



*Mansoura University  
Faculty of Agriculture  
Food Industries Department*

# **Studies on some medicinal plants and its use on some bakery products**

**By**

**Khlood Ibrahim Mohamed Abo Salem**

*B. Sc. Agric. (Food Industries), Kafr El-Sheikh Univ. (2010)*

**THESIS**

*Submitted in Partial Fulfillment of the  
Requirements for the Degree of Master of  
Science (MSC)*

*In Agricultural Sciences (Food Industries)*

**Supervisors**

**Prof. Dr. Mosaad Abdelaziz Abou Raya**

*Prof. of Food Industries*

*Food industries Dept., Faculty of agriculture*

*Mansoura University*

**Dr. Faten Yousef Ibrahim**

*Assistant professor of food industries*

*Food industries Dept., Faculty of  
agriculture*

*Mansoura university*

**Dr. Amal Mahmoud Abdel-Halem**

*Senior researcher of Food Technology*

*Food Research and Technology Institute  
Agricultural Research Center*

**Arab Republic of Egypt**

**2019**

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## LIST OF ABBREVIATIONS

|                |   |
|----------------|---|
| <b>A.O.A.C</b> | Association of Official Analytical Chemists |
| <b>ALA</b>     | Alpha linoleic acid                         |
| <b>B.C.</b>    | Before century                              |
| <b>Ca</b>      | Calcium                                     |
| <b>Cu</b>      | Copper                                      |
| <b>Fe</b>      | Iron  |
| <b>HVF</b>     | Hydrogenated vegetable fat                  |
| <b>K</b>       | Potassium                                   |
| <b>LDL</b>     | Low Density Lipoprotein                     |
| <b>Mn</b>      | Manganese                                   |
| <b>MUSFA</b>   | Mono unsaturated fatty acid                 |
| <b>Na</b>      | Sodium                                      |
| <b>P</b>       | Phosphorus                                  |
| <b>PUSFA</b>   | Poly unsaturated fatty acid                 |
| <b>SAF</b>     | Saturated fatty acid                        |
| <b>USDA</b>    | United States Department of Agriculture     |
| <b>WCF</b>     | Whole chia flour                            |
| <b>Zn</b>      | Zinc  |

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## **Abstract**

This investigation was aimed to study the chemical profile of cinnamon bark and chia seeds, and their use at different levels in biscuits and pan bread. Results of chemical analysis showed cinnamon bark and chia seeds had amounts of protein, ether extract, crude fiber and ash, compared to wheat flour. Chia seeds were richer in phosphorus, calcium and potassium than wheat flour. Cinnamon bark had a major value of potassium, calcium and manganese comparing with wheat flour. Cinnamon bark oil was rich in palmitic acid and oleic acid. Chia seed was deficient in histidine and methionine and had predominant contents of isoleucine, lysine and glutamic acid. The results of sensory acceptability of pan bread with chia seed flour indicated no significant differences in appearance, taste, smell, color, texture and overall acceptability up to 6%, compared to control. The results of the nutritional value indicated pan bread with chia seeds had amounts of protein, ether extract, crude fiber and ash. There were no significant differences in sensory acceptability of pan bread with cinnamon bark powder up to 2%, compared to wheat pan bread. Results of the nutritional value indicated pan bread with cinnamon bark powder had amounts of protein, ether extract, and crude fiber. Data showed that was differences of the nutritional value in biscuits with 1% and 2 % comparing with control biscuit. Results showed that no significant differences in appearance, taste, smell, color, texture and overall acceptability up to 4%, compared to control biscuits. There was significant differences between control biscuit and biscuit with chia seeds. Results indicated no significant differences in organoleptic properties between control biscuit and biscuit with chia seeds up to 2%.

**Keywords:** Chia seeds - cinnamon bark - chemical analysis, nutritional value, sensory acceptability.