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

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LIST OF ABBREVIATIONS

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