Chemistry 221 Lab Final Exam Study Guide

The **Chemistry 221 Lab Final** consists of 6 questions which are all "show your work" and which relate to the labs we have completed this term. Two of the questions involve actual lab procedures to complete.

Following the directions of the Lab Final will be very important…. make sure you read each question carefully before completing them.

Bring a **calculator, safety glasses** and a **pencil** to the Lab Final. The time and date of your Lab Final will be arranged with your instructor; if you miss the Lab Final for any reason, your score will be zero. No notes will be allowed, and students will work individually (and not in groups). We will meet in our lab room at the appointed date and time.

To be ***successful***, you should be able to:

- Calculate the **density** of a substance given appropriate data and/or apparatus
- **Titrate** a solution to determine the **percent by mass** of an ion (i.e. *chloride!*) in a sample
- Know how to **convert chemical names to formulas**
- Know how to **convert chemical formulas to names**
- Determine the **parts per thousand** (ppt) for any given data
- Determine the **percent error** for any experiment
- Know the **solubility guidelines** and be able to write **net ionic equations**
- Know the **three "double displacement" types of reactions** discussed in lab
- Determine the **specific heat** of a metal using a calorimeter
- Use **Hess's Law** to calculate a standard enthalpy of reaction
- Know how to find the **percent potassium chlorate** in a mixture