

[Back](#)

Agricultural and Food Science - abstract



Vol. 15 (2007), No. 4, p. 402-413

NYKTER, MINNA, KYMÄLÄINEN, HANNA-RIITTA, GATES, FRED, SJÖBERG, ANNA-MAIJA,
Quality characteristics of edible linseed oil

Keywords linseed, *Linum usitatissimum*, oil, quality, edible, methods,

Abstract

In this review the quality properties of linseed oil for food uses are discussed as well as factors affecting this quality. Linseed oil has a favourable fatty acid composition with a high linolenic acid content. Linseed oil contains nearly 60% α -linolenic acid, compared with 25% for plant oils generally. The content of linolenic acid and omega-3 fatty acids is reported to be high in linseed grown in northern latitudes. The composition of fatty acids, especially unsaturated fatty acids, reported in different studies varies considerably for linseed oil. This variation depends mainly on differences in the examined varieties and industrial processing treatments. The fatty acid composition leads also to some problems, rancidity probably being the most challenging. Some information has been published concerning oxidation and taste, whereas only a few studies have focused on colour or microbiological quality. Rancidity negatively affects the taste and odour of the oil. There are available a few studies on effects of storage on composition of linseed oil. In general, storage and heat promote auto-oxidation of fats, as well as decrease the amounts of tocopherols and vitamin E in linseed oil. Several methods are available to promote the quality of the oil, including agronomic methods and methods of breeding as well as chemical, biotechnological and microbiological methods. Time of harvesting and weather conditions affect the quality and yield of the oil.

Contact hanna-riitta.kymalainen@helsinki.fi

[[Full text](#)] (PDF 181 kt)

Update 21.2.2007.

Source: MTT's Publications database [Afsf](#)