

Stereochemistry of Dihydroxylation Notebook Guidelines

Observations: Make observations of both procedures

Results: Include a picture of all three TLC plates (yours and your partners') to scale and information about each column, developing solvents, and stain used.

Record R_f values for every column on the TLC plate. (There may be more than one R_f value for each column)

Discussion:

Which developing eluent (ether, ethyl acetate, or acetone) worked the best for collecting your data? Explain why one solvent would provide better data than another.

What does the data suggest about the identity of your oxone product? Explain.

What does the data plate suggest about the purity of your oxone product? Explain.

Propose a mechanism for the oxone reaction that is consistent with your experimental results. (You may use a textbook if necessary.)

What does the data plate suggest about the identity of your KMnO_4 product? Explain.

What does the data suggest about the purity of your KMnO_4 product? Explain.

Propose a mechanism for the permanganate reaction that is consistent with your experimental results. (You may use a textbook if necessary.)