

APPENDIX A

LAB REPORT CHECK LIST

LAB REPORT CHECK LIST

Have you included the following items in your lab report?:

Q Introduction

- " State the purpose of the experiment.
- " Described the pertinent theory related to the experiment.
- " Derive any pertinent equations, stating all approximations and assumptions.
- " Refer to any other related scientific work
- " *Briefly*, summarize the experiment.

Q Experimental Procedure

- " Cite the reference which describes the details of the experiment.
- " State any changes made in the experimental procedure which differ from the cited reference.
- " Include a simple sketch of the experimental setup.

Q Experimental Observations

- " Present all experimental observations (weights, volumes, temperatures, etc.).
- " Make use of tables where appropriate.
- " Tables must be numbered and given self-explanatory captions and include appropriate labels and units.

Q Results (Calculations and/or Questions)

- " Clearly number each Calculation and/or Question.
- " Show a *sample calculation* for each type of calculation performed.
- " Experiment results should be summarized by tables and/or plots.
- " Tables must be numbered and given self-explanatory captions and include appropriate labels and units.
- " Plots must fill the page. Plots should be numbered and given appropriate titles, axis labels and units.

Q Discussion

- " Restate the purpose of the experiment.
- " Summarize the final results obtained from the experiment.
- " Compare experimental results to theoretical or literature values.
- " Discuss any discrepancies between your experimental results and accepted values.
- " Discuss possible sources of error.

Q **References**

- " List all references cited and used in the preparation of the lab report.
- " Use an appropriate style to list references

Q **In General**

- " The lab report must be neat and well organized.
- " The lab report must be written as a serious scientific document and written using the *third person* tense.
- " All pages must be numbered.
- " Always state units.
- " All plots, figures and tables must be numbered and labeled with appropriate titles and/or captions.
- " All chemical reactions and mathematical equations must be numbered.
- " Securely fasten the report in the upper left hand corner. Always include a title page as the first page of the report (See Appendix I of this lab manual).
- " Be positive!

APPENDIX B

MARKING SCHEMES

Experiment 1

Determination of 1,2-diols in Poly(vinyl alcohol)Marking Scheme

Introduction	15
Experimental	10
Calculations	20
Error Analysis	10
Plot	10
Discussion	
Question 1	5
Question 2	5
Question 3	5
Discussion	10
General	5
Lab Performance	5
	<hr/>
Total	100

PLEASE SEE TA IN CHARGE FOR DETAILS

PLEASE SEE "LAB REPORT CHECK LIST" (APPENDIX A)
BEFORE SUBMITTING YOUR LAB REPORT

Experiment 2

Preparation of Urea-formaldehyde resin

Marking Scheme

Introduction	20
Experimental	10
Discussion	
Question 1	20
Question 2	20
Discussion	20
General	5
Lab Performance	5
	<hr/>
Total	100

PLEASE SEE TA IN CHARGE FOR DETAILS

PLEASE SEE "LAB REPORT CHECK LIST" (APPENDIX A)
BEFORE SUBMITTING YOUR LAB REPORT

Experiment 3

Radical Copolymerization of Styrene and Methyl MethacrylateMarking Scheme

Introduction	20
Experimental	10
Derivation of Equations (5), (6) and (8)	10
Sample Calculations	20
Plot	10
Discussion	20
General	5
Lab Performance	<u>5</u>
Total	100

PLEASE SEE TA IN CHARGE FOR DETAILS

PLEASE SEE "LAB REPORT CHECK LIST" (APPENDIX A)
BEFORE SUBMITTING YOUR LAB REPORT

Experiment 4

Solution Polymerization of Styrene: Determination of the Chain-transfer Constant of Dedecanethiol

Marking Scheme

Introduction	10
Experimental	10
Calculations	25
Plot	25
Discussion	20
General	5
Lab Performance	<u>5</u>
Total	100

PLEASE SEE TA IN CHARGE FOR DETAILS

PLEASE SEE "LAB REPORT CHECK LIST" (APPENDIX A)
BEFORE SUBMITTING YOUR LAB REPORT

Experiment 5

Tensile Properties of Various Polymeric Materials

Marking Scheme

Introduction	20
Experimental	10
Sample Calculations	20
Plots	10
Discussion	30
General	5
Lab Performance	<u>5</u>
Total	100

PLEASE SEE TA IN CHARGE FOR DETAILS

PLEASE SEE "LAB REPORT CHECK LIST" (APPENDIX A)
BEFORE SUBMITTING YOUR LAB REPORT

Oral Presentation

The format of the oral presentation is similar to that of the 492 oral presentations. In 15 minutes, the student is expected to introduce and describe the experiment, present the obtained results and discuss their implications. The presentation is then followed by a 5 minute question period.

Each student is then graded by each member of the audience with a weight of 1 for each undergraduate student and a weight of 2 for the TAs and the instructor. The weighted average is then taken as the grade for the presentation. The grade should reflect the clarity of the presentation (figures, speech) and the ability of the student to answer questions.

APPENDIX C

TITLE PAGES AND LAB REPORT RECORD

CHEM 471L

Title Page (Please Print)

Name:

ID Number:

Partner's Name:

Experiment Number:

Date Experiment was Begun:

Date Experiment was Due:

Date Report was Submitted:

T.A.'s Initials:

CHEM 471L

Title Page (Please Print)

Name:

ID Number:

Partner's Name:

Experiment Number:

Date Experiment was Begun:

Date Experiment was Due:

Date Report was Submitted:

T.A.'s Initials:

CHEM 471L

Title Page (Please Print)

Name:

ID Number:

Partner's Name:

Experiment Number:

Date Experiment was Begun:

Date Experiment was Due:

Date Report was Submitted:

T.A.'s Initials:

CHEM 471L

Title Page (Please Print)

Name:

ID Number:

Partner's Name:

Experiment Number:

Date Experiment was Begun:

Date Experiment was Due:

Date Report was Submitted:

T.A.'s Initials:

CHEM 471L

Title Page (Please Print)

Name:

ID Number:

Partner's Name:

Experiment Number:

Date Experiment was Begun:

Date Experiment was Due:

Date Report was Submitted:

T.A.'s Initials:

CHEM 471L

Title Page (Please Print)

Name:

ID Number:

Partner's Name:

Experiment Number:

Date Experiment was Begun:

Date Experiment was Due:

Date Report was Submitted:

T.A.'s Initials:

CHEM 471L

LAB REPORT RECORD

	Experiment Title	Date Due	Date Received	T.A.'s Initials
1	Determination of 1,2-diols in Poly(vinyl alcohol)			
2	Preparation of Urea-formaldehyde Resin			
3	Radical Copolymerization of Styrene and Methyl Methacrylate			
4	Solution Polymerization of Styrene: Determination of the chain-transfer constant			
5	Tensile behaviour of various polymeric materials			