Drury University
Inorganic Chemistry (CHEM238L)
Synthesis and Conductance of Some Ionic Substances
Guidelines for Formal Report

This document contains the guidelines for the Synthesis and Conductance of Some Ionic Substances formal report. This report is worth 200 points and is due December 7, 2012.

The more closely these instructions are followed, the better the grade will tend to be for the report. However, if you believe you have a better approach to the report, feel free to consult with the instructor.

The following sections of this document are sections expected to be in the formal report. You will notice that there are no fixed page length requirements. This is intentional. Different people have different ways of discussing and/or reporting experimental results and calculations.

The absence of page length requirements should not be taken as license for poor writing. Excessive misspelling, poor grammar, and/or awkward sentence structure will result in less than desirable consequences.

At the end of this document you will find a grading rubric. This sheet will be used by the instructor in determining the grade for the report. Feel free to consider this while preparing your report.

Cover Sheet:

The cover sheet for the report should be a separate sheet from the rest of the report. It should include a title for the experiment, the name of the person submitting the report, the name of the group partners, the date of submission, and the course title.

Abstract:

This is a very brief paragraph describing the experimentation and qualitatively the results. One purpose of an abstract is to give a potential reader of the report an indication of whether the document is of interest.

Introduction:

This portion of the report should be considerably detailed. In this section, the underlined principles, theories, and concepts are addressed. Additionally, this portion of the report should serve to give the reader a sense of the usefulness of the experimentation.

Actual experimental details should be avoided. However, giving general indications as to techniques is acceptable, especially if a new or unusual technique is employed.

Referenced statements or ideas should be properly identified and the sources inserted into the bibliography. The preference of this instructor is to use superscripted numerals.

For this report, the following items will be included in an excellent report:

- A brief description of the reaction, including the balanced chemical equation.
- A brief explanation of a coordination compound in the context of the substance in this expriment.
- A brief explanation of conductance and the equation used.
- A brief account of this experimentation's usefulness in teaching in this course.

The form of this section should be in paragraphs. Numbering or bulleting your responses to the above is not appropriate.

Procedure:

This section is a detailed account of what you successfully did during experimentation. It is not an idealized description of what was supposed to happen nor is it an account of someone else's work.

This section should also be in paragraph form. The text should be written in the past tense passive voice. It is an account of the past, of a procedure that could conceivably be done by anyone.

It would be helpful for this particular report to include a diagram of the apparatus. Referencing the diagram is quite acceptable. Using the term "figure" is this instructor's preference.

Results and Calculations:

In this section, the results of the experimentation are reported. Any calculations to determine desired values are also reported here. Yields, and other determinations are also presented here.

It is in this section that work is presented. Show the mathematical formulas employed. Be sure that proper significant figures are used.

Conclusions and Discussion:

This final section of the report is the capstone section. It is here that you demonstrate that you understood why the experimentation was done and the meaning of the results. This section should be in paragraph form and should demonstrate quality writing skills.

For this experimental project, well written reports will include:

- The identity of the obtained product and the percent yield.
- A statement about the success of this experiment.
- Reasons you believe you did or did not succeed in obtaining the desired material.
- A brief explanation of the conductance portion of this experiment.
- A brief statement concerning better or further experimentation.

Do not be afraid to repeat information from other sections of the report. This should be especially true of the Results and Discussion section. Repeating information is often important in describing your point(s).

This section must not include comments on how you "felt" about the experiments. It should also not contain your opinions about what you learned or how well you like the instructor.