



## TABLE OF CONTENTS

<b>COVER PAGE</b>	<b>i</b>
<b>RATIFICATION PAGE</b>	<b>ii</b>
<b>STATEMENT</b>	<b>iii</b>
<b>DEDICATION PAGE</b>	<b>iv</b>
<b>PREFACE</b>	<b>v</b>
<b>TABLE OF CONTENTS</b>	<b>vi</b>
<b>LIST OF FIGURES</b>	<b>viii</b>
<b>LIST OF TABLES</b>	<b>ix</b>
<b>LIST OF APPENDICES</b>	<b>x</b>
<b>ABSTRACT</b>	<b>xi</b>
<b>INTISARI</b>	<b>xii</b>
<b>CHAPTER I INTRODUCTION</b>	<b>1</b>
I.1 Background	1
I.2 Research Objectives	3
I.3 Research Benefits	3
<b>CHAPTER II LITERATURE REVIEW AND HYPOTHESIS FORMULATION</b>	<b>5</b>
II.1 Literature Review	5
II.1.1 Activated carbon	5
II.1.2 Zr/activated carbon catalyst	11
II.1.3 Preparation of Zr/activated carbon catalyst	14
II.2 Hypothesis Formulation	18
II.2.1 Formulation of hypothesis 1	18
II.2.2 Formulation of hypothesis 2	18
II.2.3 Formulation of hypothesis 3	19
<b>CHAPTER III RESEARCH METHODS</b>	<b>21</b>
III.1 Materials	21
III.2 Equipments	21
III.3 Procedures	21
III.3.1 Producing activated carbon from coconut shells	21
III.3.2 Producing Zr metal catalyzation activated carbon	22
III.3.3 Determination of activated carbon and Zr/activated carbon acidity	22
III.3.4 Isopropanol conversion	23
<b>CHAPTER IV RESULTS AND DISCUSSIONS</b>	<b>25</b>



IV.1	Producing Activated Carbon from Coconut Shell	25
IV.2	Determination of Ca, Fe, K, Mg, and Na Metals Content after Activated Carbon Leaching	26
IV.3	Producing Zr/Activated Carbon Catalyst	29
IV.4	Zr/Activated Carbon Catalyst Acidity Test	32
IV.5	Catalyst Activity Test For Isopropanol Dehydration	34
<b>CHAPTER V</b>	<b>CONCLUSIONS</b>	<b>40</b>
V.1	Conclusions	40
V.2	Suggestions	40
<b>REFERENCES</b>		<b>41</b>
<b>APPENDICES</b>		<b>46</b>