

Notes for Classification of Matter

- **Pure Substances** – Sample of matter with a fixed composition and is the same no matter which sample is examined.
 - Can be either elements or compounds
- **Elements** – All the atoms are the same.
 - Identified by a chemical symbol and found on the periodic table.
- **Compounds** – Two or more different elements chemically combined.
 - Identified by a chemical formula (ratio of elements using subscripts)
 - Formed through chemical reactions.
 - Properties of compound differ from individual elements.
- **Mixtures** – Two or more substances not chemically combined together
 - No chemical reaction required.
 - Individual components maintain their individual properties.

- **Homogeneous Mixture** – Individual components cannot be visibly distinguished from one another. (sweat tea, clean air, stainless steel)
 - Can be solid, liquid, or gas.
 - Liquid homogeneous mixtures often called solutions.
 - Metal alloys are homogeneous mixtures made when two or more metals are heated into a liquid, mixed together, and allowed to solidify. (Stainless steel, brass, bronze, different karat gold)
- **Heterogeneous Mixture** – Individual components can be visibly distinguished from one another. (trail mix)