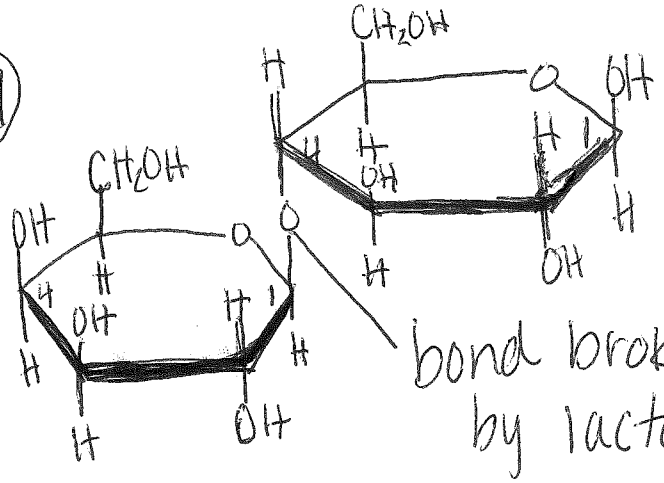
12.3
Complex Carbohydrates

(46) A disaccharide is a carbohydrate that when hydrolyzed yields two monosaccharides. The monosaccharides that make up a disaccharide do not undergo mutarotation

(47)



(48) Maltose and cellobiose both consist of two glucose monomers connected by a 1→4 glycosidic bond. Maltose, however, has an α(1→4) bond, whereas cellobiose has a β(1→4) bond.

(50) An oligosaccharide has 3-100 monosaccharide units, whereas a polysaccharide has more than 100 monosaccharide units.

(51) Giraffes have bacteria in their digestive tract that produce β-Glycosidases. These β-glycosidases can hydrolyze the β(1→4) glycosidic bonds in cellulose and produce glucose

(52) Starch contains α(1→4) glycosidic bonds in amylose and α(1→6) glycosidic bonds in amylopectin. Cellulose contains β(1→4) glycosidic bonds. Glycogen contains more α(1→6) glycosidic bonds than amylopectin

(53) In D-glucosamine, the OH group on C2 has been replaced by an amine group.