

Laboratory Notebook

Instructions

This Laboratory Notebook is an important scientific tool and has been assigned to you so that you may keep a complete, careful, chronological record of your work.

The purpose of each entry in your laboratory notebook is to provide a complete record of your work, one that would enable one of your coworkers to repeat, if necessary, exactly what you did and secure the same results. You may find these instructions helpful in preparing entries which will meet this requirement.

1. Plan your experiment carefully, and plan the presentation which will best record the data you expect to secure. Data on each page must be limited to one specific experiment.
2. After the title and experiment number, date and the objective have been filled in, your entry should record 1) the purpose of the experiment 2) materials used and their quantities 3) any apparatus used in the experiment 4) the procedure and manipulation e.g., times, temperature pressure, pH, etc... and 5) the results.
3. All entries must be made in ink. Erasures are not permitted. If a mistake is made, draw a line through the erroneous material and make a corrected entry immediately following.

In the chemical research laboratory, pay attention to the following details:

- Record all information necessary to unambiguously identify chemical reagents and other research materials e.g., instruments, including the source (manufacturer), lot number, purity (concentration) and type of container.

- Use proper names for labware and state the material used in its construction e.g., pyrex flask.
- State the procedure used to clean and prepare glassware or other vessels.
- In what sequence were the reagents mixed? How precisely were reagents measured?
- Was the reaction heated or mixed? How?
- How long did the reaction take?

Drawings/ Graphs

A drawing can save you several pages of writing and often conveys better sense than words alone. Common lab apparatus need not be illustrated.

Plotting data by hand is becoming increasingly rare. Whether you plot your data yourself or with the aid of an electromechanical contraption, the following features belong on every one of your completed graphs.

1. Title, date, experiment
 2. Label axis (tick marks, dimensions)
 3. Define plotting symbols
 4. Include error bars (If you know the error of your experiment... and you should)
 5. Keep it readable
- Use dashes and/or dots instead of different colors.

Don't spend time making it pretty, your notebook should be simple and to the point.