

**DETERMINATION OF FATTY ACIDS IN PALM OIL (*Guineensis Elaeis*), CORN OIL
(*Zea mays*) AND COCONUT OIL (*Cocos nucifera*)**



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ABSTRACT

FATTY ACIDS IN PALM OIL (*Guineensis Elaeis*), CORN OIL (*Zea mays*) AND COCONUT OIL (*Cocos nucifera*)

Fatty acids are the important compounds that are present in our diet and also as an ingredient for processed foods. Fatty acids have been shown give benefit when absorbed by human bodies such as help cell membrane development, strength, and function, and they are necessary for strong organs and tissues. Besides, fatty acids are important in industrial uses and pharmaceutical preparations. This study is important in identifying various types of fatty acids in the different types of cooking oil. The composition of fatty acids extracted by acid-catalyzed esterification from palm oil (*guineensis elaeis*), corn oil (*zea mays*) and coconut oil (*cocos nucifera*) were analyzed by gas chromatography-mass spectrometry (GC-MS). The major components of fatty acid in palm oil were palmitic acid, oleic acid and stearic. For corn oil, the fatty acids present are capric acid, myristic acid, palmitic acid, oleic acid and stearic acids. The fatty acids that present in coconut oil are lauric acid, myristic acid, palmitic acid and oleic acid respectively.

CHAPTER 1

INTRODUCTION

1.1 Background of Study

Fatty acids are acids produced when fats are broken down. They are considered as good fats. These acids are not highly soluble in water, and they can be used for energy by most types of cells. They may be monounsaturated, polyunsaturated, or saturated. They are organic, or in other words, they contain both carbon and hydrogen molecules. (Sienko et al, 1966, *Chemistry: Principles and Properties*. McGraw-Hill Book Co., NY).

Sienko et al. (1966 *Chemistry: Principles and Properties*. McGraw-Hill Book Co., NY) also reported that fatty acids are found in oils and other fats that make up different foods. They are an important part of a healthy diet, because the body needs them for several purposes. Fatty acids help move oxygen through the bloodstream to all parts of the body. They help cell membrane development, strength, and function, and they are necessary for strong organs and tissue.

Fatty acids can also help keep skin healthy, help prevent early aging, and may promote weight loss by helping the body process cholesterol. More importantly, they help