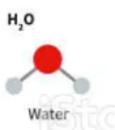


The **atomic composition** of a **molecule** describes the number and type of atoms in the molecule.

- ▶ 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.

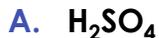
2. $4\text{H}_2\text{O}_2$

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?

Word Bank

amount
type
atom
coefficient
subscript
molecule