

Carbohydrates Disaccharide Problems

1. What is the structure of α -D-lactose?
 - a. Label the anomeric carbon on α -D-lactose.
 - b. What kind of glycosidic Linkage is present?
 - c. How does β -D-lactose differ from α -D-lactose?

2. How does isomaltose differ from maltose?

3. How does cellobiose differ from maltose?

4. How does lactose differ from cellobiose? How is it similar?

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10. For each of the following disaccharides tell what monosaccharides are present and what type of glycosidic linkage connects the two.

<u>Disaccharide Name</u>	<u>Name of the Monosaccharides</u>		<u>Linkage</u>
	First	Second	
D-maltose	_____	_____	_____
D-cellobiose	_____	_____	_____
D-isomaltose	_____	_____	_____
D-gentiobiose	_____	_____	_____
D-trehalose	_____	_____	_____
D-lactose	_____	_____	_____
D-sucrose	_____	_____	_____

11. Consider the following sugars. Which of these can have α and β forms?

D-maltose _____ (yes or no)

D-cellobiose _____

D-isomaltose _____

D-gentiobiose _____

D-trehalose _____

D-lactose _____

D-sucrose _____

12. What is the difference between a disaccharide and a trisaccharide?