

Report Guidelines for Week 2 of the Aspirin Experiment (Experiment 4b)

Pre-lab MUST be written inside your lab notebook

(I) On-line Technique Videos For This Experiment

Click on the title below to download the video (require [Real Player](#))

- (1) [Laboratory Safety](#) (this video was shown on the first day of the lab)
- (2) [Melting Point Determination](#)

If you have trouble downloading the videos, go to the following Web site and click on the appropriate title to download the video.

<http://oid.ucla.edu/Webcast/Chemistry/>

[Guides for Writing Lab Reports](#)

(II) Pre-lab Report Guidelines (Week 2 ONLY)

- (i) Title
- (ii) Reference of procedures
- (iii) Introduction
- (iv) Procedures (flow chart format) (see 57 under week 2)

Note: only construct procedural flowchart for “Titrimetric Analysis of the Acid in Aspirin” & “Melting Point of Aspirin”.

No need to construct procedural flowchart for “Mass Spectral Analysis”. No need to construct flow chart for procedures under “Week 3”

- (v) MSDS information

The following chemicals will require you to use the MSDS database on the Web (see Lecture Syllabus):

Aspirin

You should record the following MSDS information in your notebook for the chemicals listed above.

(Printouts directly from the Web pages will NOT be accepted!!)

- (a) Product Name
- (b) Chemical Formula
- (c) Formula Weight
- (d) Melting Point; Boiling Point and Density
- (e) Health Hazard Data (**summarize in your own words**)

(f) Spill and Disposal procedures (**summarize in your own words**)

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(II) Pre-lab Report Guidelines (Week 2 ONLY) (Continued)

(vi) Pre-lab study questions (**Must show all work for FULL credit**)
Complete ALL problems under week 2 only on p.56.

(vii) Data/observations (start a new page for this section)

Set up tables but leave blank. You **MUST** record all the observations into your lab notebook during your lab sessions. You will **NOT** receive any credit for your lab technique if you only record the weight of the chemicals for this experiment.

Postlab Report Guidelines for Aspirin Experiment (Part 2)**This is an INDIVIDUAL Report**

Post-lab report **MUST** be written inside your LAB NOTEBOOK (except for graphs).

(A) Abstract - summarize results and outline the lab technique that you used in the lab to purify and analyze the final product.

(B) Data / Observations (see p.59 under Analyses)

- Orderly record of data
- Data tables should have proper titles/labels

(C) Data Analysis (MUST SHOW ALL WORK FOR FULL CREDIT)

- Calculate the % recrystallized yield
- Calculate the average % purity from all the trials of your titrations.

(D) Error Analysis (MUST SHOW ALL WORK FOR FULL CREDIT)

NOTE: Refer to chemistry 14BL lecture guide on errors propagation or your post-lab report #2 & part 1 of the vinegar titration experiment.

- Calculate the % inherent error in % purity for **ONE** of your trials. You **Must identify each term in the error analysis.**

(E) Conclusions

- summarize results (again)
- Based on the value of the experimental melting point (as compare to literature value), what can you conclude in terms of the purity of the product? Explain.

Note: Read pages 93 – 102 in “Techniques in Organic Chemistry by Mohrig and others” for concepts in melting point theory.

- If your % purity is greater than 100%, explain why.
- If your % purity is less than 50%, explain why.