

Schedule of Experiments

Text: Wade, *Organic Chemistry*, 9th edition
Laboratory manual: California State University, Northridge, Department of Chemistry and Biochemistry,
Chemistry 333L Laboratory Manual

<u>Dates</u>	<u>Experiment, Pre-Laboratory Preparation</u>
June 1	Check-in Safety Review CSU Northridge Chemistry 333L Manual, pp. 1–17 UCLA video: Safety
June 2	Melting-Point Analysis Evaluation of Purity by Melting-Point Determination Melting-Point Determination of an Unknown CSU Northridge Chemistry 333L Manual, pp. 18–28 CSU Northridge video: Melting-Point Determination UCLA video: Melting-Point Determination
June 3	Recrystallization of Acetanilide CSU Northridge Chemistry 333L Manual, pp. 29–41 CSU Northridge video: Recrystallization UCLA video: Recrystallization
June 8	Simple Distillation of α -Pinene CSU Northridge Chemistry 333L Manual, pp. 48–67 CSU Northridge video: Simple Distillation UCLA video: Simple Distillation
June 9	Molecular Modeling Conformational Analysis with ChemDraw and Chem3D CSU Northridge Chemistry 333L Manual, pp. 81–86 Wade, Sections 3-13 to 3-15

- June 10, 15 Fractional Distillation of Cyclohexane and Toluene With and Without a Vigreux Column
CSU Northridge Chemistry 333L Manual, pp. 68–73
 Work together in pairs to do both distillations
CSU Northridge video: [Fractional Distillation](#)
UCLA video: [Fractional Distillation](#)
UCLA video: [Gas Chromatography](#)
- June 16 Steam Distillation of Eugenol from Cloves
CSU Northridge Chemistry 333L Manual, pp. 74–80
CSU Northridge video: [Steam Distillation](#)
UCLA video: [Gas Chromatography](#)
- June 17 Extraction
 Which Phase is Which?
 The "Salting-Out" Effect
 Acid-Base Extraction of Benzil and Benzoic Acid
CSU Northridge Chemistry 333L Manual, pp. 87–96, 99–101
CSU Northridge video: [Extraction](#)
CSU Northridge video: [Extraction Demonstrations](#)
UCLA video: [Extraction](#)
- June 22 Thin-Layer Chromatography (TLC)
 TLC Analysis of *o*-Hydroxyacetophenone and *p*-Hydroxyacetophenone
 TLC Analysis of a Mixture of Common Analgesics
CSU Northridge Chemistry 333L Manual, pp. 103–112
CSU Northridge video: [Thin-Layer Chromatography](#)
UCLA video: [Thin-Layer Chromatography](#)
- June 23 Separation of Cholesterol and a Cholesteryl Ester by Column Chromatography
CSU Northridge Chemistry 333L Manual, pp. 113–124
CSU Northridge video: [Column Chromatography: Separation of Cholesterol
 and a Cholesteryl Ester](#)
UCLA video: [Column Chromatography](#)
- June 24, 29 Acid-Catalyzed Dehydration of 2-Methylcyclohexanol
CSU Northridge Chemistry 333L Manual, pp. 125–133, 189–192
Wade, Sections 6-13 to 6-15, 7-8A to 7-8C, 7-10, 7-11, 7-17B, 7-18, 11-7, and 11-10
CSU Northridge video: [Acid-Catalyzed Dehydration of 2-Methylcyclohexanol](#)
UCLA video: [Gas Chromatography](#)

- June 30, July 1 Stereoselective Reduction of 4-*tert*-Butylcyclohexanone
CSU Northridge Chemistry 333L Manual, pp. 138–142, 183–184, 189–192
Wade, Sections 10-11 and 18-11
CSU Northridge video: [Stereoselective Reduction of 4-*tert*-Butylcyclohexanone](#)
UCLA video: [Gas Chromatography](#)
UCLA video: [Infrared Spectroscopy](#)
- July 6 Infrared Spectroscopy
CSU Northridge Chemistry 333L Manual, pp. 143–149, 183–184
Wade, Sections 12-1 to 12-12
 Appendices 2A and 2B
CSU Northridge video: [Infrared Spectroscopy](#)
UCLA video: [Infrared Spectroscopy](#)
- July 7 Check-out
- July 8 Nuclear Magnetic Resonance (NMR) Spectroscopy
CSU Northridge Chemistry 333L Manual, pp. 150–163, 183–188
Wade, Sections 12-1 to 12-12, 13-1 to 13-13
 Appendices 1B, 1C, 2A, and 2B
CSU Northridge video: [NMR Spectroscopy](#)

See the [CSUN Chemistry](#) YouTube channel for the CSU Northridge videos.

See the [Instructional Media Production](#) website for the UCLA organic chemistry videos.