LESSON PLANNINGS 1 AND 2

1. Subject/ SKS : Kim 116/ 1
2. Prerequisite : General Chemistry Lab Work 1 & 2
3. Semester : 3 period : 2 x 100 minutes
4. Competence : Students are able to promote proper laboratory practices and report preparation
5. Indicators : 1. Understand proper laboratory report format to be use
   2. Be trained in handling of various chemicals
   3. Understand using laboratory equipment found in this laboratory
6. Topics : 1. assistance
   a. Information of laboratory instructions, regulation and safety
   b. Laboratory preparations
   c. Writing Report
7. Activity

Week 1:

Steps	Details	minutes	Methods	Materials	Reference
Introduction	1. Explanation the aims of this activity 2. Students grouping	15 minutes	explanation	Slide, hand out, and equipment for organic chemistry lab work 1	1, 2, 3, 4, 5
Presentation	1. Explain the information of laboratory instructions, regulation and safety 2. Explain the equipments and procedures in this activity 3. How to Acquire the meaningful data and How to analyze the experimental results 4. The writing reports	80 minutes	Discussion –information		
Conclusion	Review	5 minutes	Discussion		

Week 2

Steps	Details	minutes	Methods	Materials	Reference
Introduction	Apperception	15 minutes	explanation	equipment	1, 2, 3, 4, 5
Presentation	1. Explain the equipments and procedures in this activity 2. How to Acquire the meaningful data and How to analyze the experimental results	80 minutes	Discussion information		
Conclusion	Review	5 minutes	Discussion		

Reference : C. Budimarwanti , (2010) *Handout of Organic Chemistry Lab. Work 1* . FMIPA UNY

C. Budimarwanti, M.Si

LESSON PLANNINGS 4

1. Subject/ SKS : Kim 116/ 1
2. Prerequisite : General Chemistry Lab Work 1& 2
3. Semestre : 3 period 1 x 100 minutes
4. Competence : Students perform experiments, analyze data, present the results in a clear and scholarly manner and to use their own creativity to solve the experiments problems in the area recrystallization.
5. Indicators : Student able to determine solvents that are most commonly used for recrystallization, able to purifying solid organic compounds by recrystallization and determine the melting point

6. Topics :

7. Activity :

Week 4

Steps	Details	minutes	Methods	Materials	Reference
Introduction	Pretest	15 minutes	test	equipment	1, 2, 3, 4, 5
Presentation	Practice the experiment: to determine solvents that are most commonly used for recrystallization, to purifying solid organic compounds by recrystallization, and determine the melting point	80 minutes	practice		
Conclusion	Write worksheet	5 minutes	Discussion		

8. Evaluation
   - Pretest, instrument : essay test
   - Performance test, instrument : chek list
   - Practice Report
   - Final Examination, instrument : objective test

Reference : C. Budimarwanti (2010) *Handout of Organic Chemistry Lab. Work 1* . FMIPA UNY

C. Budimarwanti, M.SI

LESSON PLANNINGS 5 TO 10

1. Subject/ SKS : Kim 116/ 1
2. Prerequisite : General Chemistry Lab Work 1& 2
3. Semestre : 3 period : 6 x 100 minutes
4. Competence : Students perform experiments, analyze data, present the results in a clear and scholarly manner and to use their own creativity to solve the experiments problems in synthesis organic compounds, and to characterize the extent of the physical properties of the synthesis products
5. Indicators : Students can do the synthesis of organic compounds as obtained by the application of the theory, and to characterize the extent of the physical properties of the synthesis products.
6. Topics : a. Synthesis of Chloroform
   b. Synthesis of Amyl acetate
   c. Synthesis of phenyl benzoate
   d. Synthesis of acetone-2 ,4-dinitrophenylhidrazone
   e. Synthesis of Benzylaniline

7. Activity :

Week 5

Steps	Details	minutes	Methods	Materials	Reference
Introduction	Pretest	15 minutes	test	equipment	1, 2, 3, 4, 5
Presentation	Practice the experiment: synthesis of chloroform	80 minutes	practice		
Conclusion	Write worksheet	5 minutes	Discussion		

Week 6 and 7

Steps	Details	minutes	Methods	Materials	Reference
Introduction	Pretest	15 minutes	test	equipment	1, 2, 3, 4, 5
Presentation	Practice the experiment: synthesis of amyl acetate	180 minutes	practice		
Conclusion	Write worksheet	5 minutes	Discussion		

Week 8

Steps	Details	minutes	Methods	Materials	Reference
Introduction	Pretest	15 minutes	test	equipment	1, 2, 3, 4, 5
Presentation	Practice the experiment: synthesis of phenyl benzoate	80 minutes	practice		
Conclusion	Write worksheet	5 minutes	Discussion		

Week 9

Steps	Details	minutes	Methods	Materials	Reference
Introduction	Pretest	15 minutes	test	equipment	1, 2, 3, 4, 5
Presentation	Practice the experiment: synthesis of acetone-2 ,4-dinitrophenyl-hidrazone	80 minutes	practice		
Conclusion	Write worksheet	5 minutes	Discussion		

Week 10

Steps	Details	minutes	Methods	Materials	Reference
Introduction	Pretest	15 minutes	test	equipment	1, 2, 3, 4, 5
Presentation	Practice the experiment: synthesis of benzylaniline	80 minutes	practice		
Conclusion	Write worksheet	5 minutes	Discussion		

8. Evaluation
   - Pretest, instrument : essay test
   - Performance test, instrument : chek list
   - Practice Report
   - Final Examination, instrument : objective test

Reference : C. Budimarwanti. (2010) *Handout of Organic Chemistry Lab. Work 1* . FMIPA UNY

C. Budimarwanti, M.Si

LESSON PLANNINGS 11-13

1. Subject/ SKS : Kim 116/ 1
2. Prerequisite : General Chemistry Lab Work 1& 2
3. Semestre : 3 period : 2 x 100 minutes
4. Competence : Students can design and perform the synthesis of derivative compounds alcohols, phenols, aldehydes, ketones, carboxylic acids, amines which are different from the experiment that has been done previously.
5. Indicators : Students have the skills to design and perform the synthesis of derivative compounds alcohols, phenols, aldehydes, ketones, carboxylic acids, amines which are different from the experiment that has been done previously.

6. Topics : Synthesis of organic compounds

7. Activity :

Week 11

Steps	Details	minutes	Methods	Materials	Reference
	Designing experiments and consulted with lecturer	100 minutes			1, 2, 3, 4, 5

Week 12 and 13

Steps	Details	minutes	Methods	Materials	Reference
Introduction	Pretest	15 minutes	test	equipment	1, 2, 3, 4, 5
Presentation	Practice the experiment: synthesis of organic compounds	175 minutes	practice		
Conclusion	Write worksheet	10 minutes	Discussion		

8. Evaluation
   - Pretest, instrument : essay test
   - Performance test, instrument : chek list
   - Practice Report
   - Final Examination, instrument : objective test

Reference : C. Budimarwanti, (2010) *Handout of Organicl Chemistry Lab. Work 1* . FMIPA UNY

C. Budimarwanti, M.Si

Additional reference

2. Doyle Mungal. 1980. *Exsperimental Organic Chemistry*. New York: John Wiley and Sons.

3. Furniss, B.S, P.W.G. Smith, A.R. Tatchel.1978. *Vogel*^{l}*s Textbook of Practical Organic Chemistry.* Fourth edition. London: Longman Group Limited.

4. Raymound, B. S. 1971. *Exsperimental Organic Chemistry*. New York: Barnes and Nobel Publisher

5. Rajak Bansal. 1980. *Laboratory Manual in Organic Chemistry.* New Delhi: Wiley Eastern Limited.

Responsible
C. Budimarwanti, M.Si