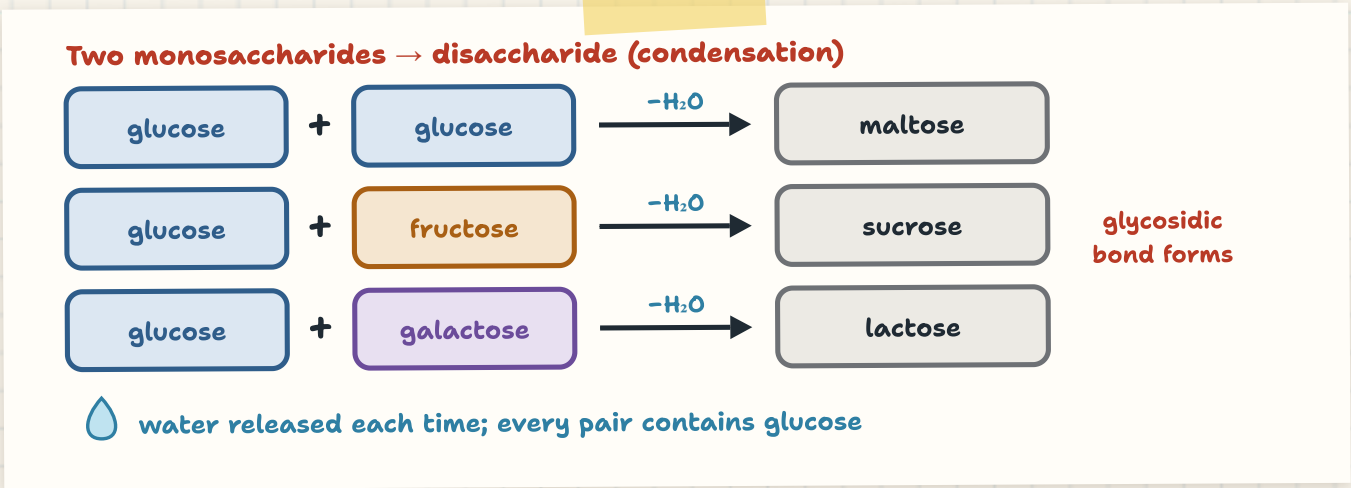
Maltose, Sucrose, Lactose: Glycosidic Bonds

Pairs of monosaccharides join by condensation, with a glycosidic bond, to make maltose, sucrose and lactose.



Key terms

monosaccharide	a single sugar unit; the monomer of carbohydrates (glucose, galactose, fructose).
disaccharide	the molecule formed when two monosaccharides join.
glycosidic bond	the bond formed between two monosaccharides in a condensation reaction, a single oxygen acting as a bridge between the rings.
maltose	glucose + glucose.
sucrose	glucose + fructose; ordinary table sugar.
lactose	glucose + galactose; the sugar in milk.

I can...

- [ ] Monosaccharides are the monomers of carbohydrates: glucose, galactose, fructose
- [ ] Condensation of two monosaccharides forms a glycosidic bond
- [ ] Maltose = glucose + glucose
- [ ] Sucrose = glucose + fructose
- [ ] Lactose = glucose + galactose

EXAM TRAP

Name the bond as a glycosidic bond, never a peptide or ester bond (those belong to proteins and fats). And do not swap the partners: sucrose is glucose + fructose, lactose is glucose + galactose.

4 marks: what earns them

1. Sucrose is formed from glucose and fructose
   Not: glucose and glucose; glucose and galactose; two sugars with no names
2. In a condensation reaction / water is released (eliminated)
   Not: water is used; hydrolysis; dehydration alone
3. A glycosidic bond forms between the (two) monosaccharides
   Not: peptide bond; ester bond; hydrogen bond; covalent bond alone
4. Lactose is made of glucose and galactose
   Not: glucose and fructose; glucose and glucose; galactose alone

Remember

Every pair includes glucose: only learn the partner.

Sucrose, fructose. Lactose, galactose (Greek for milk).

Maltose is the double: glucose + glucose.

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