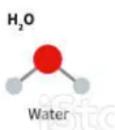


The **atomic composition** of a **molecule** describes the number and type of atoms in the molecule.

- ▶ A **molecule** consists of two or more atoms that may be the same or different.
- ▶ The **coefficient** is the amount of molecules.
- ▶ The **subscript** is the amount of atoms.



water



2 atoms of hydrogen  
1 atom of oxygen



water



4 atoms of hydrogen  
2 atoms of oxygen

### CFU

How many molecules of ammonia?  
Explain.



How many atoms of nitrogen in ammonia?  
Explain.



How many molecules of ammonia?  
Explain.



1 Describe the atomic composition of the molecule.

2 Read the atomic composition of the molecule.

1.  $O_3$

ozone

The atomic composition of

\_\_\_\_\_ molecule of ozone is \_\_\_\_\_ oxygen atoms.

2.  $N_2$

nitrogen

The atomic composition of

\_\_\_\_\_ molecule of nitrogen is \_\_\_\_\_ nitrogen atoms.

3.  $2CH_4$

methane

The atomic composition of

\_\_\_\_\_ molecules of methane is \_\_\_\_\_ carbon atoms and \_\_\_\_\_ hydrogen atoms.

4.  $3CO_2$

carbon dioxide

The atomic composition of

\_\_\_\_\_ molecules of carbon dioxide is \_\_\_\_\_ carbon atoms and \_\_\_\_\_ oxygen atoms.

5.  $2C_6H_{12}O_6$

glucose

The atomic composition of

\_\_\_\_\_ molecules of glucose is \_\_\_\_\_ carbon atoms, \_\_\_\_\_ hydrogen atoms, and \_\_\_\_\_ oxygen atoms.

6.  $4CaCO_3$

calcium carbonate

The atomic composition of

\_\_\_\_\_ molecules of calcium carbonate is \_\_\_\_\_ calcium atoms, \_\_\_\_\_ carbon atoms, and \_\_\_\_\_ oxygen atoms.

7.  $(NH_4)_2SO_4$

ammonium sulfate

The atomic composition of

\_\_\_\_\_ molecule of ammonium sulfate is \_\_\_\_\_ nitrogen atoms, \_\_\_\_\_ hydrogen atoms, \_\_\_\_\_ sulfur atom, and \_\_\_\_\_ oxygen atoms.

8.  $Ca(OH)_2$

calcium hydroxide

The atomic composition of

\_\_\_\_\_ molecule of calcium hydroxide is \_\_\_\_\_ calcium atom, \_\_\_\_\_ oxygen atoms, and \_\_\_\_\_ hydrogen atoms.

## Skill Closure

- 1 Describe the atomic composition of the molecule.
- 2 Read the atomic composition of the molecule.

## 1. NaCl

sodium chloride

The atomic composition of \_\_\_\_\_ molecule of sodium chloride is \_\_\_\_\_ sodium atom and \_\_\_\_\_ chlorine atom.

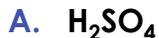
2.  $4\text{H}_2\text{O}_2$ 

hydrogen peroxide

The atomic composition of \_\_\_\_\_ molecules of hydrogen peroxide is \_\_\_\_\_ hydrogen atoms and \_\_\_\_\_ oxygen atoms.

## Concept Closure

Tristan says that the molecule that has 4 oxygen atoms is C. Do you agree with him? Correct and explain.



## Summary Closure

What did you learn today about describing the atomic composition of molecules?

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## Word Bank

amount  
type  
atom  
coefficient  
subscript  
molecule