**Method of Mixtures Experiment**

Equipment

Two 50 mL measuring cylinders, two foam cups, two thermometers, two 100 mL beakers

Method

* 1. Take 50 mL of water in a beaker. Measure and record the mass and temperature of the water.
	2. Collect boiled water from the kettle in a beaker, return to desk and measure out 30 mL into a foam cup. Measure and record the mass and temperature.
	3. Re-check the temperature of the cold water and add it to the 30 mL hot water in the foam cup.
	4. Stir well and record the final temperature then calculate the expected final temperature.

Results

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| --- | --- |
| Temperature of cold water |  |
| Temperature of hot water |  |
| Temperature of mixture |  |

Calculations

*Expected Final Temperature*

heat lost = heat gained

*Experimental Error*

Percent error is the difference between expected value and the observed value in comparison to the expected value. It is expressed as a percentage.

$$percent error=δ=\left|\frac{observed value-expected value}{expected value}\right|×100\%$$

Evaluation

How would you account for the difference between the expected and observed values?

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