

Isolation of Chlorophyll and Carotenoid Pigments from Spinach

Pre-lab report must be written inside your lab notebook.

IMPORTANT: Make sure that you always follow the proper laboratory safety protocol (refer to the course syllabus) BEFORE going to the lab.

Note: The experimental procedures for this assignment are provided as a handout.

(I) On-line Resources For This Experiment

[Techniques in Thin Layer Chromatography](#)

[Chlorophylls and Plant Pigments in Photosynthesis](#)

(II) Pre-lab Report Guideline

- Title of the experiment
- A reference identifying the procedure handout
- A short introduction summarizing the goals of the experiment and the techniques that you will use in the experiment
- A flow chart summary of the ENTIRE experimental procedures
- MSDS Information (*Refer to the MSDS handout for more information*)

The following chemicals will require you to use the MSDS database on the Web:

Hexane; Acetone

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 Guideline (Continued)**DATA TABLES & OBSERVATIONS**

USE A NEW PAGE TO SET UP THE FOLLOWING BLANK TABLES.

- Set up a blank table for recording the column chromatography data. Include a column for the number of the fraction being collected, the time over which the fraction is collected, the concentration of the solvent on the column, the appearance of colors on the column, and the color of the solution in the fraction being collected.
- Set up a blank data table for recording the thin-layer chromatography data. The data should include the components of the mobile phase; the identity of the initial spots on the TLC plate; the distance travel by each spot on the TLC plate at the end of the analysis; the distance traveled by the solvent front at the end of the TLC analysis. Keep the original TLC plate in your lab notebook for future reference.