4. Biological molecules

Starter Quiz ·

IGCSE Biology Name: _____ Score: _____

1. Proteins are built from smaller units called:

   ☐ amino acids

   ☐ fatty acids

   ☐ glucose

   ☐ glycerol

2. A positive iodine test for starch gives a:

   ☐ purple colour

   ☐ brick-red colour

   ☐ cloudy white emulsion

   ☐ blue-black colour

3. Carbohydrates are made of which three elements?

   ☐ carbon, hydrogen and oxygen

   ☐ hydrogen, nitrogen and sulfur

   ☐ carbon, nitrogen and oxygen

   ☐ carbon, hydrogen and nitrogen

4. Benedict's solution, when heated with a reducing sugar, turns:

   ☐ brick-red

   ☐ blue-black

   ☐ colourless

   ☐ purple

5. Lipids (fats) are made from fatty acids and:

   ☐ glycerol

   ☐ starch

   ☐ amino acids

   ☐ glucose

6. The Benedict's test for reducing sugar must be heated.

   ☐ True ☐ False

7. Carbohydrates contain nitrogen, but proteins do not.

   ☐ True ☐ False

8. The _____ test turns purple when protein is present.

   _____

9. Many glucose units join together to make the storage carbohydrate _____ in plants.

   _____

10. Blue-black with iodine means the food contains what?

    ☐ Protein.

    ☐ Starch.

    ☐ Fat.

4. Biological molecules

Answers ·

IGCSE Biology

1. **amino acids**

   Proteins are chains of amino acids.

2. **blue-black colour**

   Iodine turns blue-black with starch.

3. **carbon, hydrogen and oxygen**

   Carbohydrates contain C, H and O.

4. **brick-red**

   Benedict's goes blue → brick-red with reducing sugar.

5. **glycerol**

   A lipid is fatty acids joined to glycerol.

6. **True**

   Benedict's needs heating in a water bath; the others are done cold.

7. **False**

   False. Proteins contain nitrogen in their amino acids; carbohydrates and lipids contain only carbon, hydrogen and oxygen.

8. **Biuret**

   Biuret detects protein (blue → purple).

9. **starch**

   Plants store glucose as starch; animals store it as glycogen.

10. **Starch.**

    Iodine's blue-black colour is the starch result.