

## List of Contents

Page No	Title
I	List of Contents
VI	List of Tables
VII	List of Figures
VIII	List of Appendices
X	Acknowledgement
XI	Abstract
XII	Abstract (Arabic)
<b>CHAPTER ONE: INTRODUCTION 1</b>	
1	1.1 : Introduction
<b>CHAPTER TWO : LITERATURE REVIEW 3</b>	
3	2.1 Botanical description and back ground of Moringa oleifera tree
8	2.2 Nutritional value of Moringa
9	2.3 Harvesting of Moringa
9	2.4 Moringa seed oil
12	2.5 Methods of oils extraction
13	2.6 Physical analysis of <i>Moringa oleifera</i> seed oil
13	2.6.1 Refractive index
13	2.6.2 The density
14	2.6.3 The viscosity

14	2.6.2 The colour
15	2.7 Chemical analysis of <i>Moringa oleifera</i> seed oil
15	2.7.1 Peroxide value
16	2.7.2 Free fatty acids
16	2.7.3 Saponification value
16	2.8 Fatty acids composition of Moringa seed oil
17	2.9 Groundnut oil
18	2.10 Cottonseed oil
19	2.11 Sunflower seed oil
21	2.12 Frying process technology
23	2.13 Stability of oil
24	2.14 Sensory evaluation of edible oil
<b>CHAPTER THREE : MATERIALS AND METHODS 25</b>	
25	3.1 Materials
25	3.1.1 Source of materials
25	3.1.2 Chemicals and reagents
25	3.2 Methods
25	3.2.1 Sample preparation
25	3.2.2 Potato preparation
25	3.2.3 Frying procedure
26	3.3 Oil content of Moringa seed

26	3.4 Physical analysis of Morinaga seed oil
26	3.4.1 Refractive index
27	3.4.2 Density
27	3.4.3 Viscosity
28	3.4.4 Colour
28	3.5 The chemical analysis of Morinaga seed oil
28	3.5.1 Peroxide value
29	3.5.2 Free fatty acids
30	3.6 Fatty acids composition
31	3.7 Frying operation
31	3.8 Sensory evaluation
32	3.9 Statistical analysis
<b>CHAPTER FOUR : RESULTS AND DISCUSSION 33</b>	
33	4.1 Physical properties of Morinaga seed oil
35	4.2 Chemical properties of Morinaga seed oil
36	4.3 Fatty acids composition of Morinaga seed oil
37	4.4 Effect of frying on physical properties of Morinaga seed , sun flower seed, cotton seed and ground nut oils
41	4.5 Effect of frying on chemical properties of Morinaga seed, Sun flower seed , Cotton seed and ground nut oils

44	4.6 Sensory evaluation of potato fried with Moringa seed , sun flower seed, cotton seed and ground nut oils
<b>CHAPTER FIVE : CONCLUTIONS AND RECOMMENDATION</b>	
48	5.1 Conclusions
48	5.2 Recommendations
49	REFERENCES

## List of Tables

<b>Table No</b>	<b>Title</b>	<b>Page No</b>
1	Physicochemical analysis of sun flower , cotton seed and ground nut oils	20
2	Saturation percent of fatty acids of some edible oils	20
3	Physical properties of Morinaga seed oil	34
4	Chemical properties of Morinaga seed oil	35
5	Fatty acids composition of Moringa oil	37
6	Changes in physical properties of oils during frying process	40
7	Changes in chemical properties of oils during frying process	43
8	Sensory evaluation of potato chips fried by Moringa seed, sunflower seed, cotton seed and groundnut oils	47

## List of figures

<b>Figure No</b>	<b>Title</b>	<b>Page No</b>
1	Moringa tree	5
2	Moringa pod	6
3	Moringa seed	7
4	Morinaga seed oil	11

## List of Appendices

<b>Appendix No</b>	<b>Title</b>	<b>Page No</b>
1	Changes in free fatty acids of some vegetable oils during frying process	57
2	Changes in peroxide value of some vegetable oils during frying process	58
3	Changes in density of some vegetable oils during frying process	59
4	Changes in refractive index of some vegetable oils during frying process	60
5	Changes in red colour of some vegetable oils during frying process	61
6	Changes in yellow colour of some vegetable oils during frying process	62
7	Changes in blue colour of some vegetable oils during frying process	63
8	Taste of potato chips as affected by type of some vegetable oil during frying process	64
9	Flavour of potato chips as affected by type of some vegetable oil during frying process	65
10	Colour of potato chips as affected by type of	66

	some vegetable oil during frying process	
11	Texture of potato chips as affected by type of some vegetable oil during frying process	67
12	Acceptability of potato chips as affected by type of some vegetable oil during frying process	68
13	Viscosity of potato chips as affected by type of some vegetable oil during frying process	69
14	Potato chips fried in Moringa seed , sun flower oil, cotton seed and ground nut oils in four picture	70



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## Abstract

This research was conducted to see general characteristic and stability of Moringa seed oil in comparison with oils of ground nut, sun flower and cotton seeds in frequent frying process moringa seed was purchased from Omdurman local Market.

The physico chemical analysis, and frequency frying of oil were carried out by AOAC (2000).

Refractive index, density viscosity , colour red, yellow and blue and oil content which were 1.4640 , 0.9190 , 20.22 CP , 5.00 , 1.30 , 0.00 , 38.6% respectively. The chemical properties of Moringa seed oil showed peroxide value 2.79 meqO<sub>2</sub> /kg , free fatty acids 1.40% and fatty acid composition exhibited oleic acid, linoleic , stearic , behenic, palmitic and other acids were (45.09 , 42.43 , 8.38 , 1.77 , 0.52 , 1.81)%) respectively.

There were significant difference ( $p \leq 0.05$ ) among refractive index , density , viscosity colour of Moringa seed oil when they were compared to sun flower seed , cotton seed , and ground nut oils before frying and after frying . Also there were significant difference ( $p \leq 0.05$ ) in chemical properties among peroxide value and free fatty acids of Moringa seed oil compared to sun flower , cotton seed and ground nut oils before frying and after frying , also there was significant difference ( $p \leq 0.05$ ) in sensory characteristics of taste ,flavour , colour , texture

and over all acceptability of potato chips fried in Moringa seed oil compared to sun flower seed, cotton seed and groundnut oils .It is found that potatoes chips fried by moringa oil was better than those fried by other oils.

## الخلاصة

هذا البحث أجري لمعرفة الخصائص العامة وثباتية زيت المورينقا أثناء التحمير، عند مقارنته مع بعض الزيوت النباتية مثل الفول السوداني وزهرة الشمس وبذرة القطن، تم جمع بذور المورينقا من سوق أم درمان، وأخضعت العينة للتحليل الفيزيوكيميائية ومعرفة ثباتية الزيت باستخدام طرق التحليل (2000) AOAC .

معامل الانكسار ، والكثافة النسبية ، واللزوجة واللون أحمر ، أصفر ، أزرق ونسبة الزيت في البذور 1.4640 ، 0.9190 ، ، CP 20.22 ، 38.6% ، 1.3 ، 5.00 على التوالي ، الخصائص الكيميائية لزيت بذور المورينقا أوضحت أن رقم البروكسيد 2.79 meq O<sub>2</sub>/kg ، والأحماض الدهنية الحرة 1.40% وتركيب الأحماض الدهنية حمض الأوليك لينوليك، استياريك، بهينك، بالمتيك ونسبة قليلة من الأحماض الأخرى وهي ( 45.09 ، 42.43 ، 8.38 ، 1.77 ، 0.52 ، 1.8 )% على التوالي.

وجد أن هنالك اختلافات معنوية ( $p \leq 0.05$ ) في معامل الانكسار والكثافة واللزوجة واللون في زيت بذور المورينقا عند مقارنته مع زيت زهرة الشمس وبذرة القطن والفول السوداني . توجد أيضاً اختلافات معنوية ( $p \leq 0.05$ ) في الخواص الكيميائية في رقم البروكسيد والأحماض الدهنية الحرة لزيت بذور المورينقا عند مقارنته مع زيت زهرة الشمس وبذرة القطن والفول السوداني قبل وبعد التحمير ، وايضا هنالك اختلافات معنوية في الخصائص الحسية في الطعم واللون والقوام ودرجة القبول العام لرقائق البطاطس المحمرة بزيت بذور المورينقا عند مقارنته مع زيت زهرة الشمس و بذرة القطن والفول السوداني .

قد وجد أن رقائق البطاطس المحمرة بزيت المورينقا أفضل من المحمرة بالزيوت الأخرى.