

Flame Temperature --- A Really Hot Lab

Question: What is the Temperature of a Bunsen Burner Flame? (Come on admit it – you’ve been wondering about this and you know it – don’t deny it!)

Purpose: To use our knowledge of thermochemistry to determine experimentally the temperature of a Bunsen burner flame.

Materials: calorimeter, water, bolt (Fe), Bunsen burner, nichrome wire, crucible tongs, temperature probe

Procedure: You need to determine your procedure. Note: do three trials.

Data: You need to determine what data you must record. Do not forget anything!

Calculations: Clearly show all of your work. Label each step and use appropriate units.

Error Analysis: Accepted value will be the average value as determined by the class. Calculate your percent error and discuss possible sources of error.

Conclusion: Write a conclusion that describes the logic used to determine the temperature of the flame.