

Experiment #11 (Part 1) Synthesis and Analysis of Iron oxalate

Pre-lab Report Guidelines for Iron Oxalate Experiment
Pre-lab Report MUST be written inside your lab notebook.

IMPORTANT: Make sure that you follow the proper laboratory safety protocol (refer to the course syllabus) BEFORE going to the lab. You will be dismissed from the laboratory if you do not follow the proper safety protocol.

Pre-lab Report Guidelines

- (i) Title of the experiment
- (ii) Reference of procedures
- (iii) Introduction - summarize the goal(s) for this part of the experiment as well as any techniques (including any synthetic; analytical and/or purification techniques) that you will be using in achieving such goal(s).
- (iv) Procedures for **week 1 (or period 1) ONLY** in flowchart format
- (v) MSDS information (*Refer to the MSDS handout on how to access the MSDS site*)

The following chemicals will require you to use the MSDS database on the Web (refer to the MSDS handout):

Oxalic Acid (1M) and Ferrous Ammonium Sulfate

Note: In MSDS, select the site that gives you the MSDS information closest to the concentration listed above for each individual chemical. 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 (also known as specific gravity)
- (e) Health Hazard Data (**summarize in your own words**)
- (f) Spill and Disposal procedures (**summarize in your own words**)

(vi) Pre-lab report study questions (Must show all work for FULL credit)

Complete **ALL** study problems under **period 1 only**. For question #1, refer to reaction #1 on page 98 when finding out the limiting reagent. *Instead of using $FeSO_4 \cdot 6H_2O$, use $(NH_4)_2Fe(SO_4)_2 \cdot 6H_2O$ for your calculation.*

For question #2, construct the time-line only for part 1 of the experiment. You may combine it with your procedural flow chart (refer to item (iv) above).

(vii) Data/observations (Start a **NEW** page for this part)

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.

Experiment #11 Post-lab Report Guideline for Iron oxalate Experiment (Part 1)**This is an INDIVIDUAL REPORT**

Refer to the post-lab report due date listed on the lab schedule
Post-lab report MUST be written inside your lab notebook.

(A) Responsibilities

In an organized manner, record the tasks being performed during the experiment and the assignment of responsibilities for **EACH** of the group member.

(B) Abstract

Summarize results and technique used in this part of the experiment. Also, include the objective for this part of the experiment.

(C) Data and Observations/ Synthesis (See p.102 in your lab manual)

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

Record all the weights of materials that you used and products recovered.
Provide observations for each step in the synthesis and descriptions of your products.

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

Calculate the % crude yield of FeC_2O_4 that you obtained.

(This is very similar to what you did in the pre-lab study question)

(E) Conclusions

Summarize all the results

What can you conclude about % crude yield that you obtained from this experiment? Explain.