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| **Group Name:** |  |

**Experiment 5: Calorimetry**

**Design Proposal**

## **LibreTexts page:** [5: Calorimetry](https://chem.libretexts.org/Courses/University_of_Arkansas_Little_Rock/Chem_1402%3A_General_Chemistry_1_(Belford)/Laboratory/05%3A_Experiment_5_-_Calorimetry)

## **(**<https://chem.libretexts.org/link?214682>)

**This worksheet is to be used for the** [**Experiment 5: Calorimetry**](https://chem.libretexts.org/Courses/University_of_Arkansas_Little_Rock/Chem_1402%3A_General_Chemistry_1_(Belford)/Text/5%3A_Energy_and_Chemical_Reactions/5.6%3A_Calorimetry) **in the class LibreText. Each group will create a proposal to determine the calorimetry constant.**

**At 11:30 AM the breakout groups will adjourn and each group will present their proposal to the class.**

**Supplies**

* **100ml Graduated cylinder (TC)**
* **Plastic funnel**
* **Calorimeter**
* **Two thermometers**
* **Hot and cold water**

**Experimental Design Parameters you need to account for in your proposal**

* **Surrounding conditions**
* **Temperature of the water**
* **Spills**
* **Accuracy of the graph**

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| Role | Name |
| **Manager** |  |
| **Theoretician** |  |
| **Engineer** |  |
| **Analyst** |  |
| **Spokesperson** |  |

1. **Introduction & Overview**
   * Team works, Theoretician is the scribe, but everyone should contribute
   * Write 2-3 sentences for this section and describe what calorimeter constant is and why you need to use it in your calculations.

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1. **Experimental Design**
   * Team works, Engineeris the scribe, but everyone can contribute
   * Show how you are going to obtain your data
   * Show how you are going to minimize the potential errors

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1. **Error analysis of the design proposal** 
   * Team works, Analyst is the scribe
   * Explain how each of the errors that you discussed in part 2 would affect your results and conclusions. This **must state** how the error will cause you to overestimate or underestimate the calorimetry constant.

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1. **Safety evaluation** 
   * Team works, Manager is the scribe
   * Define protocols that ensure that this experiment will be performed in a safe and prudent manner.

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**5. Presentation**

* + Team works, Spokesperson is the scribe
  + Prepare a brief 3 minute presentation of your proposal.

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