

Question 55. Describe the term D- and L-configuration used for amino acids with examples.

Solution: The sugars are divided into two families: the D-family and L-family which have definite configurations. These configurations are represented with respect to glyceraldehyde as the standard. The glyceraldehydes may be presented by two forms as: D-(+)-Glyceraldehyde L-(-)-Glyceraldehyde The D-configuration has -OH attached to the carbon adjacent to -CH₂OH on right while L-configuration has -OH attached to the carbon adjacent to -CH₂OH on left. The sugars are called D- or L- depending upon whether the configuration of the molecule is related to D-glyceraldehyde or L-glyceraldehyde. It has been found that all naturally occurring sugars belong to D-series, e.g., D-glucose D-ribose and D-fructose