

**ISOLATION OF PROTEIN FROM WINGED BEAN  
(*Psophocarpus tetragonolobus*) AND LONG BEAN (*Vigna  
unquiculata subsp. sesquipedalensis*)**

**AHMAD HILMI BIN BASHARAL HAFI**

**BACHELOR OF SCIENCE (Hons.) BIOLOGY  
FACULTY OF APPLIED SCIENCES  
UNIVERSITI TEKNOLOGI MARA**

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## TABLE OF CONTENTS

	<b>PAGE</b>
<b>ACKNOWLEDGEMENTS</b>	iii
<b>TABLE OF CONTENTS</b>	iv
<b>LIST OF TABLES</b>	vi
<b>LIST OF FIGURES</b>	vii
<b>LIST OF ABBREVIATIONS</b>	viii
<b>ABSTRACT</b>	ix
<b>ABSTRAK</b>	x
<b>CHAPTER 1:INTRODUCTION</b>	
1.1 Background of Study	1
1.2 Problem Statement	2
1.3 Significance of the Study	3
1.4 Objectives of the Study	3
<b>CHAPTER 2:LITERATURE REVIEW</b>	
2.1 Protein	4
2.1.1 Protein Function	4
2.1.2 Protein Structure	5
2.2 Problem Used in Various Industries	5
2.2.1 Food Industry	6
2.2.2 Detergent Industry	6
2.2.3 Medical Industry	6
2.2.4 Application for biopolymer production	6
2.3 Plant Based Protein	7
2.4 Type of Vegetables Samples and Its Chemical Composition	7
2.4.1 Winged bean	8
2.4.2 Long bean	10
2.5 Methods of Protein Extraction	12
2.5.1 Alkaline extraction method	13
2.5.2 Biuret test	14
2.5.3 Spectrophotometer	14
2.5.4 Protein purification	14
<b>CHAPTER 3:METHODOLOGY</b>	
3.1 Materials	15
3.1.1 Raw materials	15
3.1.2 Chemicals	15
3.1.3 Apparatus and equipment	15

3.2	Methods	16
3.2.1	Alkaline extraction of winged bean and long bean	18
3.2.2	Biuret test	18
3.2.3	Spectrophotometer of protein	19
3.2.4	Protein precipitation	20
<b>CHAPTER 4: RESULTS AND DISCUSSION</b>		
4.1	Vegetables Extraction by Alkaline Methods	21
4.1.1	Extracted Solution	22
4.1.2	Biuret test	24
4.1.2.1	Biuret Test for Albumin	26
4.1.2.2	Biuret Test for Winged bean	26
4.1.2.3	Biuret Test of Long bean	27
4.2	Spectrophotometer of Protein	27
4.2.1	Spectrophotometer of Protein from Albumin	28
4.2.2	Spectrophotometer of Protein from Winged bean	29
4.2.3	Spectrophotometer of Protein from Long bean	29
4.3	Protein Precipitation	30
4.4	Comparison of Protein Extraction	31
4.5	Suggestion and Recommendation	33
<b>CHAPTER 5: CONCLUSION AND RECOMMENDATION</b>		35
<b>CITED REFERENCES</b>		36
<b>APPENDICES</b>		39
<b>CURRICULUM VITAE</b>		41

## ABSTRACT

### **ISOLATION OF PROTEIN FROM WINGED BEAN (*Psophocarpus tetragonolobus*) AND LONG BEAN (*Vigna unguiculata subsp. sesquipedalis*)**

The demand for food of plant origin will continue to keep up with the world rapidly growing population. The potentially plant to generate high protein output is desirable to overcome the shortage of animal-based protein. This study was carried out to identify an alternatives plant-based protein. The winged bean (*Psophocarpus tetragonolobus*) and long bean (*Vigna unguiculata subsp. sesquipedalis*) are said as a rich protein source plant and widely consumed in Malaysia. Therefore, these two species, were used as a subject study. The objectives of this research are to isolate protein from winged bean (*Psophocarpus tetragonolobus*) and long bean (*Vigna unguiculata subsp. sesquipedalis*) and also to compare protein extraction from long bean and winged bean. Albumin was used as indicator to compare present of protein between long bean and winged bean. Protein was extracted by using alkaline method. Technically there are six major steps involved which are sample pre-treatment, extraction, centrifugation, Biuret test, spectrophotometer, and precipitation of protein. Samples were treated in 25°C and 35°C with three different volume-weight ratios (35:1, 40:1 and 45:1). The result obtained from this study showed that the protein not successfully extracted using alkaline method and proven by Biuret test and precipitation of protein, even though spectrophotometric analysis showed certain number of absorption reading but too low. Albumin give the positive result for protein compared to distilled water (control) and the sample used.