

One distinguishes between α - and β -glycosidic bonds based on the relative stereochemistry of the anomeric position and the stereocentre furthest from C1 in the saccharide. In D-hexose sugars in their pyranose forms, an α -glycosidic bond is formed in an axial orientation, whereas a β -glycosidic bond will be oriented equatorially. Two anomers are designated alpha (α) or beta (β), according to the configurational relationship between the anomeric centre and the anomeric reference atom. The anomeric centre in hemiacetals is the anomeric carbon C-1, which is attached to the hemiacetal oxygen (in the ring) and in hemiketals carbon C-2, attached to the hemiketal oxygen. In aldohexoses and smaller carbohydrates the anomeric reference atom is the furthest chiral centre in the ring (the configurational atom, defining the sugar as D or L). In α -D-glucopyranose the reference atom is C-5. If the anomeric centre and the anomeric reference atom have opposite stereochemistries, this is an alpha linkage. If they have the same stereochemistry, this is a beta linkage.