English for specific purposes challenges: writing laboratory reports

Laboratory reports are written for several reasons. One reason is to communicate the laboratory work to management. Another reason is to archive the work so that the work will not have to be done in the future. There is a commonly used organization for laboratory reports:

Abstract. The abstract presents a synopsis of the experiment. It should be intelligible and complete in itself. The opening sentence or two should, in general, indicate the subjects dealt with in the paper and should state the objectives of the investigation. The body of the abstract should indicate newly observed facts and the conclusions of the experiment. Its optimum length should not exceed 200 words.

Introduction. The Introduction identifies the experiment to be undertaken, the objectives of the experiment, the importance of the experiment, and overall background for understanding the experiment.

Procedures. The Procedures often called the Methods discusses how the experiment occurred. Historically, laboratory procedures have been written as first-person narratives as opposed to second-person sets of instructions. Because your audience expects you to write the procedures as a narrative, you should do so. You should give the audience enough information that they could replicate your results.

Results and Discussion. In discussing the results, you should not only analyze the results, but also discuss the implications of those results. Pay attention to the errors that existed in the experiment. One important way to present numerical results is to show them in graphs.

Conclusions. The objectives mentioned in the ‘Introduction’ are examined to determined whether the experiment succeeded.

Appendices. Appendices appear in laboratory reports presents information that is too detailed to be placed into the report’s text.