

ELEMENTS AND COMPOUNDS

A molecule is composed of a cluster of atoms and can be broken down into those atoms during a chemical change.

An element is a pure substance whose molecules are made up of identical atoms.

A compound is a pure substance whose molecules are made up of different kinds of atoms. Compounds can be broken down into elements.

Of 10 million known pure substances, only 1.18 are elements (the rest are compounds).

CHEMICAL FORMULAS

A chemical formula is a combination of chemical symbols that indicate what elements make up the compound and the number of atoms of each element present.

Example: H_2O (water)

H - hydrogen \rightarrow 2 atoms

O - Oxygen \rightarrow 1 atom



Example: $C_6H_{12}O_6$ (glucose)

C - carbon \rightarrow 6 atoms

H - hydrogen \rightarrow 12 atoms

O - oxygen \rightarrow 6 atoms