

Determining the Specific Heat of a Metal for the Purposes of Identification

Introduction

Begin by stating the purpose of the lab, which was to identify an unknown metal by determining its specific heat.

The second paragraph should provide background information on the chemical concepts in the experiment. Discuss specific heat, including, but not limited to, how it is calculated. State how the specific heat of an unknown substance can be determined by comparing the heat lost from the unknown substance (the metal) to the heat gained by a known substance (water).

Methods

Use past tense, passive voice (no personal pronouns) to describe the experimental procedure. Be complete and concise. The purpose of the methods section is to describe the experiment in such a way that it could be repeated and generate similar results, without the use of any external sources.

Results

Always provide an account of your visual observations during the experiment, not just the numerical data. For example, state the appearance of the unknown metal, as this may help corroborate your conclusion. The data should be tabulated.

Discussion

Summarize your observations and data. Suggest an identity for the unknown metal based on its specific heat. Calculate a percent error to indicate the accuracy of your results. Suggest possible sources of experimental error, how they may have affected the results, and how they might be minimized in future experiments.

$$\text{Percent Error} = \frac{|\text{experimental value} - \text{accepted value}|}{\text{accepted value}} \times 100$$

References

Lab 3: Measuring Heats of Reactions. (2020). In *Goodwin College Chemistry Lab Student Manual*. eScience Labs

Using correct APA format, cite all sources of information that were used to write the report.