

Experiment 4: DENSITY

Data Collection and Results Pages
(Show work for all calculations.)

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I. Density of Water (-1)

Room Temp: 25.2°C Correct Density of Water at this Temp: 0.9982

Reference:

<http://www.csgnetwork.com/water-information.htm>

Calculate the density of water for each trial:

access date (-0.5)

Trial 1:

8ml

(-2)

Trial 2:

10ml

(-2)

Calculate the Average Density of Water: *Note: The average value cannot have more precision than the individual values. As a rule of thumb, the average should have the same decimal places as the individual values.*

$$\text{Density} = \text{mass} / \text{volume} \quad (-2)$$
$$44.53\text{g} / 9\text{cm}^3$$
$$4.95\text{g} / \text{cm}^3$$

Calculate the Error in the Average Density: (Watch your sign and sig. fig.!)

$$\text{Error in average density } 1/2 = 0.5 \quad (-2)$$

Calculate the % Error in the Average Density: (Watch your sign and sig. fig.!)

$$0.5/9 = 100 = 5.5\%$$

(-2)

