

Unit 6: Properties of Matter

Physical Properties

Can be observed or measured without changing the identity of the substance, such as

- Melting/Boiling points
- Density
- Color

Physical Changes

Will not change the identity of the substance, such as

- Grinding
- Cutting
- Melting
- Boiling

Extensive Properties

Depend on the amount of matter present, such as

- Volume
- Mass
- Energy content

Intensive Properties

Independent of the amount of matter present, such as

- Melting/Boiling points
- Density
- Electrical conductivity

Chemical Properties

Relates to a substance's ability to undergo changes that transform it into different substances

Chemical Changes (Chemical Reactions)

Occurs when one or more substances are converted into a new substance

All chemical reactions can be described
by a chemical equation

Example:



aluminum + bromine → **aluminum bromide**

reactants

products

Evidence of a Chemical Change

**Production
of a gas
(bubbles)**

**Formation of
a precipitate***

**Change in
temperature
(heat/light)**

**Change in
color**

***precipitate = a solid forming in solution**

Physical or Chemical Change?

The ripening of a banana

To be completed in class!

Physical or Chemical Change?

The electrolysis of water

To be completed in class!