

## Unit 1 – Ch 1-2 – Density and Percent Error

### Variables in Experimentation:

- Control Group:
- Independent Variable (IV):
- Dependent Variable (DV):

### DENSITY:

- DEFINITION:
  - Formula: Unit:
  - Conversion Factor:
  - INTRINSIC Property –
    - Used to \_\_\_\_\_ a substance.
- Measuring Density:
  - REGULAR Solids:
  - IRREGULAR Solids:

### DENSITY PRACTICE:

Ex #1) What is the density of a  $10.0 \text{ cm}^3$  piece of metal with a mass of 113.4 grams? What is its identity?

Ex #2) What is the mass of ethanol that exactly fills a 200.0mL container? *The density of ethanol is 0.789 g/mL.*

Ex #3) CHALLENGE: A plane is loaded with 173,231 liters of jet fuel. If fuel density is 0.768 g/mL, what is the mass of fuel in kilograms?

**PERCENT ERROR IN DENSITY:**

- **ACCEPTED VALUE:**

- EX:

- **EXPERIMENTAL VALUE:**

- EX:

- **Percent Error Formula:**

**% ERROR PRACTICE:**

Ex #1) A student observes and measures copper. According to his results, copper's density is  $8.37 \text{ g/cm}^3$ . What is his percent error?

Ex #2) In the lab, Mr. Arul determined the density of aluminum to be  $2.85 \text{ g/cm}^3$ . What is his percent error?