

CHEM 252 EXAM #2 STUDY GUIDE

Exam will be date is June 10 and the exam will take place from 2-3 pm in AS 1614.

The exam will cover the Grignard (PLKE 38), Esterification (PLKE 56) and the Micheal/Aldol reaction (PLKE 64). There will be nothing on the unknown analysis or the paint lab. There will not be any IR or NMR interpretation. It will be 80 pts and you will have an hour to take the exam.

Grignard reaction. (also read sec 17.4 in Bruice)

Know the overall reaction for this experiment.

Know the reactive characteristics of the Grignard reagent; how it would react with carbon dioxide, a ketone an aldehyde, an ester and an alcohol.

Know why water was avoided in this reaction.

Know what impurities this reaction produced and how you purified your product (know separation scheme—be able to draw the flow chart)

How did you keep this reaction anhydrous (water free)?

Ester lab:

Be able to determine the structure of the ester product when an acid & alcohol are reacted.

Know the acid catalyzed **mechanism** for an esterification

Know how to shift the equilibrium of an esterification.

Know how the product was separated and purified.

PLKE #64 Michael and Aldol reactions.

Be able to write both a Micheal and Aldol reaction mechanism

Be able to recognize the structure of a chalcone and what aldehyde and ketone could have produced it.

How were your products purified?