

Therefore each isomer is a typical hemiacetal and is readily hydrolysed in aqueous solution to give the open chain form of glucose, hence each isomer changes into an equilibrium mixture (38% α -D glucose + 62% β -D glucose) through the open chain form containing both the isomers and a little open chain form. Thus, when open chain form of sugar is obtained, asymmetry of glucose's carbon is destroyed leading to the change in rotation. This easy opening and closing of the hemiacetal ring explains mutarotation. Such reactions are catalysed by both acid and base but the presence of both is necessary.

Base catalysed reaction

