

Schedule of Experiments

Text: Wade, *Organic Chemistry*, 6th edition.

Laboratory manual: California State University, Northridge, Department of Chemistry,
Chemistry 333L Laboratory Manual.

<u>Dates</u>	<u>Experiment, Pre-Laboratory Preparation</u>
Sept. 5–11	Check-in. Safety Review. CSU Northridge Chemistry 333L Manual, pp. 1–17. LRC Safety DVD.
Sept. 12–18	Melting Points. Evaluation of Purity by Melting-Point Determination. Melting-Point Determination of an Unknown. CSU Northridge Chemistry 333L Manual, pp. 18–28. LRC Melting-Point Determination DVD.
Sept. 19–25	Purification of Acetanilide by Recrystallization. CSU Northridge Chemistry 333L Manual, pp. 29–41. LRC Recrystallization DVD.
Sept. 26 – Oct. 2	Simple Distillation. Isolation of α -Pinene. CSU Northridge Chemistry 333L Manual, pp. 48–67. Modification: Skip the Boiling-Point Determination of an Unknown section. LRC Simple Distillation DVD.
Oct. 3–9	Fractional Distillation With a Vigreux Column. CSU Northridge Chemistry 333L Manual, pp. 68–73. Modification: Only do the fractional distillation. LRC Fractional Distillation DVD.
Oct. 10–16	Molecular Modeling. Conformational Analysis with ChemDraw and Chem3D. CSU Northridge Chemistry 333L Manual, pp. 81–86. Wade, Sections 3-13 to 3-15.

- Oct. 17–23 Extraction.
 Which Phase is Which?
 The "Salting-Out" Effect.
 Separation via Acid-Base Extraction.
CSU Northridge Chemistry 333L Manual, pp. 87–96, 99–101.
LRC Extraction DVD.
- Oct. 24–30 Thin-Layer Chromatography (TLC).
 TLC Analysis of *o*-Hydroxyacetophenone and *p*-Hydroxyacetophenone.
 TLC Analysis of Analgesic Components and an Unknown Mixture.
CSU Northridge Chemistry 333L Manual, pp. 103–112.
LRC Thin-Layer Chromatography DVD.
- Oct. 31 – Nov. 6 Separation of Cholesterol and a Cholesteryl Ester by Column Chromatography.
CSU Northridge Chemistry 333L Manual, pp. 113–124.
 Modification: Only collect and characterize cholesterol. Do not isolate the
 cholesteryl palmitate impurity.
LRC Column Chromatography DVD.
- Nov. 7–13 Acid-Catalyzed Dehydration of 2-Methylcyclohexanol.
CSU Northridge Chemistry 333L Manual, pp. 125–133, 173–174, 189–192.
Wade, Sections 6-13 to 6-15, 6-17, 6-18, 7-7A to 7-7C, 7-10, 11-7 and 11-10.
LRC Gas Chromatography DVD.
- Nov. 14–20 Reduction of Cyclohexanone.
CSU Northridge Chemistry 333L Manual, pp. 134–137, 181–184, 189–192.
Wade, Sections 10-11 and 18-12.
LRC Infrared Spectroscopy DVD.
- Nov. 21, 22 Catch-up periods.
- Nov. 27–30 Infrared Spectroscopy.
CSU Northridge Chemistry 333L Manual, pp. 143–149, 183–184.
Wade, Sections 12-1 to 12-12.
 Appendices 2A and 2B.
LRC Infrared Spectroscopy DVD.
- Dec. 4–7 Organic Structure Determination by Spectrometric Techniques.
CSU Northridge Chemistry 333L Manual, pp. 150–163, 183–188.
Wade, Sections 12-1 to 12-12, 13-1 to 13-13.
 Appendices 1A, 1C, 2A and 2B.
- Dec. 11–14 Check-out.