Nutritional composition, extraction, and utilization of wheat germ oil: A review


Abstract

Wheat germ oil is a by-product of wheat milling from which wheat germ oil (WGO) can be obtained using different techniques. For better quality WGO, techniques such as supercritical fluid extraction, molecular distillation, and other innovative methods can be adopted. WGO is composed of 45% sterols, glucose, triglycerides, phospholipids, alcohols, ethers, fatty acids, tocopherols, and sterols. It is a natural source of vitamin E and contains squalene and sterols, which are not found in any other foodstuff. It is also a rich source of antioxidants, which are involved in many biological processes, such as the prevention of cancer and cardiovascular disease. Several studies have indicated that WGO has a high nutritional value and can be used as a functional food. Therefore, WGO has been shown to have potential applications in various fields, including medicine, agriculture, and industry.

Keywords: Wheat germ oil, Extraction methods, Utilization, Nutritional value, Functional food.