

Laboratory Work in Chemistry 236

This year full lab reports are to be submitted for only the two elective experiments. All six experiments will carry a point value of 25 for performance, results, and analysis; the two full reports are worth another 15 points each. All members of the team receive the same grade. In *all* cases, clarity of presentation is important: If the grading TA has to scratch his or her head trying to figure out what you have done, you are losing points!

The 25 points for all experiments are broken down as follows:

- (10) **Performing the experiment.** Teams can lose some of these points by (a) running late, (b) failing to follow proper safety rules, (c) failing to follow proper notebook procedures, and (d) failing to properly clean up after they complete their work. Under (a) is included the TA's judgment of your preparedness for the experiment, from, *e.g.*, not knowing simple procedures well spelled out in the Class Pak and PowerPoint presentation. Points could be lost under (b) by, *e.g.*, scribbling data on loose sheets of paper, not working in ink, not getting the TA's initials on checkout, and failing to submit the master notebook for the experiment.
- (15) **Results and Analysis.** Includes relevant figures and tables, key results, and data and error analysis. Figures should include captions designed to make them self-explanatory. Tables should include a short title and should present all key results obtained in any sort of repetitive fashion, *e.g.* information about different solutions studied or analyzed. Do NOT print out the very long tables of data logged on the computer by the LabWorks interface or UV-VIS spectrophotometer. However, the relevant files should be identified by name (and should be left on the computer under that name). Similarly, data entered in the notebook may not need to be presented in a table, but they should be easy to find in the notebook if needed to check your analysis.

All figures and tables should be numbered in sequence (*e.g.*, Figure 1, Figure 2 ...; Table 1, Table 2, ...). This facilitates cross-referencing information included in captions to other figures and tables. In the case of reports, figures and tables need not be inserted in the text; they may be appended at the end, in order.

In general, results will be assessed for completeness and quality and the correctness of your analysis. Typically error analysis will count for 2-4 points — smaller in those cases where it is done automatically through least-squares fitting, larger in other cases.

The two Lab reports should be printed documents, double-spaced. However, equations may be entered neatly, by hand. (This is much to be preferred over printed crude "computereze.") For guidance on the preparation of reports, see the sample report given on pp 13-23 of your lab text. The report credit breakdown will be roughly as follows.

- (3) Introduction. Summary of the point of the experiment and theoretical background, including key equations, numbered. Should seldom exceed 1 page in length.
- (1) Procedures. What you did in the lab. Should rarely exceed $\frac{1}{2}$ page. If you followed the procedures in the Class Pak or text exactly, a single sentence may suffice. More often, the Class Pak suggests ranges (*e.g.*, for concentrations, times); here is where you would provide more specific information in such cases.
- (5) Results and Discussion. Text to accompany Results and Analysis, typically ~2 pages.
- (3) Conclusion. Summary of results and comparison with theory and literature. Typically $\frac{1}{2}$ – 1 page.
- (1) Cited References. Not just "See Class Pak"! See p 23 in your lab text for how to list references. Also note how to cite these in text, as discussed about $\frac{2}{3}$ down this page.
- (2) Overall quality assessment. "Is this report neat, clear, and easy to follow, or do I have to dig and hunt around to find out what this team actually did?"

TA Office Hours:
(SC5212)

Becky — 12-1 W
Jared — 4:30-5:30 R

Ian — 4:30-5:30 T

(If you are unable to use these periods, contact us by email to make other arrangements.)