

Chem 322L: Exam II Review

Exam Format

- Multiple Choice
- True/False

Techniques to Review from *Mohring*:

- **Heating and Cooling Methods** Technique 6 (pages 47-56)
- **Refluxing a Mixture** Technique 7 (Section 7.1; page 56)
- **Drying Agents** Technique 8 (Sections 8.7 and 8.8; pages 92-95)
- **Recrystallization** Technique 9 (pages 100-116)
- **Melting-Point Theory** Technique 10 (pages 117-127)
- **Thin-Layer Chromatography** Technique 15 (pages 177-189)
- **Liquid Chromatography** Technique 17 (Sections 17.1-17.6; pages 206-219)
- **Infrared Spectroscopy** Technique 18 (pages 228-267)
 - **Could be asked to interpret IR of any compound**
 - **You will be given characteristic frequency table**
 - **Will not be asked about instrumentation**
- **NMR** Technique 19 (page 267-341)
 - **Could be asked to interpret NMR of any compound**
 - **You will be given characteristic chemical shifts**
 - **Will not be asked about instrumentation**

Calculations to Review

- Percent Yield (page 33)
- Theoretical Yield
- Limiting Reactant
- Calculation of R_f (page 178)

Experimental Sections

6. Alkylation of Biphenyl and *Para*-Dimethoxybenzene
 7. Nitration of Methyl Benzoate
 8. Wittig Reaction
 9. Aldol Condensation
 10. Synthesis of Banana Oil
- Review background from lab and textbook
 - Review experimental sections
 - Be able to predict reactants, products, and byproducts, as well as any reagents needed for the workup of the sample such as solvents, catalysts, drying agents, etc

NOT on this Exam:

- Labs 1-5