



# Matter

**Matter** is anything that has mass and occupies space. Matter can exist in four phases: solids, liquids, gases, or plasma

## Classification of Matter

Matter can be classified into two types:

- 1- **Pure substance**:- A substances that are made of only one type of atom or only one type of molecule.
  - a. **Elements**: Element is the simplest matter which contains one type of atom. There are 109 known elements in nature. We show elements with symbols like for iron we use "Fe".
  - b. **Compounds**: are pure substances that are composed of two or more elements. Substances such as water, salt, and sugar are simple examples of compounds.



- 2- **Mixture**: two or more different types of matter (element, molecule, compound) are mixed to get mixture. All matters forming mixture keep their original properties. They are not pure matters.
- a. **Homogeneous Mixtures**: All parts of mixture show same properties in homogeneous mixtures. We can call homogeneous mixtures as solutions. Salt water, sugar water, air are examples of homogeneous mixtures.
  - b. **Heterogeneous Mixtures**: Mixtures do not show same uniformity in all parts of it. In this types of mixtures, you can see different phases of matters. Water+Sand, milk, blood, soil are some common examples of heterogeneous mixtures.

