

# Break-out Session #3

## Measurement Labs

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*of*

Intimate group

Students driven by marks, so need to mark them

Quant lab – based solely on results

First year – don't mark on accuracy

Org labs – lab practical exam

Feedback vs. Assessment

Importance of TA's talking to students

- TA assessment of students

*5/5 Independent student, excellent skills and knowledge, good time management, willing to help lab mates, easy to work with."*

- TA assessment of lab notebooks

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## Measurement Labs

Notebooks will be graded according to the considerations outlined in the preceding section. In addition the following specific considerations apply:

1. All pages numbered and dated, and the table of contents complete.
2. Title and original sample tag included for every analysis.
3. Data recorded directly into notebook, in ink and on the right-hand side of the page only.
4. Data for replicate samples aligned in parallel columns.
5. No erasures, whiteouts, recopied data, or pages removed. Avoid the possibility of chemical spills on the lab notebook, which may result in data being obscured or lost.
6. Sample calculation included, including molecular weights used.
7. Q-test calculation included where applicable.
8. Average and standard deviation (plus median and range if required), properly calculated and reported for each analysis. The value reported for grading must be clearly identified.
9. All requisite graphs (calibration plots, Fe-bipyridine spectrum) present, correctly labeled and identified and all necessary computer output taped or stapled into book. Least-squares calculations included where appropriate. Graphs can be done using pencil.
10. Grade received shown for each analysis, along with the results of a follow-up report if required. Indicate labs for which a grade has not yet been received.
11. Representative chart traces or instrument printouts taped or stapled into notebook.
12. Calculation of least-squares results for determination of trace iron (Ch. III).
13. Calculation of theoretical plates, resolution and capacity factor for determination of benzene (Ch. X).