

General Chemistry 131 Laboratory Practicum

STUDY GUIDE

Students will be responsible for the following techniques and information.

1. Students will be required to properly read and record data from several pieces of glassware and/or equipment used in the lab, such as, a balance, graduated cylinders, a buret, a pipet, a thermometer.
2. Determination of a solid density using the method of displacement.
3. Determination of a liquid density. Students will be responsible for the correct usage and reading of a 10 ml pipet.
4. Determination of solubility values for a liquid and a solid.
5. Determination of the melting point for a solid unknown. This includes the proper assembling and usage of a hot water bath and melting point apparatus and lighting a Bunsen burner.
6. Determination of the boiling point for a liquid unknown. This includes the proper assembling and usage of a hot water bath and boiling point apparatus and lighting a Bunsen burner.
7. Performance and observation of a series of reactions. Students will be responsible for correct recording of observations and writing molecular, complete ionic and net ionic equations. (Review pages 80-87, 124- 142 , Brown and LeMay, 11th ed.) Students will also be responsible for proper use of the solubility rules table and operation of a centrifuge.
8. Standardization of an unknown NaOH solution by titration. Students will be responsible for the proper usage and reading of a 25 ml buret.
9. Given a computer generated graph and the associated data table, students should be able to properly label the graph as specified. The graph will then be used to determine requested information.
10. Basic laboratory calculations used throughout the semester, such as,
 - Determination of molarity from titration data
 - Conversion of grams to moles and vice versa
 - Determination of average deviation
 - % composition in a mixture
 - Determination of % yield
 - Determination of a limiting reactant
 - Using a computer generated graph to determine temperatures needed for enthalpy calculations.

**A CALCULATOR AND PEN/PENCIL WILL BE REQUIRED!
PROGRAMMABLE CALCULATORS WILL NOT BE ALLOWED. SHARING OF
CALCULATORS WILL NOT BE ALLOWED.**