rotated

**Optical Isomers**

Rotate plane-polarised light

The other enantiomer will rotate the light in an anticlockwise direction

Of a pair of enantiomers, one enantiomer will rotate the light in a clockwise direction

**3.7 OPTICAL ISOMERISM**

**Racemic Mixtures (Racemates)**

Contains exactly equal quantities of each enantiomer from an optically active compound

Racemic mixtures do not display optical activity

This is because the enantiomers cancel out each other's rotation of light

Produced from reactions which involve a planar bond

E.g. The reaction of propanal with acidified potassium cyanide

The planar bond has an equal chance of being attacked from above or below

AQA