

Organic Chemistry Calculations Lab

Purposes of this lab

To review the units of mass, volume, number, density, molecular weight, molarity, percent composition, and molar equivalents.

To practice calculations involving these units.

To practice the calculations needed to set up and to evaluate a chemical reaction in the lab.

Introduction

Organic chemistry does not involve nearly as much math as general chemistry. However, some basic calculations are needed in the laboratory in order to determine how much of a chemical to use and how successful a reaction or isolation of a natural product was. You should be familiar with most of these calculations from general chemistry, but you may need some review. This lab will review these calculations, and show you how we will use them before and after a reaction.

Procedure

Before you come to lab:

- Print out a copy of this lab and read through the procedures found below. Put it in your binder and bring it to lab.
- Print out a copy of "Performing Calculations," found on the course website, and read it thoroughly. Put it in your binder as well so that you can refer back to it throughout the year.
- Complete the pre-lab questions on-line before the deadline. Note that you have up to three tries, and only your highest score will be counted.

During lab:

- Work in your group to fill out the Calculations Worksheets that you will be given. Make sure that you understand each calculation yourself, rather than relying on the understanding of others in your group. If you understand the problem but someone else doesn't, don't go on until everyone is together. Participate in the review of each one as we go.
- Complete the lab simulation on your own. Use the information from the calculations worksheets to help. If you have questions, ask the instructor, not your classmates.

After lab:

- Finish any of the worksheets or lab simulation that you weren't able to complete in class. Turn in the lab simulation.