**Activity 23: Glycosidic Bonds**

***Learning Objectives***

*Gain familiarity with the disaccharides maltose, lactose, and sucrose*

*Identify and name glycosidic bonds in carbohydrates*

*Draw the condensation or hydrolysis products for monosaccharides and disaccharides, respectively*

**Estimated Completion Time** 20–30 Minutes

**Instructor Information**

Students find this activity very straightforward *except* for understanding the glycosidic bond of sucrose. The anomeric carbon reasoning (question 6) must be reiterated and reinforced.

**ANSWERS TO QUESTIONS**

1. Alpha

2. 1; 4

3. Students should answer yes.

4. (1🡪4)

5.



6. The alpha or beta designation is given for anomeric carbons that are in a glycosidic bond. Only one anomeric carbon is in the glycosidic bond in maltose and lactose.

7.



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8. Answers will vary.

**Activity 23: Skill Development**

1. a. Hydrolysis reaction (break with water)



b. Condensation reaction (water is produced)



2.



3. a. (1🡪3) b. monosaccharide A is glucose, monosaccharide B is fructose.