

Answer on Question#41068-Chemistry-Organic Chemistry

Question

The change in optical rotation with time of freshly prepared solution of sugar is known as

- 1) mutarotation
- 2) rotatory motion
- 3) inversion
- 4) specific rotation

Answer

The correct answer is

- 1) mutarotation

By definition mutarotation is the change in the optical rotation with time that occurs by epimerization (that is the change in the equilibrium between two epimers, when the corresponding stereocenters interconvert). Cyclic sugars show mutarotation as α and β anomeric forms interconvert.

Mutarotation was discovered by French chemist Dubrunfaut in 1846, when he noticed that the specific rotation of aqueous sugar solution changes with time.