

# Organic Molecule Lab

Record your results of the known solutions in the following data tables.

Monosaccharide (sugar) test

Test Tube	Color change	Positive or Negative
Monosaccharide		
Water only		

Polysaccharide (starch) test

Test tube	Color change	Positive or negative
Polysaccharide		
Water only		

Protein test –

Test tube	Color change	Positive or negative
Protein		
Water only		

Lipid test

Test paper	Results	Positive or negative
Oil		
Water		

Unknown solution-

1. Test the beaker of solution on the lab bench marked “unknown”.
2. Run all three tests listed below on the solution.
3. Use a clean test tube for every test.
4. The solution may contain **one or more** of the three organic molecules.

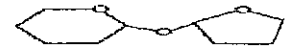
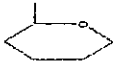
Test tube	Color change	Positive or negative
1. Monosaccharide test		
2. Polysaccharide test		
3. Protein test		

## Completion

1. Give three examples for each of the carbohydrates

- a. Monosaccharide 1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_  
 b. Disaccharide 1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_  
 c. Polysaccharide 1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

2. Label each diagram as monosaccharide, disaccharide or polysaccharide.



3. Matching: A. Carbohydrate      B. Lipid –      C. Protein      D. Nucleic acid

1	Starch	7	Polysaccharide	13	Polypeptide chain
2	Cholesterol	8	Phospholipid	14	Glucose
3	Steroid	9	Glycerol	15	Unsaturated fat
4	Glycogen	10	Monosaccharide	16	Enzyme
5	Nucleotide	11	Cellulose	17	Saturated fat
6	RNA	12	Amino acid	18	DNA

In the above table, write Benedict's solution, iodine, Biuret solution or brown paper test next to each substance in order to obtain a positive result. Write "none" if no test would work.

4. State whether the following is found in animals, plants or both

1	Saturated fat	8	Glucose
2	Protein	9	RNA
3	Steroid	10	Polysaccharide
4	Amino acid	11	Glycogen
5	DNA	12	Starch
6	Cellulose	13	Phospholipid
7	monosaccharide	14	Enzyme

Which food molecule (monosaccharide, polysaccharide, lipid, protein) would you eat if...

- 5...you needed a quick boost of energy? \_\_\_\_\_  
 6. ....you wanted to grow strong nails? \_\_\_\_\_  
 7. ...you haven't eaten in days? \_\_\_\_\_  
 8. ...you wanted to grow healthy hair? \_\_\_\_\_  
 9. ...you had a race tomorrow afternoon? \_\_\_\_\_  
 10. ...you were getting ready for hibernation? \_\_\_\_\_  
 11. ...you wanted to get bigger muscles? \_\_\_\_\_  
 12. ...your next meal will be in a week? \_\_\_\_\_ (pick 2)