

Vocabulary: Identifying Nutrients



Vocabulary

- Carbohydrate – an organic molecule containing hydrogen, carbon, and oxygen.
 - Carbohydrates are produced by plants during photosynthesis.
 - Carbohydrates include monosaccharides, disaccharides, and polysaccharides.
 - Carbohydrates are a major source of energy in the diet.
- Disaccharide – a sugar formed when two monosaccharide molecules are joined.
 - Sucrose, or table sugar, is a disaccharide. Other examples are lactose (milk sugar) and maltose.
 - None of the tests available in the *Identifying Nutrients* Gizmo can identify disaccharides.
- Lipid – a fat.
 - A lipid molecule usually consists of three *fatty acids* bonded to a “backbone” of *glycerol*.
 - Lipids are used as an energy source and as a building material for cells.
 - In the presence of lipids, Sudan Red solution will show concentrated spots of color.
- Monosaccharide – a simple sugar such as glucose or fructose.
 - A monosaccharide molecule usually consists of a ring of five or six carbon atoms that are bonded to hydrogen atoms and hydroxyl groups.
 - In the presence of monosaccharides, Benedict solution will turn from blue to pink.
- Polysaccharide – a complex carbohydrate such as starch or cellulose.
 - Polysaccharides are chains or branching structures composed of 40 or more monosaccharide molecules.
- Protein – a molecule composed of a chain of *amino acids*.
 - Proteins are an essential building block of muscles, skin, bone, hair, and most other body structures.
 - In the presence of proteins, Biuret solution will turn from blue to bright purple.
- Starch – a type of polysaccharide found in potatoes, rice, pasta, bread, and other plant-based foods.
 - In the presence of starch, Lugol’s solution (iodine) will turn from yellow-brown to dark purple.