

**FORMIC ACID PRETREATMENT OF LIGNIN TO FACILITATE THE  
DEPOLYMERIZATION OF LIGNIN BY LACCASE FROM *TRAMETES*  
*VERSICOLOR***

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for the award of the degree of  
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## **SUPERVISOR'S DECLARATION**

We hereby declare that we have checked this thesis and in our opinion, this thesis is adequate in terms of scope and quality for the award of the degree of Bachelor of Chemical Engineering.

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### **STUDENT'S DECLARATION**

I hereby declare that the work in this thesis is my own except for quotations and summaries which have been duly acknowledged. The thesis has not been accepted for any degree and is not concurrently submitted for award of other degree.

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I sincerely dedicated this thesis to my parents, Mohd Rudzelan Ahmad and Tengku  
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## TABLE OF CONTENTS

	<b>Page</b>
<b>SUPERVISOR'S DECLARATION</b>	<b>ii</b>
<b>STUDENT'S DECLARATION</b>	<b>iii</b>
<b>ACKNOWLEDGEMENT</b>	<b>v</b>
<b>ABSTRACT</b>	<b>vi</b>
<b>ABSTRAK</b>	<b>vii</b>
<b>TABLE OF CONTENTS</b>	<b>viii</b>
<b>LIST OF FIGURES</b>	<b>x</b>
<b>LIST OF SYMBOLS</b>	<b>xi</b>
<b>LIST OF ABBREVIATIONS</b>	<b>xii</b>
<b>CHAPTER 1 INTRODUCTION</b>	<b>1</b>
1.1 Background of the Study	1
1.2 Motivation	1
1.3 Problem Statement	3
1.4 Objectives	3
1.5 Scopes of Study	3
<b>CHAPTER 2 LITERATURE REVIEW</b>	<b>4</b>
2.1 The need for lignin utilization	4
2.2 Lignocellulosic and lignin	5
2.2.1 Lignin Preparation	9
2.3 Lignin Depolymerization	11
2.4 Palm oil empty fruit bunch (POEFB)	12
2.5 Enzymatic depolymerization of lignin	12
2.5.1 Laccase	13
2.6 Mediators	18
2.7 Formic acid	19
<b>CHAPTER 3 METHODOLOGY</b>	<b>21</b>
3.1 Material and Methods	21
3.2 Preparation of sodium acetate buffer solution	21
3.3 Enzyme assay	21
3.4 Lignin pretreatment	22
3.5 Depolymerization of lignin by laccase	22
3.6 Fractionation of samples	22

3.7	Preparation standard solution of vanillin	23
3.8	Product identification	23
<b>CHAPTER 4 RESULTS AND DISCUSSION</b>		<b>24</b>
4.1	Introduction	24
4.2	Laccase from <i>Trametes versicolor</i> (LTV) assay	25
4.3	Vanillin acid Chromatogram	27
4.4	Depolymerization of lignin and product analysis	31
<b>CHAPTER 5 CONCLUSION AND RECOMMENDATION</b>		<b>34</b>
5.1	Conclusion	34
5.2	Recommendation	34
<b>REFERENCES</b>		<b>36</b>



**LIST OF FIGURES**

<b>Figure No.</b>	<b>Title</b>	<b>Page</b>
<b>Figure 2.1:</b>	Components of lignocellulosic biomass	6
<b>Figure 2.2:</b>	Linkages in lignin	7
<b>Figure 2.3:</b>	Woody plant	7
<b>Figure 2.4:</b>	Structure of lignin precursors of H-, G-, and S- units in lignin	8
<b>Figure 2.5:</b>	Valorisation of Kraft lignin by a biorefinery concept	11
<b>Figure 2.6:</b>	Schematic diagram of the lignin degradation steps and enzymes involved	13
<b>Figure 2.7:</b>	Two types of mushrooms	14
<b>Figure 2.8:</b>	Structure of laccase	16
<b>Figure 2.9:</b>	Structure of the copper coordination network of the laccase molecule	17
<b>Figure 2.10:</b>	Oxidation of ABTS in presence of laccase	19
<b>Figure 4.1:</b>	Potential lignin application	24
<b>Figure 4.2:</b>	Samples to determine laccase assay	25
<b>Figure 4.3:</b>	UV-vis spectrophotometer	25
<b>Figure 4.4:</b>	LTV assay with different concentration of ABTS	26
<b>Figure 4.5:</b>	Initial rate of reaction LTV	26
<b>Figure 4.6:</b>	HPLC Chromatogram of vanillin	30
<b>Figure 4.7:</b>	Calibration curve of vanillin	31
<b>Figure 4.8:</b>	Incubator	31
<b>Figure 4.9:</b>	High performance liquid chromatography	32
<b>Figure 4.10:</b>	HPLC Chromatogram samples	33

**LIST OF SYMBOLS**

h	hours
min	minute
$\mu\text{m}$	micrometres
g	gram
mg	milligram
$\mu\text{l}$	microliters
ml	milliliters
L	litres
mM	millimolar
M	molar

**LIST OF ABBREVIATIONS**

ABTS	2,2'-azino-bis(3-ethylbenzothiazoline-6-sulphonic acid)
H <sub>2</sub> SO <sub>4</sub>	Sulphuric acid
HPLC	High performance liquid chromatography
LTV	Laccase from <i>Trametes versicolor</i>
OPEFB	Oil palm empty fruit bunch