

Chapter 4.3: Mixtures

_____ : A combination of two or more substances that are _____ chemically combined.

_____ = No _____ change.

1. Separating Mixtures

- **Distillation:** Method of separating mixtures based on different _____.
- _____: Used to separate iron from other components of a mixture.
- _____: Used to separate components of a mixture based on density.

2. Mixtures vs. Compounds

Mixtures	Compounds
Made of _____, _____, or both.	Made of _____.
No change in original _____ of components.	Change in original _____ of components.
Separated by _____ means.	Separated by _____ means.
Formed using _____ ratio of components.	Formed using a _____ ratio of components.

3. Solutions

Solution: a mixture composed of _____ or more substances that appear to be a _____.

Dissolving: Process in which particles of substances _____ and spread _____ throughout a mixture.

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Solute: The substance that is _____ (Ex. _____).

Solvent: The substance in which the _____ is _____
(Ex. _____).

4. Examples of Different States of Solutions

States	Examples
Gas in _____	
Gas in _____	
Liquid in _____	
Solid in _____	
Solid in _____	

5. Concentration of Solutions

Concentrated Solution: _____ of solute (salt)

Dilute Solution: _____ solute (salt)

These terms tell you the _____, but not the _____ amount of solute.

6. Solubility

Solubility: the amount of _____ that can be dissolved in a _____ at a particular _____.

Why is temperature important?

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Solids in Liquids

Higher temperature _____ solubility.

Example: More salt dissolve in _____ than in _____ water.

Gases in Liquids

Higher temperature _____ solubility.

Example: Less oxygen gas dissolves in _____ water.

7. Suspensions

Suspension: A mixture in which particles are _____, but are heavy enough to _____ to the bottom.

Scatter _____.

Can be _____.

Examples: _____.

8. Colloids

Colloids: Mixture where particles are _____ (dispersed), but do not _____ to the bottom.

Examples: _____

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Self Check

1. What are the three types of mixtures?
2. Why should you dissolve sugar in lemonade before you add the ice?
3. When salt is dissolved in water, which is the solvent and which is the solute?
4. What method can you use to separate particles in suspensions?
5. Why can't the particles in a colloid be separated by filtration?