

# Science 9 -Biology

## Experiment 6 – Water

**Object –** to be able to test for water content.

**Material –** A special container to dehydrate food in.

Five food samples for testing – Listen carefully to the discussion before choosing your food. You want positive and negative results.

**Method –** **\*\*\*Note of Caution\*\*\*** The dehydrating container will get very hot! It can burn your hands!

### **Background Information**

What are the roles of water in our body? (We are about 60% plus water)

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What are some sources of water? Be careful with this answer.

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How much water should we drink a day? Why drink pure water?

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### Observations

Your instructor will weigh out a crucible of water to be dehydrated.

Weigh the food you are going to dehydrate. If you need to put your piece of food on a crucible (a small dehydrating dish), weigh both the crucible and the food. If the food is going directly into the dehydrator still use a piece of paper towel on the balance and zero the balance before weighing.

1. Write down the mass of to the food. \_\_\_\_\_g
2. Mass of the food after dehydrating: \_\_\_\_\_g
3. The change in mass after dehydrating: \_\_\_\_\_g
4. What percentage of your food was water? \_\_\_\_\_ %
5. What food is your control? \_\_\_\_\_
6. Did you have an indicator for water? \_\_\_\_\_

On the next page record your class data

Class Data

Food	Percentage water
Water	

**Conclusion**

What foods are a good source of water? (do not include water).

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From your experiment, what is the average percentage of water in these foods? Show your calculations.

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**Nutrients Essential in Human Nutrition – for each of the following nutrients you are given an example. Give at least two additional types or sources and then the role of that group of nutrients.**

**Carbohydrates**      Ex glucose

Two types \_\_\_\_\_

Role: \_\_\_\_\_

**Fats**      EX.    linoleic acid

Two types \_\_\_\_\_

Role: \_\_\_\_\_

**Amino Acids** Ex. Valine, tryptophan, threonine phenylalanine, methionine, lysine, leusine, and isoleusine histidine.

Two general groupings of amino acids \_\_\_\_\_

Role: \_\_\_\_\_

**Minerals** Ex. Calcium, chloride, chromium, cobalt, copper, fluoride, iodide, iron, magnesium, manganese, molybdenum, nickel, phosphorus, potassium, selenium, silicon, sulphur, tin, vanadium, and zinc.

Role: \_\_\_\_\_

**Vitamins** Ex. Vitamin A, D, E, K, B6, B12, C thiamin (B1), riboflavin (B2), niacin (B3), folacin, pantothenic acid, and biotin.

Two general grouping of vitamins \_\_\_\_\_

Role: \_\_\_\_\_

**Water** Ex. H<sub>2</sub>O

Two good solid food sources: \_\_\_\_\_

Role: \_\_\_\_\_

**Fiber** Ex. Indigestible foods, rice shells, etc.

Two other sources of fibre: \_\_\_\_\_

Role: \_\_\_\_\_