

EXPERIMENT 1: LOW SODIUM

You go to the family doctor, and he decides to put you on a special diet. He tells you that you have been eating too much sodium. He is an old chemist, and he tells you not to eat more than 0.01 mole of sodium per day. This sounds pretty easy until you go home and find out that all of the food items list the amount of sodium in mg (milligrams). How do you follow the doctor's orders? Which foods can you eat?

HINTS:

First determine the atomic weight of sodium. It is on the periodic table and the quantity is given as grams per mole (grams/mole). Record this quantity here: _____

Remember that the atomic weight tells you how many grams of an element are in one mole, but you need to find out how many milligrams are in 0.01 mole. To find out how many milligrams of sodium are in 0.01 mole, first convert grams of sodium in one mole to milligrams of sodium (1000 milligram = 1 gram) in one mole and then multiply by 0.01 mole. This will give you milligrams of sodium in 0.01 mole.

Do your calculation here:

milligrams (mg) of sodium in 0.01 mole = _____

Experiment 1: _____ Date: _____

Objective: _____

Hypothesis: _____

I. List the materials you need.

MATERIALS

II. Write out the steps of your experiment in as much detail as possible.

EXPERIMENT

1. _____

2. _____

3. _____

4. _____

5. _____

III. Record your results.

RESULTS

| Food Item | Serving size | Sodium (in milligrams) |
|----------------------------|--------------|------------------------|
| Raisin Bran Cereal | 1 cup | 350mg |
| Nature Valley Granola Bars | 2 bars | 160mg |
| Jiff Peanut Butter | 2 Tbsp | 150mg |
| Chicken of the Sea Tuna | 2 oz. | 250mg |
| Baked Beans | 1/2 cup | 550mg |

