



Product Description

Chia (*Salvia hispanica* L.)

APPLICATIONS

Chia seeds and oil are recommended:

- As source of essential fatty acids.
- To maintaining a proper lipid balance.
- In postmenopausal women with cardiovascular risk and people with cardiovascular risk due to hypercholesterolemia and hypertriglyceridemia.
- Smokers who need to control their levels of LDL in blood

INTRODUCTION

The market of human food, animal feed, as well as food supplements, uses different seeds as source of vegetable oil for their content in omega fatty acids, including linseed, colza, sunflower, soybean, corn, evening primrose and chia seeds.

Despite the antioxidant activity and profile of healthy fatty acids, consumers were not aware of the benefits of chia until recent years. Based on the results of investigations,

chia seed oil is a good choice to maintain a balanced healthy lipid profile.

Salvia hispanica L. or chia is a cultivated plant because of the interest of its nutritional composition for the food industry:

- 15-25% proteins
- 25-40% oil
- 26-41% carbohydrates
- 18 to 30% dietary fibre
- 4-5% minerals and vitamins

From all of these nutrients, it highlights the composition in essential fatty acids:

- **Chia oil contains the two essential fatty acids for the human body:** alpha-linolenic acid (ALA Omega-3) and linoleic acid (LA, Omega-6). They represent 60% and 20% of total fatty acids respectively.
- Chia seeds contain a high amount of antioxidants and is free of gluten.

HEALTH BENEFITS

A comparative study using flaxseed, rapeseed and chia seeds as feed for chickens, showed that the eggs from hens fed with chia seeds had the highest content of ALA (ω -3) compared to hens fed with flaxseed or colza.

In other animal studies it was observed that the incorporation chia seed in the animal feeding caused a significant reduction in the level of serum triglyceride (TG) and LDL density or bad cholesterol (LDL), while increasing significantly high density proteins or good cholesterol (HDL) and the levels of polyunsaturated fatty acids ω -3.

The results obtained in animals also results desirable for human consumption. It is known that there is a correlation between high and low intake of polyunsaturated fatty acids (PUFAs) with diseases such as cardiovascular disorders, diabetes and metabolic syndrome. Furthermore, it has been observed that the intake of ALA and other long chain ω -3 (EPA, DHA, ...) has cardioprotective effects in women.

Recently, chia has regained its popularity to become a major source of oil with high levels of polyunsaturated fatty acids.

Chia, which used to be the main food crop of the indigenous peoples of Mexico and Guatemala, is now widely cultivated and marketed by its content alpha-linolenic acid and antioxidant properties.

Chia is an alternative as source of Omega 3 to vegetarian, vegan and people allergic to seafood.

STATUS AND RECOMMENDED AMOUNT

Currently the consumption of chia seeds and oil obtained thereof, it is allowed in Europe under the **Novel Food** category. The European regulations allow the following applications and amounts:

Chia seeds: can be included up to 5% in bread products, baked goods, cereals for breakfast, nuts and seed mixtures.

Chia oil: can be included in oils and fats up to 10% and as a **nutritional supplement can be consumed up to 2 g of chia oil per day, which provide 800 mg of ALA.**

Chia oil softgels: 4 softgels of 500 mg provides 1200 mg ALA.

