Experiment 13: Sublimation

Explore how differences in physical properties and the technique of sublimation is used to purify organic products. Extract, isolate, purify and characterize caffeine.

Preparations

Read: Experiment 13 - Isolation of Caffeine (page 100)
Technique 17 - Sublimation (page 779)
Essay - Caffeine (page 96)

Do: Prepare your lab notebook:
- State experiment objectives (for each part assigned)
- List materials used w/ properties (solvents used in previous experiments do not need to be repeated)
- Make a procedures bullet list (for each part assigned)

Intended Learning Outcomes

* Identify the six processes that accomplish phase changes between solid, liquid, and gas states.
* Describe the temperature and pressure requirements for sublimation.
* Describe the advantages of sublimation as a separation technique.
* Recognize sublimation occurs most readily with non-polar, symmetric substances.
* Determine which of two substances is more likely isolatable by sublimation.

Report

Prepare a report for this experiment according to this experiments report description for the parts we accomplished. Include the questions with answers for this experiment, except any your instructor tells you to omit.