

Hemp Seeds and Hemp Oil as Food



Hemp Seed Is a Nutritional Powerhouse

says German-American scientist Dr. Gero Leson. “It is an excellent source of several critical mineral nutrients and vitamins. Its oil has an outstanding fatty acid spectrum; its protein is balanced and easily digested. Moreover well prepared hemp foods are very appetising. I am convinced that hemp seeds have a great food potential. Their nutritional composition and culinary versatility are very much in line with several major trends in the science and marketing of food”.

In his comprehensive 1993 book on fat nutrition “Fats that heal, fats that kill”, Dr. Udo Erasmus concluded “the best-balanced source of essential fatty acids is hemp seed oil”.





Hemp Seeds and Oil in Human Nutrition

Hemp seeds and oil have been part of the human diet in Asia and Europe for at least 5,000 years. In China and in other hemp growing areas in Asia, hemp seeds remain as traditional foods. Yet, worldwide the currently largest use of hemp seeds is as feed for birds and fish.

In Europe and North America hemp seeds for food were rediscovered in the mid 1990s – concurrently with the reintroduction of hemp as a technical fibre crop. Since then, several studies have confirmed the high nutritional quality of hemp seeds and their products. Hundreds of such products are now available in stores and on the Internet, annual market growth is consistently more than 15 %. Today, the combined annual hemp seed production in Canada and Europe is more than 20,000 tonnes – and growing.

Clinical studies on actual health benefits from eating hemp foods are still rare. Yet, their findings and the known nutritional composition of hemp seeds promises various health benefits, as part of a balanced diet.

This booklet introduces hemp seeds as a modern food staple – and the commercial materials made from them: cold pressed oil, shelled seeds (or hemp nuts), flour and protein powder.

The European Industrial Hemp Association (EIHA)

EIHA was originally founded as an association of the members of the European hemp industry. Regular members include primary hemp processors in the EU. Associate members may be associations, research organisations and companies and individuals working in the area of hemp and other natural fibres. Founded in 2005, EIHA today has 7 regular and more than 60 associated members from 30 countries.

EIHA was founded to give industry a voice at the European Commission in Brussels. It has rapidly become a respected industry association that provides effective lobbying and serves as an information bank. The annual EIHA conference has become an attractive opportunity for members and visitors to meet, learn about developments and exchange views with their colleagues.

More Information at www.eiha.org



Hemp seeds and oil



Hemp seeds

Hemp Oil – excellent and unique fatty acid spectrum

Today's hemp oil is typically a cold-pressed gourmet oil from mature, well-dried seeds. Its most unique nutritional feature is the "almost perfect" balance of the omega-3 and omega-6 essential fatty acids plus the presence of two "higher" omega-3 and -6 fatty acids, stearidonic acid (SDA) and gamma linoleic acid (GLA). These offer known health benefits and are found in only a few other vegetable oils – yet nowhere as balanced and tasty as in hemp oil.

A gross imbalance in the omega-3/6 ratio in the Western diet is now considered an important contributor to the high occurrence of inflammatory, cardiovascular, skin and even mental disorders. As a balanced source of these fatty acids, hemp oil and seeds can help reduce their occurrence, in good taste.

Hemp Protein – high quality

Hemp seeds and the seed cake flour contain a high quality protein. It is easily digestible, and contains all essential amino acids in a balanced ratio that satisfies the protein needs of adults. Commercially available protein flour and powders are high in protein and dietary fibre. They are used in shakes and smoothies, as well as for baking.

Minerals, Vitamins and other Micronutrients

Hemp seeds, nuts and flour also offer a bonanza of micronutrients that are often lacking in our diet. These hemp seed materials are good or even excellent sources of magnesium, manganese, iron, zinc and potassium – and of several B1, B3 and B5 vitamins. Hemp seeds also contain significant amounts of phytosterols and of tocopherols, i.e. members of the Vitamin E complex.

Overall, the nutritional richness and culinary versatility of hemp seeds and their products make them an excellent basis for a healthy diet and a range of food products.

Typical Nutritional Composition of Shelled Hemp Seeds (per 100 gram)

Energy content:	580 kcal (2,430 kJ)
Fat:	45 g
Protein:	35 g
Total Carbohydrate:	8 g (Fibre: 6 g)
Ash:	6 g
Selected Minerals and Vitamins (in percent of daily value, DV):	
Phosphorus:	130 %
Magnesium:	150 %
Manganese:	450 %
Iron:	90 %
Zinc:	60 %
Vit B1 (thiamine):	90 %
Vit B3 (niacine):	30 %
Vit B5 (panthotenic acid):	90 %
Vit E (tocopherol):	20 %

Fatty acid composition of Hemp Oil *

Unsaturated fatty acids:	~ 90 %
Oleic acid (18:1 omega-9):	10 – 15 %
Linoleic acid (18:2 omega-6, essential):	55 – 60 %
Alpha-linolenic acid (18:3 omega-3, essential):	17 – 20 %
Gamma-linolenic acid (18:3 omega-6):	2 – 4 %
Stearidonic acid (18:4 omega-3):	0.5 – 2 %
Saturated fatty acids	~10%

*Varies with hemp variety



Hemp biscuits



Hemp cereals

Hempro International



Peeled and unpeeled hemp nuts

Hemp oil

Hemp capsules

Hemp cereals

Hemp biscuits

Manitoba Harvest



Shelled hemp seed

Hemp oil

Hemp protein

Hemp oil

Hemp protein

Hemp seed butter



Hemp pasta and oil

Wholebake



Hemp bars

CANAH



Hemp flour and hulled seeds

Hemp oil



Active colon



Hemp protein powder



Hemp caps

Hanf & Natur



Hemp sauce

Hemp pasta

Hemp confectonery

Hemp slices

Hemp chocolate



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