



YOGYAKARTA STATE UNIVERSITY
FACULTY OF MATHEMATICS AND NATURAL SCIENCE

SYLLABUS

Course	: Organic Chemistry I Laboratory Work
Code/Credit	: KIC126/ 1
Pre-requisite	: General Chemistry Lab-Work 1 & 2
Co-requisite	: Organic Chemistry I
Semester	: 4
Lecturer	: Dini Rohmawati, M.Sc. (dini_rohmawati@uny.ac.id)

I. Description

This course introduces the student to basic techniques and procedures in purification and characterization of organic compounds and simple reactions used in organic chemistry laboratory.

II. Competencies

1. Students able to purify solid organic compounds by recrystallization and determine the melting point
2. Students able to synthesize organic compounds as theory application and characterize the physical properties of synthesis products.
3. Students can design and conduct a simple experiment.

III. Text

Reference:

1. C.Budimarwanti, et.al., 2011, *Handout of Organic Chemistry I Lab-Work*, FMIPA UNY.

Additional Reference:

2. Doyle Mungal, 1980, *Experimental Organic Chemistry*, New York, John Wiley and Sons.
3. Furniss, BS., PWG Smith, AR., 1978, *Vogel's TextBook of Practical Organic Chemistry*, Fourth Edition, London.
4. Raymond, BS., 1971, *Experimental Organic Chemistry*, New York, Barnes and Publisher.
5. Rajak Bansal, 1980, *Laboratory Manual in Organic Chemistry*, New Delhi, Wiley Eastern Limited

IV. Strategy

Discussion, Simulation, Experiment

V. Activity Plans

Topics	Indicator	Learning Process	Assessment		Week	Relevant Reading
			Kinds of Assessment	Type of Instrument		
Organic chemistry laboratory work introduction	<ul style="list-style-type: none"> - Be trained in various chemicals handling - Understand how to use laboratory equipment in organic laboratory - Understand how to write the proper laboratory report 	<ol style="list-style-type: none"> 1. Assistance 2. Give laboratory instructions 	-	-	(1) 100 mnt	1
		<ol style="list-style-type: none"> 1. Introduction 2. Give explanations of - Laboratory preparations - Writing reports 	-	-	(2) 100 mnt	1
1. Pretest		Pretest	Test	Essay	(3) 100 mnt	1,2,3,4,5
2. Recrystallization and Melting Point Determination a. Recrystallization b. Melting Point Determination	Able to determine the most common solvent which is use for recrystallization, then purify solid organic compounds by recrystallization, and determine the melting point	<ol style="list-style-type: none"> 1. Pretest 2. Practice 3. Writing observation sheet 4. Writing report 	Test Performance Test	Essay Worksheet	(4) 100 mnt	1,2
3. Synthesis of Organic Compounds a. Synthesis of Chloroform	Able to synthesize organic compounds, and characterize the physical	<ol style="list-style-type: none"> 1. Pretest 2. Practice 3. Writing observation sheet 	Test Performance Test	Essay Worksheet	(5-10) 6x100 mnt	1,2,3,4,5

b. Synthesis of Amyl Acetate c. Synthesis of Phenyl Benzoate d. Synthesis of Aceto-2,4-dinitrophenylhydrazone e. Synthesis of Benzylaniline	properties of synthetic products	4. Writing report				
4. Free Choice Experiment	Design and conduct a simple experiment	1. Design a simple experiment 2. Practice 3. Writing observation sheet 4. Writing report	Performance Test	Essay Worksheet	(11-13) 1x100 mnt	1,2,3,4,5
5. Remedial					(14)	
6. Final Evaluation		Final examination	Performance Test	Worksheet	(15) 100 mnt	1,2,3,4,5
			Test	Objective	(16) 100 mnt	1,2,3,4,5

VI. Assessment

a. Component

No	Assignment	Percentage (%)
1.	Performance	25 %
2.	Lab Report	25 %
3.	Pre-test	25 %
4.	Post-test	25 %
	Total	100 %

b. Instrument

Assignment	Criteria	Jenis Tagihan dan Instrumen
Pre-test	Can analyze the relationship between theory and laboratory work	Examinations
Performance	Can apply the theory in laboratory work	Non test
Lab Report	can report the results of laboratory work in written form	Non test
Post-test	Can apply knowledge of both theory and lab work	Examinations