

Kenaf seed oil: A potential new source of edible oil

Abstract

Kenaf is gaining more attention in recent years due to its high fiber content and medicinal usage. It is now cultivated in many countries and its commercial value is being explored. Kenaf seeds, which are usually discarded as waste product have high oil content and can be a new source of edible oil. Scope and approach: In this review, kenaf seed oil (KSO) will be described in details. Kenaf seed oil can be extracted from kenaf seeds by Soxhlet extraction or supercritical fluid extraction (SFE). In order to prolong the shelf life of kenaf seed oil, microencapsulation is carried out and the storage stability is studied. The health benefits and uses of kenaf seed oil are also studied to explore its commercial value and applications. Key findings and conclusions: Kenaf seed oil is composed mostly of unsaturated fatty acid with palmitic, oleic and linoleic being the major one. It also contains various bioactive components such as phenols, saponins, tannins and alkaloids. It is reported that Soxhlet extraction gives higher yield than SFE but the latter method is preferred due to safety issue. Spray drying is used to encapsulate the KSO and the microencapsulated KSO has enhanced oxidative stability. KSO possesses various biological activities such as anti-hypercholesterolemic, anti-oxidation, anti-cancer, anti-inflammatory and others due to the presence of phytochemicals. Besides using as edible oil, KSO finds applications in various fields, such as cosmetics, chemicals and fuel.