Chemistry 222 Laboratory
Spring Semester, 1997

Instructor: Dr. Monica Ali

Text: Campbell, B.N. Jr. and Ali, M.M., "Organic Chemistry Experiments, Microscale and Semi-Microscale", Brooks/Cole Publishing Company, Pacific Grove, California, 1994.

Laboratory:

Date	**Schedule**
January 27	Infra-red lecture and demonstration; Text, chapter 10 and all problems; Lab book, p. 181 - 98
February 3	Nuclear magnetic resonance lecture; Text, chapter 11 and all problems; Lab book, p.199 - 214
10	Nuclear magnetic resonance experiment
17	Thin layer chromatography, p.153 - 160, questions 1 - 6
24	High pressure liquid chromatography, handout
March 3	Photohalogenation, p.173 - 4; Gas chromatography, p.160 - 4
17	Preparation of cyclohexene, p.218 - 20, questions 1 - 8; p. 493, exercises 1 and 2
24	Preparation of iodoform, p. 247 - 252, questions 1 - 4
31	Preparation of p-bromonitrobenzene, p. 301 - 3, questions 1, 4, 5, 6, 7, 8; Nuclear magnetic resonance analysis of product
April 7	Preparation of diphenylcarbinol, p. 391 - 5, questions 1 - 8
14	Preparation of soap, p. 420 - 1 Preparation of polymers, Handout
21	Checkout

Safety: Safety glasses and closed toed shoes must be worn in the laboratory. All long hair must be tied back and legs must be covered to the knee.

Grading:

10 lab reports at 20 points each	=	200 points
final exam	=	100 points
		300 points

There will not be a prelab report or a quiz for the experiments on January 27, February 3, and February 10. There will, however, be prelab reports and quizzes for all of the remainder of the laboratory experiments. When there is a prelab and quiz, the prelab will equal five points, the quiz will equal five points, and the postlab will be ten points. Otherwise, as in the first three labs, the postlab will equal twenty points.

The class test scheduled for Friday, February 28, will include problems on infra-red spectroscopy and nuclear magnetic resonance. Do not wait until just before the test to study the material. Master the material from the laboratories on January 27, February 3, and February 10 as soon as the laboratory work is completed. Otherwise, the amount of material covered for the test on February 28, including both lecture and laboratory, will be overwhelming.

There will be individual oral postlabs for the experiment conducted on March 17, Preparation of cyclohexene.