CHEMICAL SCREENING AND BIOLOGICAL PROPERTIES
OF THE AROMATIC PLANT *Polygonum minus* Huds (KESUM)

NOOR MASITAH BINTI MAT RASHID

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This Final Year Project Report entitled “Chemical Screening and Biological Properties of the Aromatic Plant, Polygonum minus Huds (Kesum)” was submitted by Noor Masitah Binti Mat Rashid, in partial fulfilment of the requirements for the Degree of Bachelor of Science (Hons.) Chemistry, in the Faculty of Applied Sciences, and was approved by

Dr. Rohaiza binti Saat
Supervisor
B. Sc. (Hons.) Chemistry
Faculty of Applied Sciences
Universiti Teknologi MARA
72000 Kuala Pilah
Negeri Sembilan

Nurul Huda binti Abdul Halim
Project Coordinator
B. Sc. (Hons.) Chemistry
Faculty of Applied Sciences
Universiti Teknologi MARA
72000 Kuala Pilah
Negeri Sembilan

Mazni binti Musa
Head of Programme
B. Sc. (Hons.) Chemistry
Faculty of Applied Sciences
Universiti Teknologi MARA
72000 Kuala Pilah
Negeri Sembilan

Date: __________________________
TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>iii</td>
</tr>
<tr>
<td>TABLE OF CONTENTS</td>
<td>iv</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>vi</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>vii</td>
</tr>
<tr>
<td>LIST OF ABBREVIATIONS</td>
<td>viii</td>
</tr>
<tr>
<td>ABSTRACT</td>
<td>ix</td>
</tr>
<tr>
<td>ABSTRAK</td>
<td>x</td>
</tr>
</tbody>
</table>

CHAPTER 1 INTRODUCTION
1.1 Background of study                                  1
1.2 Problem statement                                     3
1.3 Significance of study                                 4
1.4 Objectives of study                                   5

CHAPTER 2 LITERATURE REVIEW
2.1 The Classification of Polygonum minus Huds Family     6
2.2 Traditional Purpose of Polygonum minus Huds species   8
2.3 Phytochemical Studies on Polygonum minus Huds extract 11
   2.3.1 Essential oil                                    13
   2.3.2 Flavonoids                                      17
2.4 Bioactivity study of Polygonum minus Huds             19
   2.4.1 Antibacterial                                   20
   2.4.2 Anti-inflammatory                               21
   2.4.3 Antulcer                                        21
   2.4.4 Antioxidant                                     21

CHAPTER 3 METHODOLOGY
3.1 Materials                                             23
   3.1.1 Raw materials                                   23
   3.1.2 Chemicals                                       23
   3.1.3 Apparatus                                       24
   3.1.4 Instrument                                      24
3.2 Methodology                                           24
   3.2.1 Extraction of Polygonum minus Huds leaves        24
   3.2.2 Phytochemical Screening on the Extracted Sample 26
     3.2.2.1 Test for alkaloids                          26
     3.2.2.2 Test for flavonoids                         26
     3.2.2.3 Test for phenol                             26
     3.2.2.4 Test for terpenoids (Salkowski test)        27
3.2.2.5 Test for tannins 27
3.2.2.6 Test for saponins 27
3.2.2.7 Test for glycosides 27
3.2.2.8 Test for sterol (Liebermann-Burchard Reaction) 28
3.2.3 Thin Layer Chromatography (TLC) 28
3.2.4 Antibacterial assay 28
3.2.4.1 General 28
3.2.4.2 Media preparation of Nutrient Agar (NA) 29
3.2.4.3 Culturing microbe of Nutrient Broth (NB) 29
3.2.4.4 Sample preparation 29
3.2.4.5 Disc diffusion method 30
3.2.4.6 Control test 30
3.2.5 TLC bioautography 31

CHAPTER 4 RESULTS AND DISCUSSION
4.1 Extraction of sample 32
4.2 Phytochemical screening 34
4.3 Thin Layer Chromatography (TLC) 37
4.4 Antibacterial assay 43
4.5 Antioxidant activity 46

CHAPTER 5 CONCLUSION AND RECOMMENDATIONS
5.1 Conclusion 48
5.2 Recommendations 50

CITED REFERENCES 51
APPENDICES 54
CURRICULUM VITAE 55
ABSTRACT

CHEMICAL SCREENING AND BIOLOGICAL PROPERTIES OF THE AROMATIC PLANT, Polygonum minus Huds (KESUM)

The research of an aromatic plant, Polygonum minus Huds or kesum has been done on their chemical screening and biological properties. Extractions by cool extraction method were done at room temperature for 72 hours successively by three different solvent which are hexane, ethyl acetate and ethanol. The highest percentage yield shown by ethanol extract which is 4.73%. The phytochemical screening analysis for ethanol extract were done and confirm the presence of alkaloids, flavonoids, glycosides, phenols, saponins, sterols, tannins and terpenoids. In thin layer chromatography (TLC) study, the combination of solvent system hexane and ethyl acetate give a good separation of compound under ultraviolet (UV) lamp short wavelength and long wavelength. The best ratio for solvent system for hexane extract and ethyl acetate extract is 8:2 while the ratio for ethanol extract is 7:3. Disc diffusion method were used to determine the antibacterial activities of crude by using four patogenic bacteria of Bacillus subtilis, Staphylococcus aureus, Salmonella typhi and Escherichia coli. The highest inhibition zone observed was the hexane extract with the diameter of 14 mm. Meanwhile for antioxidant study, DPPH were used to define the presence of antioxidant in the crude extracts.