

# CHEMISTRY LAB REPORT: QUICK REFERENCE CARD

## Introduction to Chemistry Lab Reports

This Guide is designed to be used in preparing laboratory reports for all general science and engineering courses at IIT. It introduces some standard conventions and rules for writing reports of professional quality. In addition, it describes the structure of a good laboratory report, outlines the different sections of the report, and explains the need for each of them.

## Writing Guidelines for Subject & Verb Tense

Subject is always *impersonal*. Avoid any reference to a person (e.g. I, we, the man.)

Verb tense is always *passive*, which means a verb phrase consisting of some form of be (is, was, etc.) plus the past participle (verb used as an adjective).

In technical and scientific articles, especially in the presentation of experimental methods, researchers use the passive voice as a conventional means of impersonal reporting. The passive voice allows them to avoid calling attention to themselves and to omit reference to any subjective thoughts or biases they might have brought to their work. The effect is to lend the article the air of objectivity.

### Examples:

YES: The equipment was set up before the experiment was begun.

NO: The TA set up the equipment before we began the experiment.

YES: Distance was calculated using the data from table 2.

NO: We calculated distance using the data from table 2.

## Guidelines for Tables, Graphs & Equations

### Tables, Graphs & Equations:

They must have:

- An introductory sentence to explain the purpose
- Additional verbal description to explain the table, graph or equation
- Explanatory labels—consistent format and sequential throughout the report

Comprehensive descriptions of tables, graphs and equations will demonstrate to readers that the author is more than just a technician plugging numbers.

### Example:

Equations should be embedded in the text of the report and formatted using the "Equation Editor" tool on your word processor, as in the following example:

Using the results listed in Table 1, a percentage difference was calculated for each set of readings taken by the two different instruments (the CMM and Vernier Calipers). Equation 1 was used to calculate this percentage difference. It can be written as:

$$E = \left[ \frac{m_1 - m_2}{\Delta m} \right] \times 100$$

Equation 1

where:

E is the percentage difference;

$m_1$  is the measurement by CMM;

$m_2$  is the measurement by Vernier Calipers

and  $\Delta m$  is the difference of the two instruments.

