

Chemical and Physical Properties

- * **Matter - Anything that has mass and takes up space.**
- * **Matter has observable and measurable qualities.**
- * **We use properties (PHYSICAL and CHEMICAL) to identify substances.**

Physical Properties

- * A description of a substance that **DOES NOT** involve forming a new substance

Physical Properties

- * **Qualitative physical properties:**
determined by your senses
- * **Quantitative physical properties:**
use numerical characteristics (weight, height, density)

Examples

- * Colour

- * Texture (smooth, rough)

- * Density

- * Smell

- * Solubility (dissolves)

- * Clarity (transparent, translucent, opaque)

- * State (solid, liquid, gas)

- * Luster (shiny, dull)

- * Malleability

Chemical Properties:

- * Characteristics that can only be measured by performing a chemical reaction.

Examples

- * Flammability
- * Reactivity
- * Toxicity
- * Chemical Stability
- * Reactivity with other chemicals

Chemical and Physical Changes

Types of Changes

- * A change in which no new substances are formed is called a physical change.
- * Many can be reversed (like evaporation)
- * Some cannot be reversed (like cutting sodium)
- * Changes of state are common physical changes: melting, evaporating, ect.

Types of Changes

- * A change in which new substances are formed is called a chemical change or chemical change.
- * New substances have different properties
- * Difficult to reverse

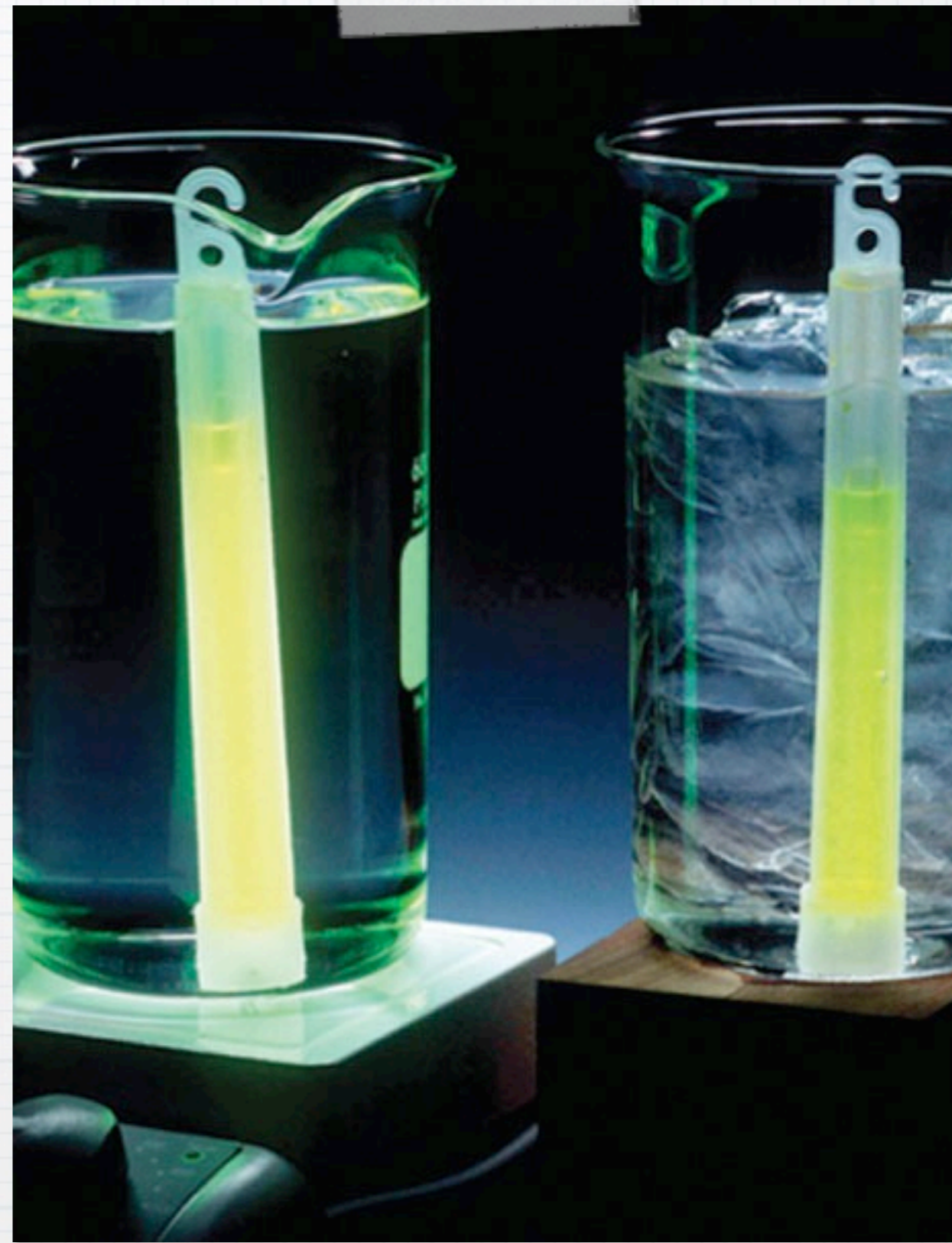
Signs of a Chemical

i) Heat produced or absorbed



Signs of a Chemical

ii) Light or Sound produced



Signs of a Chemical

iii) Colour Change



Signs of a Chemical

iv) Gas Produced (Bubbles)



Signs of a Chemical

v) Precipitate forms

