

**PURPOSE**

Scientists write lab reports to share the findings of experiments and studies with other researchers. A good lab report does more than describe the experiment; it illustrates the writer's understanding of the principles the experiment examined and analysis and interpretation of the findings. Most researchers use a common format (IMRAD) that allows readers to follow the research and its findings quickly; however specifics may vary based on the scientific discipline or your instructor's instructions.

**IMRAD – MAJOR PARTS OF A LAB REPORT**

Title Page – includes the name of the experiment, the participants, and date (Other elements may be required by your instructor.)

Abstract – describes the purpose, key findings, and conclusions for the experiment (100-200 words)

**Introduction**

The introduction introduces the problem, provides necessary background and theory, explains why the experiment is important, describes specialized equipment, and states your objectives. Some lab reports include a brief literature review as part of the introduction.

**Methods/Materials**

The methods section explains how the experiment was conducted and provides an accurate, complete list of any equipment used. It describes your process in chronological order. Make sure the details you describe are relevant and explain the reasons for the procedures. Other researchers must be able to repeat your findings using the same process you used. The purpose of this section is to provide readers with enough detail so that they can evaluate the validity of your conclusions.

**Results**

The results section provides a straightforward description of the outcomes of the experiment. You do not offer analysis in this section but instead provide detailed reports of data supplemented by graphs and tables.

**And**

**Discussion**

The discussion section explains the outcome of your research and its significance to your field. Examine relationships that you observed in your experiment, why they happened, and how they relate to your purpose. You address limitations of your study and any errors you made. In your concluding paragraphs, restate the purpose of the experiment, your final results, and their relevance to the field. You may also make suggestions for future studies.

Reference Page – includes sources for background information and any figures you did not create.

**Hints**

- Write the abstract after you finish the report.
- Use past tense to describe the work you already completed in the experiment. Use present tense to describe things that still exist (theory, equipment, your report).
- Ask your instructor if you should use first person (I and we). In the past, the scientific community preferred for researchers to avoid using first person because researchers are not the focus of research.
- Ask your professor if you should use the passive voice (the chemical was added to the solution). Using the passive voice helps researchers take themselves out of their experiments.

Both first person and active voice are becoming more widely accepted in scientific writing: I added the chemical to the solution.