**Pure Substances, Mixtures and Solutions**

**Types of Matter**

1. **Pure** **Substance**: matter that has \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and unique properties.

Contains \_\_\_\_\_ type of matter

* **Element**: a pure substance that can’t be broken into simpler substances
* **Compound**: a pure substance made up of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that have been \_\_\_\_\_\_\_\_\_\_\_\_ combined.
1. **Mixture**: Matter that contains \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ combined compounds; can be \_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**The Appearance of Matter**

1. **Homogeneous Substances**
* Means \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Can be:

1.

2.

3.

1. **Heterogeneous Substances**
* Means \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Always is:

1.

**Matter**

**3 Classes of Mixtures**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Solution | Colloid | Suspension |
| Examples |  |  |  |
| Particle Type |  |  |  |
| Particle Size |  |  |  |
| Scatter Light? |  |  |  |
| Settle while standing? |  |  |  |
| Separate by filtration? |  |  |  |

**Homogenous Mixtures**

**Homogeneous mixture :** is a mixture in which the components are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ among each other. You \_\_\_\_\_\_\_\_\_\_\_ see the component parts.

**Homo means the \_\_\_\_\_\_\_\_\_ throughout.**

* **Homogenous mixtures are also called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Examples**:

**Solutions**: Well-mixed (uniform) – single phase, homogeneous, transparent, cannot be separated by filter, do not separate on standing

|  |  |
| --- | --- |
| **States of matter in solutions** | **Examples** |
| Gas in gas |  |
| Gas in Liquid |  |
| Liquid in liquid |  |
| Solid in liquid |  |
| Solid in solid |  |

**Heterogeneous Mixtures**

**Heterogeneous mixture :** the components are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ distributed among each other. A heterogeneous mixture has two or more distinct phases that are usually detectable.

This type of mixture does \_\_\_\_\_\_ have uniform properties.

Heterogeneous mixtures that look like solutions can be distinguished because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Examples:

**Colloids**:

Examples :

**Suspensions**:

Examples: