BIOACTIVITY STUDIES AND CHEMICAL ANALYSIS OF THE MEDICINAL HERB *Centella asiatica* (PEGAGA) LEAVES

MUHAMAD HAIKAL BIN AZILAH

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This Final Year Project Report entitled "Bioactivity Studies and Chemical Analysis of The Medicinal Herb *Centella asiatica* (Pegaga) Leaves" was submitted by Muhamad Haikal bin Azilah 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

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# TABLE OF CONTENTS

ACKNOWLEDGEMENTS iii  
TABLE OF CONTENTS iv  
LIST OF TABLES vi  
LIST OF FIGURES vii  
LIST OF ABBREVIATIONS ix  
ABSTRACT x  
ABSTRAK xi

## CHAPTER 1 INTRODUCTION 1  
1.1 Background of Study 1  
1.2 Problem Statement 4  
1.3 Significance of the Study 5  
1.4 Objectives of the Study 6

## CHAPTER 2 LITERATURE REVIEW 7  
2.1 Description of *Centella asiatica* 7  
2.2 Uses of *Centella asiatica* 10  
2.3 Phytochemical Study of *Centella asiatica* 12  
2.3.1 Triterpenoids 13  
2.3.2 Fatty acids 16  
2.3.3 Flavanoids 17  
2.3.4 Essential oils 18  
2.4 Bioactivity Studies of *Centella asiatica* 19

## CHAPTER 3 METHODOLOGY 22  
3.1 Materials 22  
3.1.1 Raw materials 22  
3.1.2 Chemicals 22  
3.1.3 Apparatus 22  
3.1.4 Instrument 23  
3.2 Extraction of Sample 23  
3.3 Thin Layer Chromatography (TLC) Analysis 24  
3.4 Phytochemical Screening on the Extracted Sample 25  
3.4.1 Test for alkaloid 25  
3.4.2 Test for flavonoid 25  
3.4.3 Test for phenol 25  
3.4.4 Test for terpenoid 25  
3.4.5 Test for saponin 26
ABSTRACT

BIOACTIVITY STUDIES AND CHEMICAL ANALYSIS OF THE MEDICINAL HERB Centella asiatica (PEGAGA) LEAVES

Bioactivity and chemical analysis of Centella asiatica leaves have been studied. Extraction process of C. asiatica take placed by using three different polarity of solvents which are hexane, ethyl acetate, and ethanol using cold extraction method. The highest percentage yield is ethanol crude extract which is 2.214 %. The thin layer chromatography (TLC) profile of C. asiatica leaves extracts has been identified with the best ratio of solvent system for hexane crude extract was (2:8) of hexane:chloroform. While for ethyl acetate crude extract was (7:3) of hexane:acetone. For ethanol crude extract was (1:9) of hexane:chloroform. The most obvious separation and noticeable colour spots was shown in hexane crude extract. The phytochemical screening studies revealed that there are many secondary metabolites presence in C. asiatica such as alkaloid, flavonoid, phenol, terpenoid, glycoside, tannin, steroid, and sterol. In addition, only ethyl acetate and ethanol extracts showed antioxidant activity by using TLC bioautography technique. Antibacterial activity was tested by using disc diffusion method towards Bacillus subtilis, Staphylococcus aureus, Escherichia coli, and Salmonella typhi. The highest zone inhibition diameter was recorded in ethanol crude extract against Salmonella typhi with the zone of inhibition 13.5 mm.