

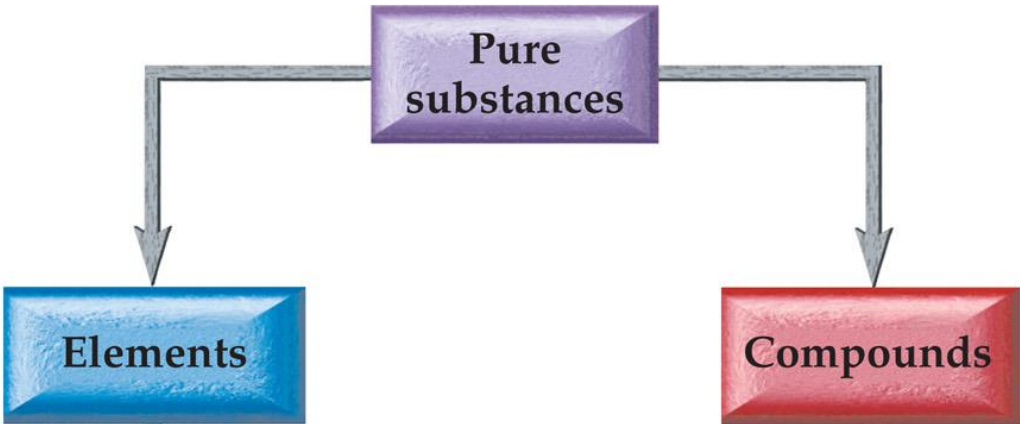
Separation Techniques

Lab Notes

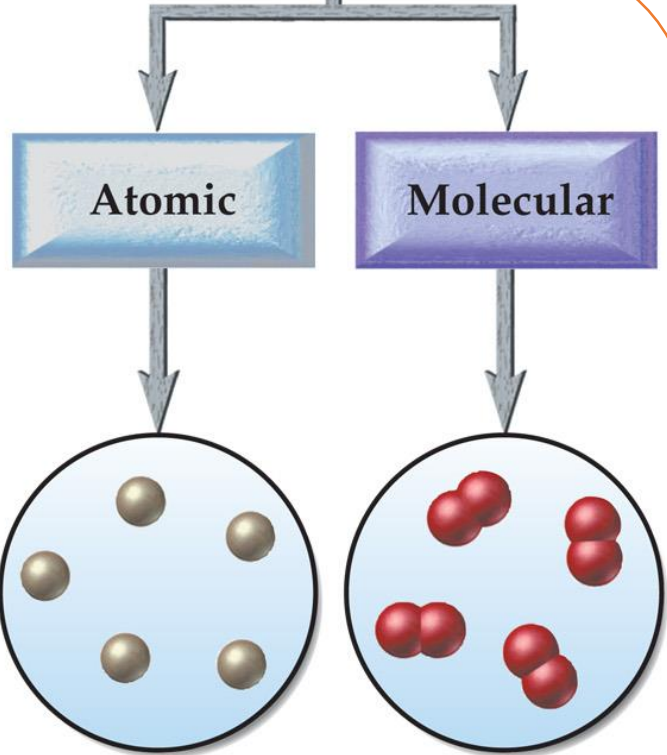
Classifying Matter

- Chapter 1: Matter can be classified as either a PURE SUBSTANCE or MIXTURE

PURE SUBSTANCES:
Cannot be broken down
using physical means.

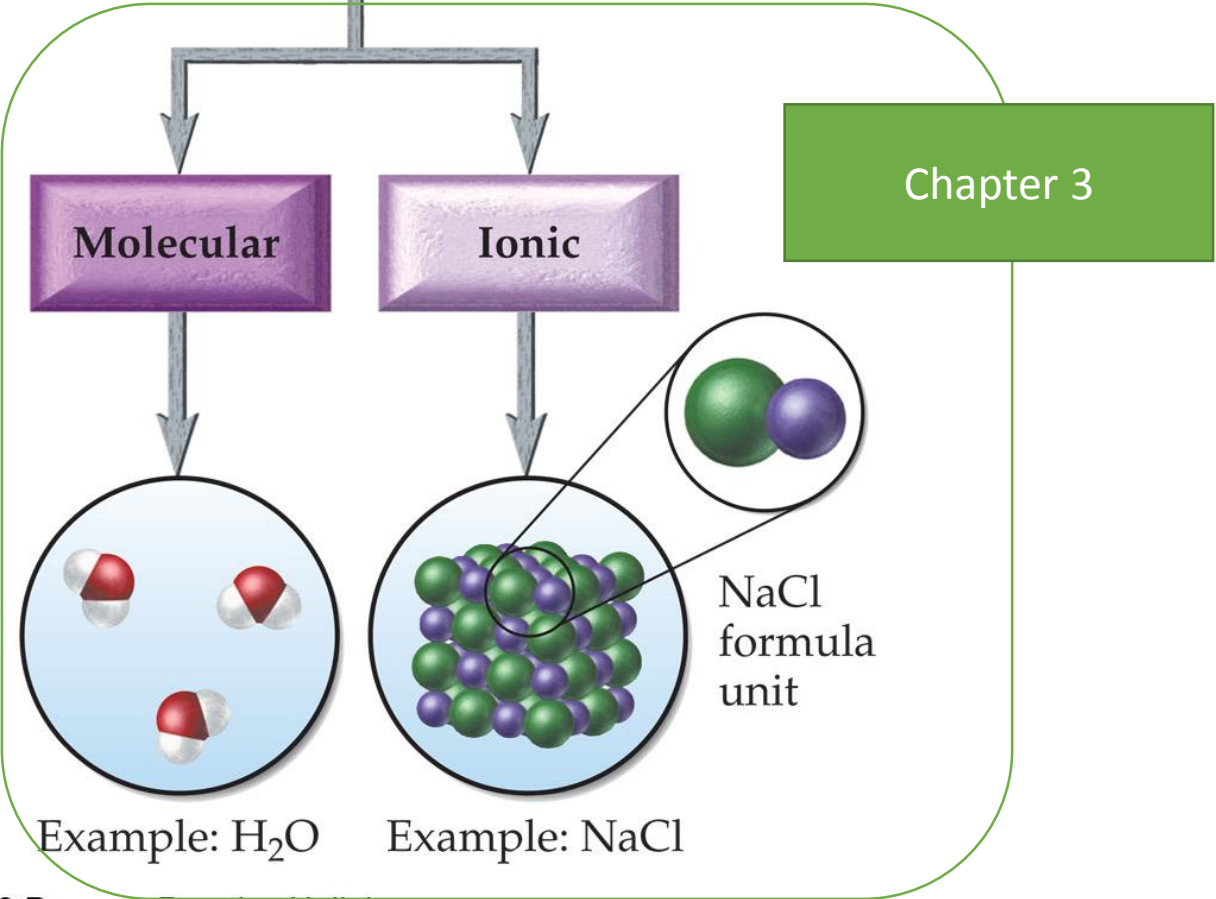


Chapter 2



Example: Ne

Example: O₂



Chapter 3

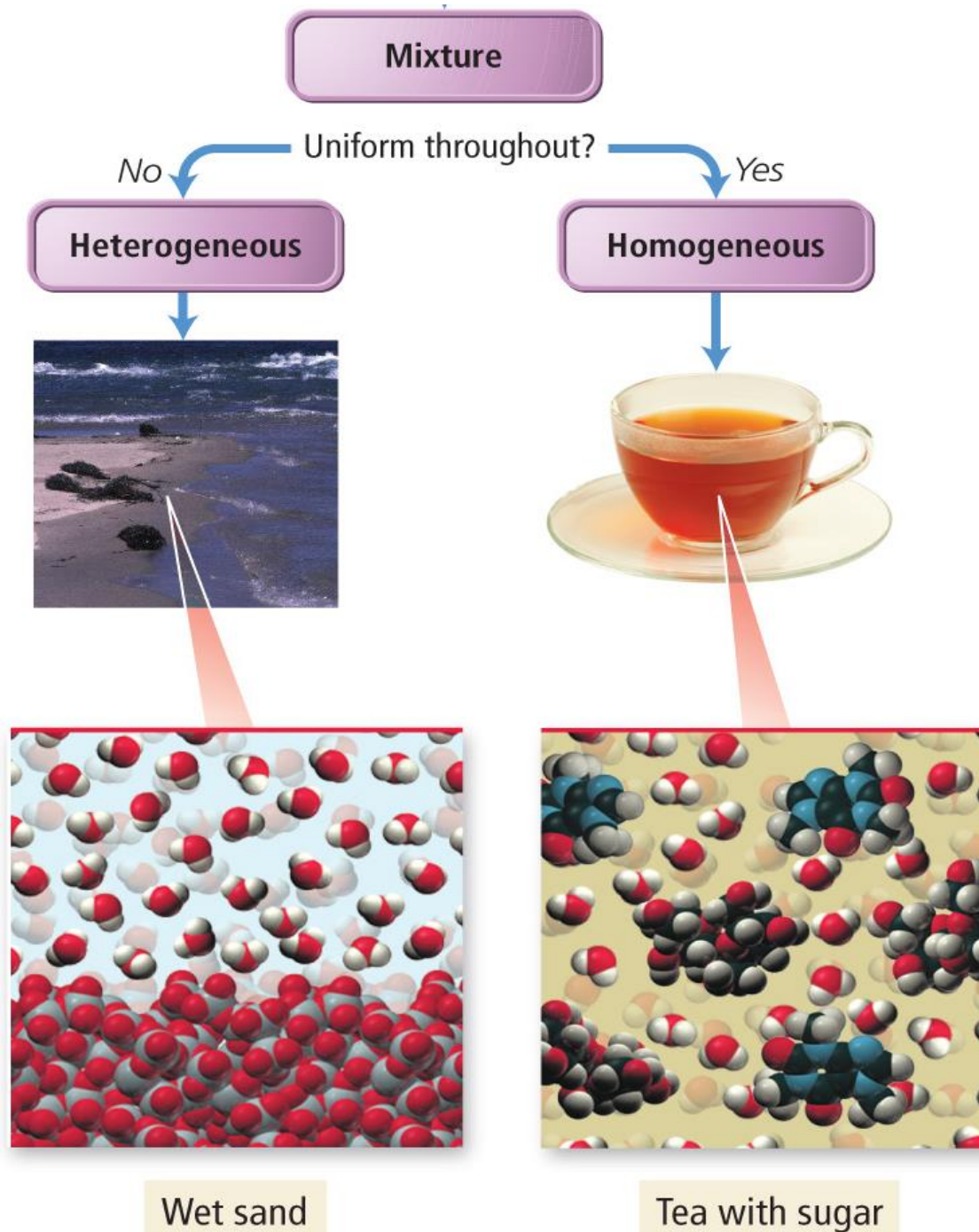
Example: H₂O

Example: NaCl

NaCl
formula
unit

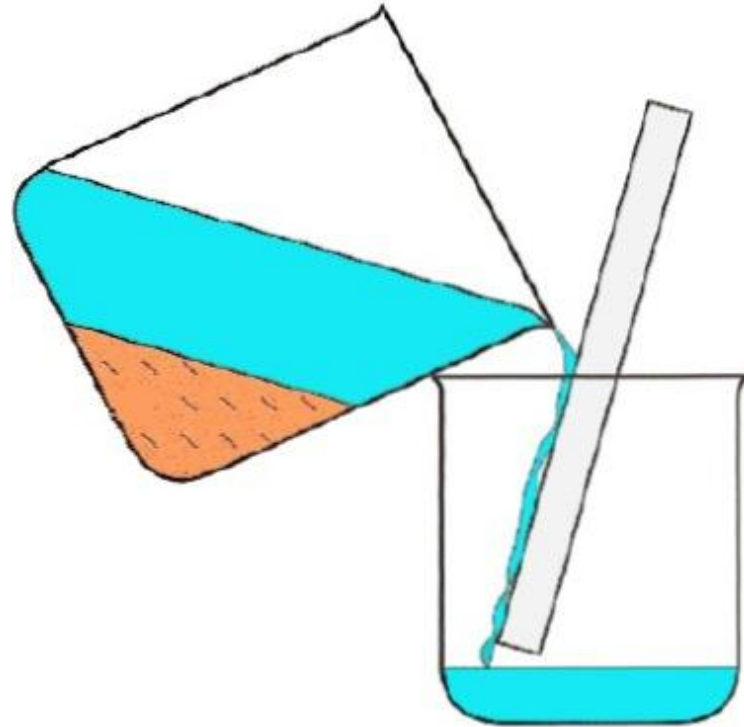
MIXTURES can be separated into multiple pure substances. This can be done through PHYSICAL means.

This means NO CHEMISTRY!
Boiling, filtering, magnets, melting, dissolving...

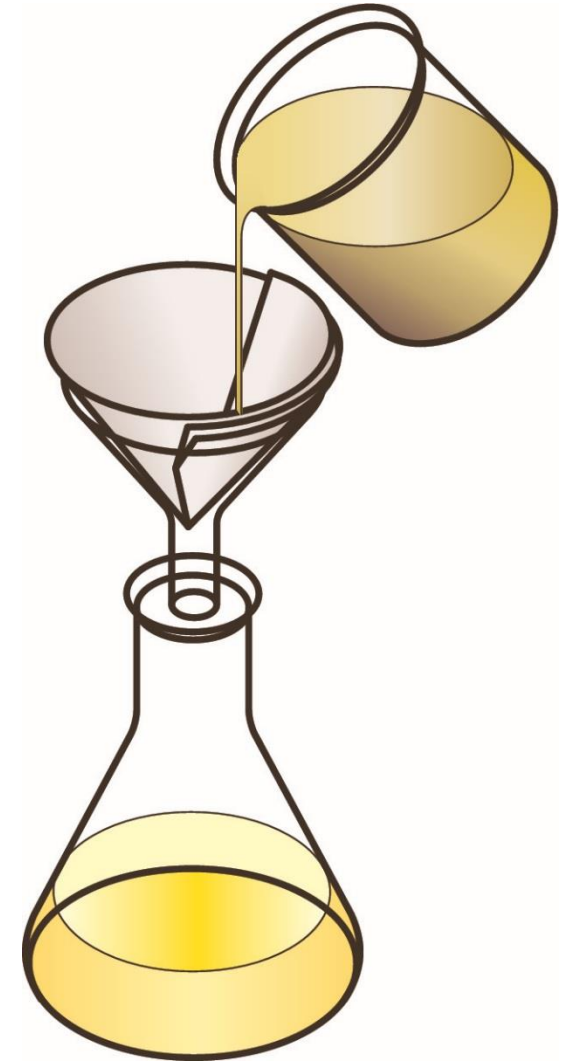


Difference in Phase

- DECANT

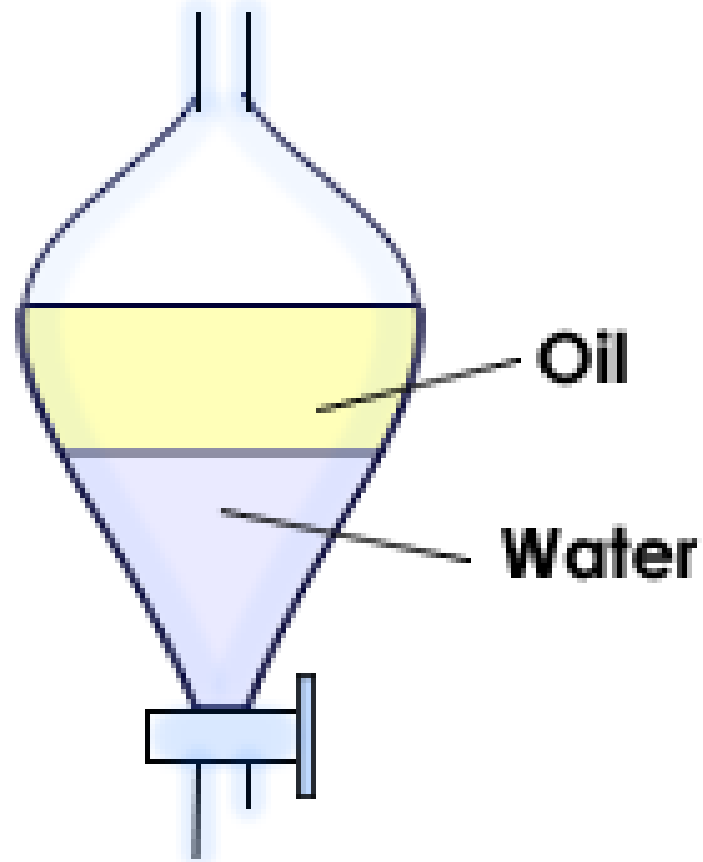


- FILTER



When the Substances differ in Solubility

- Extraction

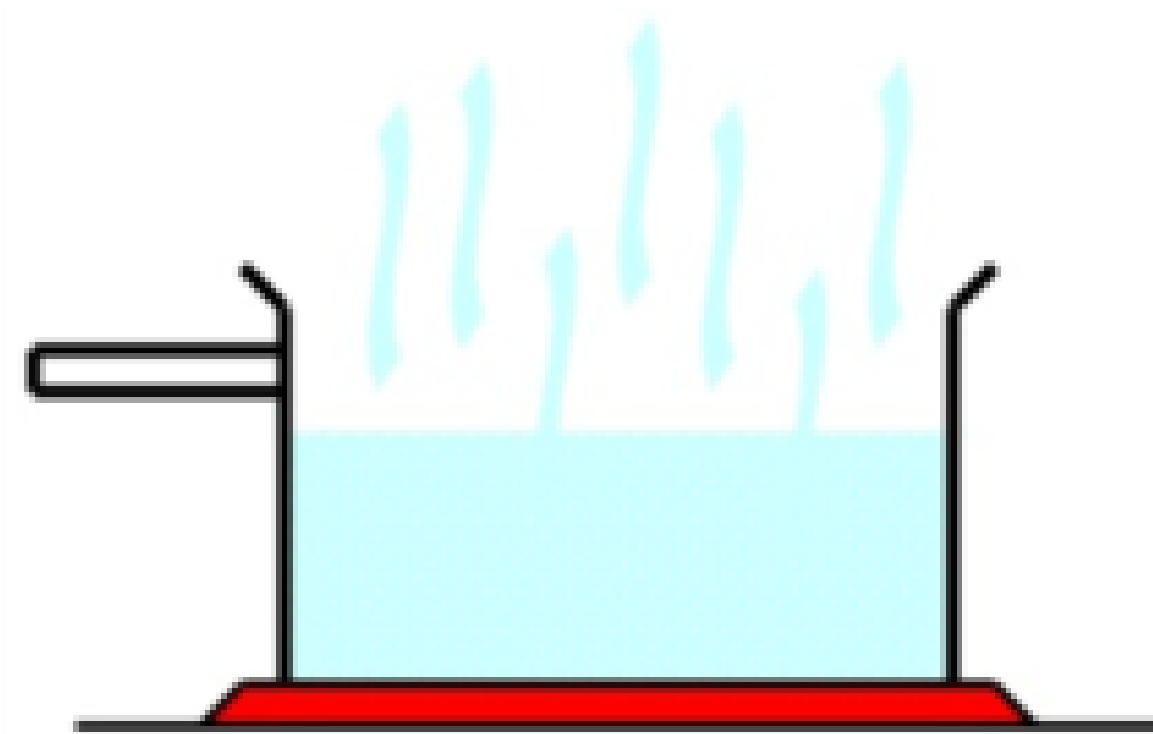


We will do an extraction today!

Salt dissolves in water, but sand does not. We will use this difference to lift the salt into the aqueous phase and remove it from the sand.

Difference in volatility

- Evaporation

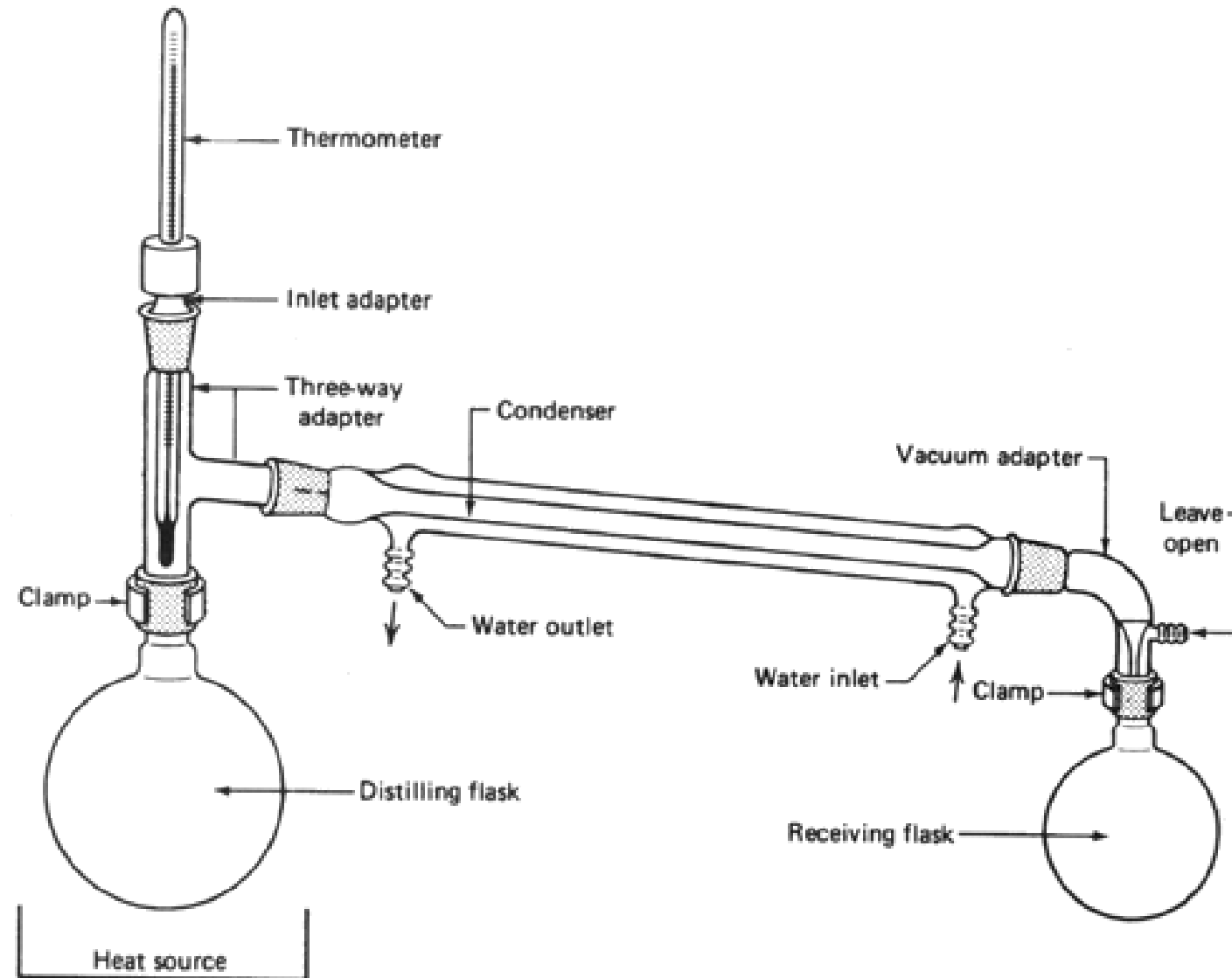


Good for separating a volatile component from a non-volatile one.

We will do this to remove the added water from the salt.

Difference in Boiling Points

- Distillation



w/w% Mass Percent

- The mass percentages of all of the components should add up to 100%.
- Mass Percent is a great conversion factor:
 - If my sample is 20% NaCl, I can write 20g NaCl = 100g sample