CHEMICAL PROPERTIES OF ACACIA MANGIUM

SAPUDIN BIN ABDUL RAHMAN

DIPLOMA IN WOOD INDUSTRY UNIVERSITI TEKNOLOGI MARA 2004

ACKNOWLEDGEMENT

Bismillahirrahmanirrahim...

First of all, a lot of thanks to Almighty Allah for everything I have and for the chance to complete this project.

Thank you very much to my advisor, Mr. Amran Shafie for advising and teach me about this thesis, laboratory assistant, Mr. Rudaini that mostly help and support, Mr. Sardey and not forgotten, all staff and lecturer of Wood Technology Department.

I also want to thank to all of my friends that support and encouraging me whether direct or indirectly.

Finally, Thank and love for my parents and the whole family for their hope and support. Thank you very much.

TABLE OF CONTENT

			Page
APP	ROVA	AL SHEETS	ш
DED	ICAT	ION	IV
ACK	v		
LIST	OF I	FIGURES	IX
ABS	TRAC	e T	X
ABS	TRAK	K	XI
CHA	PTE	t	
I	1.0	INTRODUCTION	1
	1.1	General	1
		Objectives	2
П	2.0	LITERATURE REVIEW	3
	2.1	Field characteristic of acacia	3
		2.1.1 General	3
		2.1.2 Chemistry and toxicity	3 3 4
		2.1.3 Wood properties	4
		2.1.4 II	-

Ш	3.0	MATERIAL AND METHOD	7
	3.1	Material preparation	7
	3.2		8
	33	3.2.1 Procedure Determination of cold – water solubility of wood	8 9
	3.3	3.3.1 Procedure	9
	3.4	Determination of hot – water solubility of wood 3.4.1 Procedure	10 10
	3.5		11
	3.3	3.5.1 Procedure	11
	3.6	Determination of 1% NaOH solubility of wood	12
		3.6.1 Procedure	12
	3.7		13
		3.7.1 Procedure	13
	3.8	Determination of ash in wood	14
		3.8.1 Procedure	14
IV	4.0	RESULT AND DISCUSSION	15
	3.9	Result of moisture content	15
		Result of cold – water solubility of wood	16
		Result of hot – water solubility of wood	17
		Result of alcohol – benzene solubility of wood	18
		Result of 1% NaOH solubility of wood	19
		Result of Lignin in wood	20
	3.15	Result of ash in wood	21
V	5.0	CONCLUSION	22
		APPENDIX	24
		REFERRENCES	32
		VITA	24

ABSTRACT

CHEMICAL COMPONENTS OF ACACIA MANGIUM

By

SAIPUDIN BIN ABDUL RAHMAN

MARCH 2004

This project is a study about chemical components of *Acacia mangium* wood.

Acacia mangium is the commercial fast growing tree that valuable in wood industry of our country. There are seven experiments have done in this study namely determination of moisture content, cold – water solubility, hot – water solubility, alcohol – benzene solubility, 1% NaOH solubility of wood, lignin and ash in wood. The percentage of result shows the content of chemical component in wood such as extractive components, lignin and ash. Other that, the result also indicates the degree of decay or degradation.