



The Role of Vegetable Oils as Antioxidants and Their Nutritional Components: Review

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I. Abstract

The sources of vegetable oils are diverse, and because of this diversity, their uses are numerous and varied. However, the nutritional and health sectors remain the most common due to their beneficial nutritional and health benefits. Vegetable oils are considered healthy because they contain many antioxidants, including fat-soluble vitamins such as tocopherols and phenols, in addition to unsaturated and essential fatty acids, and important vitamins and minerals. They also provide the body with energy, vitality, and stamina. The importance of vegetable oils lies not only in their low saturated fatty acids and harmful cholesterol content but also in their role in protecting body cells and improving the health of the immune system, digestive system, skin, eyes, and liver. This is because most vegetable oils are rich in antioxidants and many vitamins, especially fat-soluble vitamins (A, E, D, and K). The importance of essential fatty acids lies in their crucial role in compensating for deficiencies in these essential fatty acids in the body resulting from surgery, malnutrition, or following a specific diet. Among the most important of these acids are Omega-3, 6, and 9 fatty acids play a crucial role in enhancing the function of the immune system.

This study dealt with several well-known vegetable oils, highlighting their significant medicinal and health benefits, as well as their diverse applications in various fields, including food, pharmaceuticals, cosmetics, and fitness. The study also clarified the antioxidant and essential fatty acid content of these vegetable oils, noting their importance in growth and maintaining overall health.

Keywords: Vegetable oils, Nutrition, antioxidant, Fatty acids.

II. Introduction

Vegetable oil is oil extracted from natural plant sources, such as sesame oil, olive oil, and sunflower oil. It is a less dense liquid than water and usually does not mix with it without the addition of emulsifiers, most of which are chemicals and are triglycerides of three fatty acid esters and calcium. They are produced from the reaction between two alcohols and three similar or dissimilar types of fatty acids [1]. There are many raw materials currently used in the production of vegetable oils, which number more than two hundred types of raw materials (botanical). Annual plants are currently the largest source of oils, such as sunflowers, corn, sesame, cotton, soybeans, and peanuts, as well as perennials that produce oil-rich fruits such as coconut, palm, and olives [2].

Most of the oils and fats produced globally and suitable for human consumption are derived from plant sources. These derivatives are called vegetable oils, which play an important role in the global

