

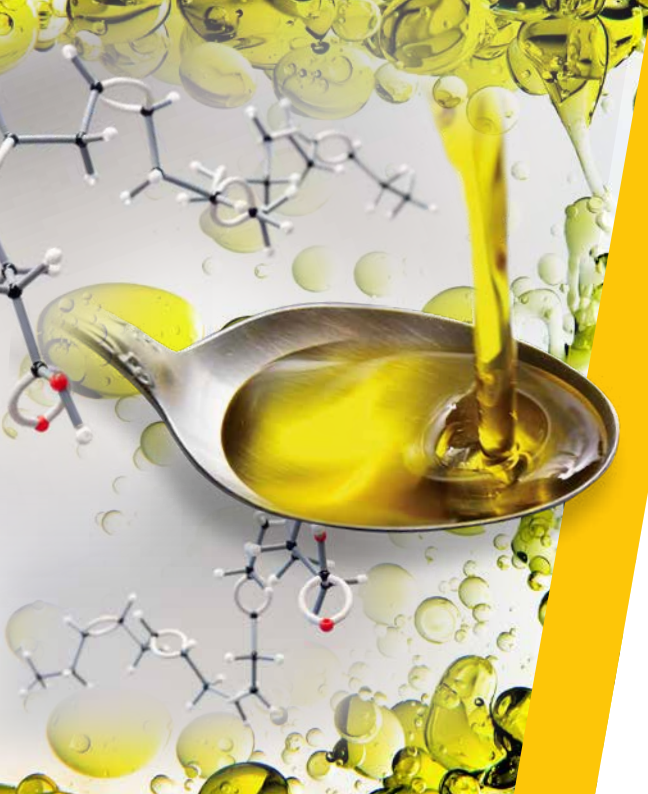


**HENRY
LAMOTTE**
OILS



Omega-3 Oils

Ingredients with additional benefit Oils



Omega-3 Oils

Essential fatty acids

Omega-3 fatty acids are very important essential fatty acids. They are found in marine sources, such as fish and algae, as well as in high-quality oils from a variety of plants.

Fish and algae are our primary sources of eicosapentaenoic acid (EPA) and dicosapentaenoic acid (DHA). These key fatty acids are found in cold-water fish – for example salmon, mackerel, halibut, sardines, tuna and herrings – and in numerous varieties of algae. The essential fatty acid α -linolenic acid (ALA) can be found in the seeds of a number of plants and in the oils extracted from them.

Omega-3 fatty acids are polyunsaturated fatty acids (PUFAs) and contribute significantly to our health and well-being. By consuming only two grams of ALA per day we can help to maintain normal blood readings and cholesterol levels.*

ALA and LA are the essential raw materials needed in order to produce EPA and DHA in our bodies. As the human body's conversion of EPA/DHA is relatively inefficient, it is important to supplement our diet with these two Omega-3 fatty acids. EPA and DHA help to keep the cardiovascular system functioning normally.*

Furthermore, they play an important role in the development of our visual and cerebral functions*, a role which is particularly important during pregnancy and infancy. In addition, EPA and DHA are the raw materials needed to form hormones that influence important vital functions in our bodies.

* EFSA-supported health claim. For further information please review the following sources for more information and details. Please note that the information contained in this document is for professional use only. It is not intended for the end user.





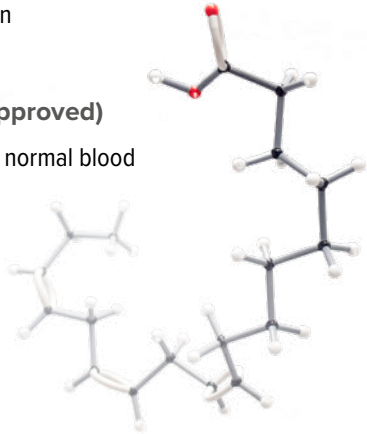
Health Claims

Health Claims EPA/DHA (EFSA approved)

- Maintenance of normal brain functions
- Maintenance of normal vision
- Maintenance of normal cardiac function

Health Claims ALA (EFSA approved)

- ALA contributes to the maintenance of normal blood cholesterol levels

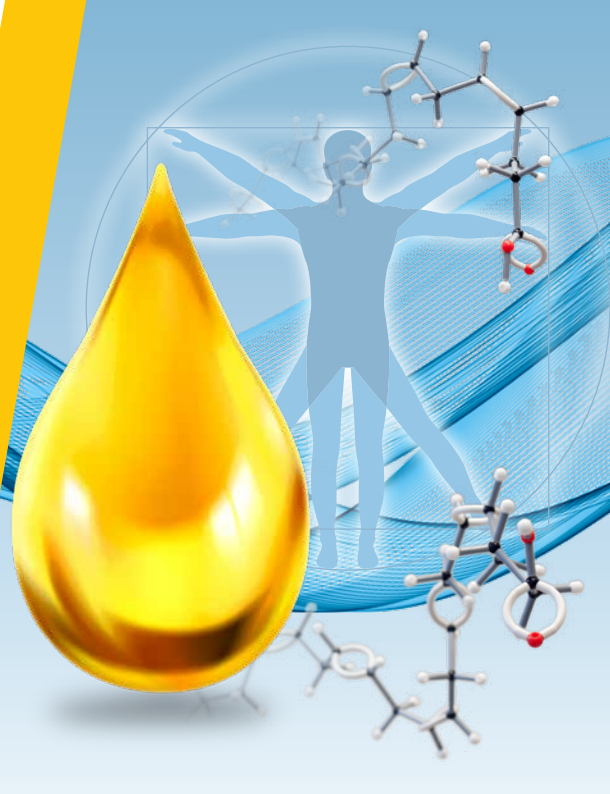


Health Claims in the EU

DHA: The claim may be used only for food which contains at least 40 mg DHA per 100 g and per 100 kcal. To bear the claim information shall be given to the consumer that the beneficial effect is obtained with a daily intake of 250 mg of DHA.

EPA and DHA: The claim may be used only for food which contains at least 40 mg EPA/DHA per 100 g and per 100 kcal. To bear the claim information shall be given to the consumer that the beneficial effect is obtained with a daily intake of 250 mg of EPA and DHA.

ALA: The claim may be used only for food which contains at least 0.3 g ALA per 100 g and per 100 kcal. To bear the claim information shall be given to the consumer that the beneficial effect is obtained with a daily intake of 2 g of ALA.



The oil is rich in omega-3 fatty acids and takes care of it for a well-balanced diet

rich in



Nutritional Claims

- The claim **“source of Omega-3”** can be used only for food, which contains at least 0.3 g of ALA per 100 g and per 100 kcal.
- The claim **“rich in Omega-3”** can be used only for food, which contains at least 0.6 g of ALA per 100 g and per 100 kcal.
- The claim **“source of Omega-3”** can be used only for food, which contains at least 40 mg of EPA/DHA per 100 g and per 100 kcal.
- The claim **“rich in Omega-3”** can be used only for food, which contains at least 80 mg of EPA/DHA per 100 g and per 100 kcal.
- To use the claim **“source of Omega-3”** following quantities should be used, for example*:

Walnut Oil	2.7 g	per 100 g and per 100 kcal.
Linseed Oil	0.6 g	per 100 g and per 100 kcal.
Rapeseed Oil	3.0 g	per 100 g and per 100 kcal.
Marine Oil	0.2 g	per 100 g and per 100 kcal.

* Based on the average values of samples taken from our most recent incoming stocks (as per August 2018)

Omega-3-Oils Overview*

Oils	LA (Omega-6) [average %]	ALA (Omega-3) [average %]	EPA (Omega-3) [average %]	DHA (Omega-3) [average %]	SDA (Omega-3) [average %]	Ratio Omega-6/Omega-3	total Omega-3 FA [%]	total PUFAs [%]
Ahiflower® Oil	12	46	–	–	18	1:4	64	84
Algae40 % DHA	–	–	0,4	46	–	–	46	52
Black Currant Seed Oil	46	28	–	–	–	4:1	16	77
Camelina Oil	18	33	–	–	–	1:2	33	52
Chia Oil	19	60	–	–	–	1:3	61	80
Hemp Oil	55	20	–	–	–	3:1	18	76
Linseed Oil	16	53	–	–	–	1:3	53	69
Perilla Oil	13	63	–	–	–	1:5	63	76
Rapeseed Oil	21	10	–	–	–	2:1	10	31
Sacha Inchi Oil	37	44	–	–	–	1:1	44	81
Soybean Oil	52	6	–	–	–	8:1	6	58
Walnut Oil	60	12	–	–	–	5:1	12	71
Wheat Germ Oil	56	6	–	–	–	9:1	6	62
Marine Oil, Omega-3, natural	1,3	0,8	18	12	–	1:7	37	42

* Based on the average values of samples taken from our most recent incoming stocks (as per August 2018)



Ahiflower® Oil

Buglossoides arvensis

- Ahiflower® Oil is pressed and extracted from the seeds of non-genetically-modified varieties of the field gromwell. It is considered to be an annual or biannual herbaceous plant from the raw leafy plant family (*Boraginaceae*).
- Commercial production takes place in Great Britain, the USA and Canada as well as in the southern hemisphere.
- We market and sell Ahiflower® Oil under the registered trademark of our suppliers.

Characteristic properties

- The outstanding property of Ahiflower® Oil is its high content of the essential fatty acids stearidonic acid (SDA, C18:4, Omega-3) and gamma linolenic acid (GLA, C18:3, Omega-6).
- The main benefit of SDA is its highly efficient conversion into eicosapentaenoic acid (EPA C20:5, Omega-3).
- Ahiflower® Oil is a valuable source of Omega-3 and Omega-6 fatty acids.
- It also contains a high proportion of the essential fatty acids linolenic acid (C18:2, Omega-6) and alpha-linolenic acid (C18:3, Omega-3).
- Ahiflower® Oil is the ideal vegan alternative to fish oil.

Applications

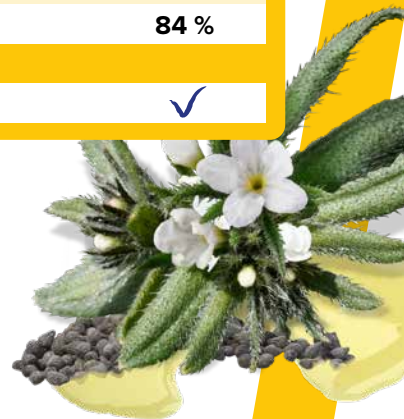
- A versatile edible oil thanks to its nutritious fatty acid ratio.
- Ideal for use as an ingredient in dairy products, cheese, spreadable fats and breakfast cereals (subject to Novel-Food approval).
- Also suitable for use in animal feed as a vegetable-based supplementary source of Omega-3, -6 and -9.

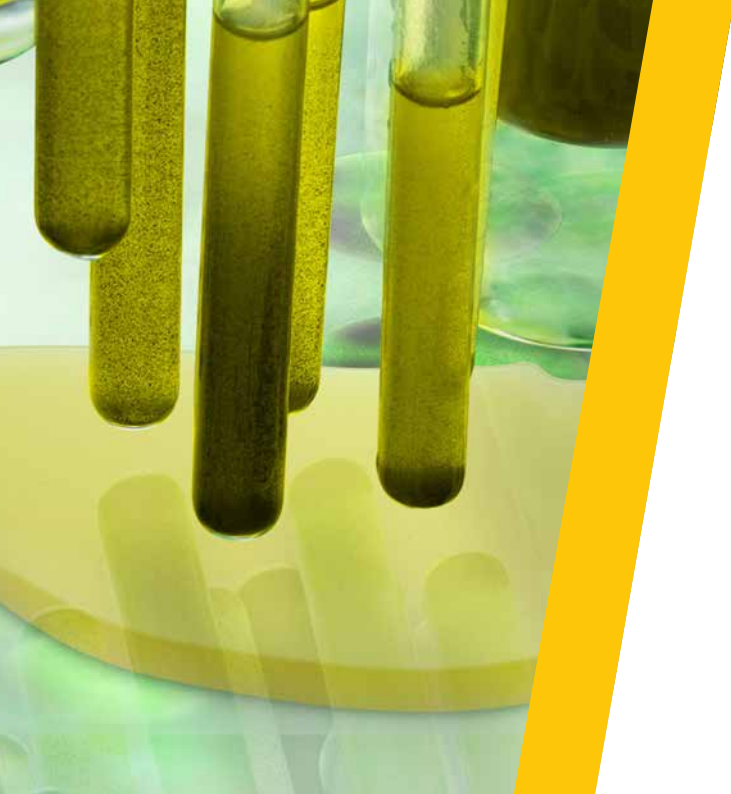
Ahiflower® Öl

LA (Omega-6)	12 %
ALA (Omega-3)	46 %
SDA (Omega-3)	18 %
Omega-6/Omega-3	1:4
total Omega-3 FA	64 %
total PUFAs	84 %

Qualities

refined





Algae Oil 40% DHA

Schizochytrium

- Algae Oil 40% DHA is harvested from the microalgae *Schizochytrium sp.* It was previously thought to be a marine fungus, but was later taxonomically grouped in the Thraustochytriaceae family.
- The microscopically small single-cell algae is common in most coastal areas of tropical and temperate climates. It mainly feeds on dead plant material and does not utilise photosynthesis

Characteristic properties

- The distinctive feature of the microalgae *Schizochytrium sp.* is that it is very rich in Omega-3 fatty acids, especially DHA.
- Our Algae Oil 40% DHA contains at least 40% DHA.
- This makes it an interesting vegan alternative to fish oil.

Applications

- In food supplements due to the health benefits of EPA and DHA, in particular for the brain, eyes and cardiovascular system.
- Novel Food approved as a nutritious ingredient in spreadable fats, salad dressings, breakfast cereals, dairy products and similar items, as well as bakery products.

Algae Oil 40% DHA

DHA (Omega-3)	40 %
EPA (Omega-3)	<0,5 %
total Omega-3 FA	46 %
total PUFAs	52 %

Qualities

refined





Black Currant Seed Oil

Ribes nigrum

- The black currant is a deciduous shrub, which was once common in European-Asian forest areas and is now cultivated in Central Europe.
- The small, dark, grape-like fruits cover the seeds.
- The oil is extracted and then gently refined and winterised.



Characteristic properties

- The outstanding property of Black Currant Seed Oil is its high content of γ -linolenic acid (GLA, C18:3, Omega-6).
- It has an ideal combination of nutrients, as it is rich in linoleic acid (LA, C18:2, Omega-6) and α -linolenic acid (ALA, C18:3, Omega-3).
- The oil is slightly yellowish and almost neutral in smell.

Applications

- Ideal for use as a dietary supplement
- Is effective in helping to maintain normal blood-cholesterol levels.
- Black Currant Seed Oil is valued by the pharmaceutical and cosmetic industries for its high content of γ -linolenic acid (GLA) and can be utilised, among other applications, in dermatological formulations.

Black Currant Seed Oil

LA (Omega-6)	46 %
ALA (Omega-3)	28 %
Omega-6/Omega-3	4:1
GLA	14 %
total Omega-3 FA	16 %
total PUFAs	77 %
Qualities	
refined	✓

Qualities





Camelina Oil

Camelina sativa

- Camelina (sometimes called gold of pleasure) belongs to that group of plants that are verifiably known to have been cultivated by humans since the earliest times. The use of camelina was widespread between 400 BC and AD 500.
- While the origin of the plant probably lies in Southern and Eastern Europe, today it is mainly cultivated in Central and Eastern Europe, including Russia.
- Camelina is a very robust plant that can be cultivated as an environmentally friendly intermediate crop.
- The seed is covered by a hard skin, is between 1.5 mm and 2.5 mm long and have an oil content of 30% to 35%.



Characteristic properties

- Very high content of essential fatty acid α -linolenic acid (ALA; C18:3, Omega-3).
- The pressed oil is yellowish and has a slightly spicy taste.

Applications

- Delicate, nutritionally physiological and valuable salad oil.
- Utilised in processed foods such as spreads.

Camelina Oil

LA (Omega-6)	18 %
ALA (Omega-3)	33 %
Omega-6/Omega-3	1:2
total Omega-3 FA	33 %
total PUFAs	52 %

Qualities

pressed	✓
pressed organic	✓
refined	✓



Chia Oil

Salvia hispanica

- The Mexican chia (*Salvia hispanica*) is an annual herbaceous plant which was originally found almost exclusively in Mexico and Central America. It can grow up to 1.75 m high and has white to black-grey patterned clusters which measure from 2 mm to 4 mm long.
- The word „chia“ comes from the Nahuatl language and means „oily“. Traditionally, chia seeds were important for the Aztecs as a food source and for use in folk medicine because of their beneficial nutritional and physiological properties.
- Today chia is grown commercially in South and Central America.
- The oil is produced by gentle pressing and subsequent filtration.



Characteristic properties

- The main element of Chia Oil is α -linolenic acid (ALA, C18:3, Omega-3), with a proportion of up to 60%, followed by linoleic acid (LA, C18:2, Omega-6) with a proportion of 18% to 20%.
- Its natural tocopherols and antioxidants make Chia Oil even more versatile.
- Recognised by the EU as a Novel Food with a content of up to 10% in oils and 2 g/day or as pure Chia Oil with 2 g/day and in food supplements.

Applications

- Particularly versatile edible oil with a high level of Omega-3 fatty acids.
- Ideal for use as a salad oil
- Can be utilised in food supplements

Chia Oil

LA (Omega-6)	19 %
ALA (Omega-3)	60 %
Omega-6/Omega-3	1:3
total Omega-3 FA	61 %
total PUFAs	80 %

Qualities

pressed	✓
pressed organic	✓





Hemp Oil

Cannabis sativa

- Hemp is one of the oldest and most important cultivated plants. Its geographical origins are in Canada, Europe and Central Asia.
- Hemp has been successfully cultivated in China for over 6,000 years.
- Hemp is a robust plant that does not leach out the soil and is therefore also very good for lowering CO₂ levels.
- The seeds are approx. 3 mm to 5 mm long and have an oil content of between 30% and 35%.
- Oil extraction is exclusively carried out by means of gentle, mechanical cold pressing and subsequent filtration.



Characteristic properties

- Contains γ -linolenic acid (GLA, C18:3, Omega-6).
- Has an ideal ratio of nutrients, as it is rich in content of linoleic acid (LA, C18:2, Omega-6) and essential α -linolenic acid (ALA, C18:3, Omega-3).
- The oil is green in colour and has a slightly hay-like smell and taste.

Applications

- Versatile oil rich in Omega-3 fatty acids, which contributes to a healthy balance of Omega-6 and Omega-3 fatty acids.
- Tasty oil for use in salads, dressings, sauces, marinades and spreads.

Hemp Oil

LA (Omega-6)	55 %
ALA (Omega-3)	20%
Omega-6/Omega-3	3:1
total Omega-3 FA	18 %
total PUFAs	76 %

Qualities

pressed	✓
pressed organic	✓



Linseed Oil

Linum usitatissimum

- Flax, also known as linen, is one of the oldest cultivated plants, which was grown 6,000 to 8,000 years ago by the Sumerians and Egyptians.
- The plant's region of origin is not known, but today flax is cultivated worldwide. The main growing areas are Eastern Europe, Kazakhstan and South America.
- The seeds are approx. 4 mm to 6 mm long and have an oil content of 30% to 48%.



Characteristic properties

- The outstanding property of Linseed Oil is its high content of linoleic acid (LA, C18:2, Omega-6) and essential α -linolenic acid (ALA, C18:3, Omega-3).
- The pressed oil is golden yellow in colour and has a unique, slightly hay-like odour and taste.

Applications

- Cold-pressed Linseed Oil is a popular edible oil, suitable for use in products such as salads, dressings, sauces, marinades and spreads.
- It is highly valued as an additional ingredient in margarine.

Linseed Oil

LA (Omega-6)	16 %
ALA (Omega-3)	53 %
Omega-6/Omega-3	1:3
total Omega-3 FA	53 %
total PUFAs	69 %

Qualities

pressed	✓
pressed organic	✓
refined	✓





Perilla Oil

Perilla frutescens

- Perilla is closely related to the herbs lavender and basil.
- The plant is assumed to have originated in the mountainous regions of India and China.
- Today the main growing areas are in East, South and South-East Asia.
- Perilla Oil is obtained by pressing the seeds which then undergo refining if necessary.
- The seed has an oil content of about 35% to 45%.

Characteristic properties

- High content of essential Omega-3 fatty acid α -linolenic acid (ALA, C18:3, Omega-3).
- The oil is viscous with a light yellow colour and a weak but highly characteristic odour.

Applications

- Utilised in food supplements

Perilla Oil

LA (Omega-6)	13 %
ALA (Omega-3)	63 %
Omega-6/Omega-3	1:5
total Omega-3 FA	63 %
total PUFAs	76 %

Qualities

pressed	✓
refined	✓



Rapeseed Oil

Brassica sp.

- Rapeseed is now considered to be the most important oil plant in the temperate zones. The oil of *Brassica sp.* is one of the most widely produced raw materials in the world.
- The plant probably originated in the eastern Mediterranean. Today the main growing areas are in Western and Eastern Europe for winter rapeseed and Kazakhstan and South America for summer rapeseed.
- A characteristic visual feature of the rapeseed plant is its bright yellow flower.
- The seeds are small, dark-brown grains with an oil content of 40% to 50%.



Characteristic properties

- The fatty acids found in the highest quantities are oleic acid (C18:1, Omega-9), linoleic acid (LA, C18:2, Omega-6) and α -linolenic acid (ALA, C18:3, Omega-3).
- The ratio of Omega-6 to Omega-3 lies within the favourable range.
- The pressed oil has a light yellow colour and has a typical, lightly seed-like odour and taste.

Applications

- Very suitable as salad oil or crude vegetable oil as well as for steaming and roasting
- Used in the food industry for the production of margarine or mayonnaise.
- Utilised in the manufacture of bakery products.



Rapeseed Oil

LA (Omega-6)	21 %
ALA (Omega-3)	10 %
Omega-6/Omega-3	2:1
total Omega-3 FA	10 %
total PUFAs	31 %

Qualities

pressed	✓
pressed organic	✓
refined	✓
refined organic	✓



Sacha Inchi Oil

Plukenetia volubilis

- Sacha Inchi Oil is harvested from the Inca peanut (*Plukenetia volubilis*), a perennial climbing plant from the *Euphorbiaceae* family.
- The Inca peanut has been valued by indigenous peoples of the Amazon forest for centuries. The high nutritional value of the nut has only become generally known in recent years. Due to its high potential, it is considered a “superfoods”.
- The unpeeled seed has a fat content of between 50% and 54%.
- The fruits are collected in the Peruvian Amazon region, after which the nuts are extracted and then gently pressed.



Characteristic properties

- Sacha Inchi Oil is characterised by its exceptionally balanced composition of fatty acids. 90% of the fatty acids contained in it are Omega-3, Omega-6 and Omega-9 fatty acids. Due to this special composition, the oil is suitable for many purposes.
- Because it has a high content of antioxidants such as vitamin E, Sacha Inchi Oil is very resistant to oxidation compared to other Omega-3 oils.

Applications

- In salads, dips and sauces.
In Salaten, Dips und Saucen.
- Is used in snacks, confectionery, sweets and energy bars.
Snacks, Süßigkeiten, Süßwaren und Energieriegel.
- For foodstuff which has to be roasted or baked during production, Sacha Inchi Oil is a stable functional Omega-3 source.
Für Lebensmittel, die bei der Herstellung geröstet oder gebacken werden, stellt Sacha Inchi Öl eine stabile funktionelle Omega-3-Quelle dar
- Approved as novel food which can be used in a similar manner to Linseed Oil.
Als Novel Food zugelassen mit einer Verwendung wie Leinöl.

Sacha Inchi Oil

LA (Omega-6)	37 %
ALA (Omega-3)	45 %
Omega-6/Omega-3	1:1
total Omega-3 FA	44 %
total PUFAs	81 %

Qualities

pressed



pressed organic





Soybean Oil

Glycine max

- The soybean is an ancient cultivated plant which is known to have been a food plant in China from 1700 BC to 1100 BC. Distribution and cultivation in the USA began in the early 19th century.
- Today, the main soy bean growing areas are found in the USA, Argentina and Brazil.
- The 4 mm - 10 mm long seeds are brown to black in colour and have an oil content of approx. 15% to 20%.
- Oil extraction takes place by means of pressing and/or extraction with subsequent filtration; if required, this is followed by a refining process.
- Crude Soybean Oil is a source of lecithin.



Characteristic properties

- High content of linoleic acid (LA, C18:2, Omega-6), oleic acid (C18:1, Omega-9).
- Contains α -linolenic acid (ALA, C18:3, Omega-3).
- The pressed oil is light yellow and has a characteristically mild odour and taste.

Applications

- Ideal for use as a salad oil, for baking, frying and deep frying.
- Used in the food industry for the production of margarine, mayonnaise and finished products.
- Soybean Oil is considered to be a healthy food oil.

Soybean Oil

LA (Omega-6)	52 %
ALA (Omega-3)	6 %
Omega-6/Omega-3	8:1
total Omega-3 FA	6 %
total PUFAs	58 %

Qualities

pressed organic	✓
refined	✓
refined organic	✓





Walnut Oil

Juglans regia

- The walnut tree (*Juglans regia*) originated in Persia. Today, walnuts are grown in all the world's temperate zones.
- The main exporting countries are France, Turkey, the USA and, more recently, China.
- It takes up to 15 years for the walnut tree to start to produce larger quantities of nuts; its full capability is only achieved after around 50 years.
- The kernels are stone fruits which are surrounded by a hard skin and have an oil content of approx. 50% to 65%.
- Walnut Oil is obtained from unpeeled walnut kernels (nuts) by pressing or extraction.

Characteristic properties

- High content of linoleic acid (LA, C18:2, Omega-6), oleic acid (C18:1, Omega-9).
- Contains α -linolenic acid (ALA, C18:3, Omega-3).
- The ratio of Omega-6 to Omega-3 is within the favourable range.
- The refining process results in an oil with a pale yellow colour and a slightly nutty taste.
- Also available as a roasted quality

Applications

- A popular cooking oil for use in salads and cold dishes
- The roasted quality can be used for marinades



Walnut Oil

LA (Omega-6)	60 %
ALA (Omega-3)	12 %
Omega-6/Omega-3	5:1
total Omega-3 FA	12 %
total PUFAs	71 %

Qualities

pressed	✓
refined	✓
roasted	✓



Wheat Germ Oil

Triticum sp.

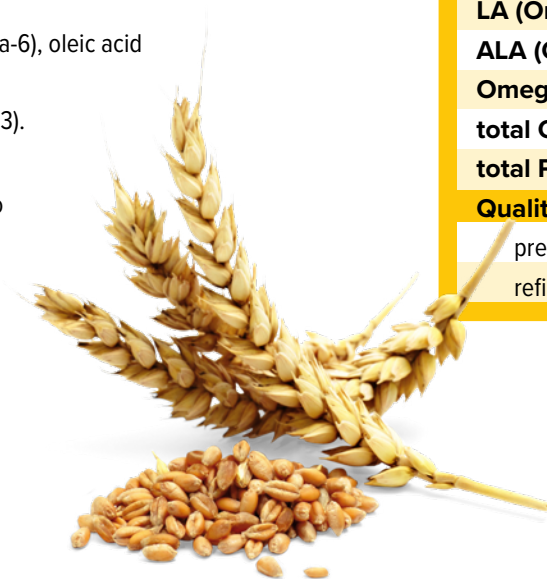
- Wheat is one of the oldest cultivated plants known to mankind.
- Wheat originally came from Persia; today the main cultivation areas are in China, India, the USA, Russia and France.
- The seeds are golden-yellow, oval grains which produce spores with an oil content of approx. 6% to 10%.
- The spores are separated from the grains by a machine and then collected for additional processing. The oil is extracted by means of cold pressing, solvent extraction or CO₂ extraction, with optional refining afterwards.

Characteristic properties

- High content of linoleic acid (LA, C18:2, Omega-6), oleic acid (C18:1, Omega-9) and palmitic acid.
- Contains α -linolenic acid (ALA, C18:3, Omega-3).
- Rich in natural vitamin E.
- The refined oil has a light colour and is mild to neutral in taste and smell.

Applications

- Healthy edible oil, suitable for salads and in cold dishes.



Wheat Germ Oil

LA (Omega-6)	56 %
ALA (Omega-3)	6 %
Omega-6/Omega-3	9:1
total Omega-3 FA	6 %
total PUFAs	62 %

Qualities

pressed	✓
refined	✓



Omega-3 Fish Oils

- The main sources of our Omega-3-rich Fish Oils are sardines, anchovies and other fish species from the waters of the Pacific and Atlantic Oceans.
- The fresh raw material is gently extracted and refined. The last step in the refining process, deodorisation, is especially important for the organoleptic properties of the product.




Characteristic properties

- High Omega-3 fatty-acids content of eicosapentaenoic acid (EPA, C20:5) and docosahexaenoic acid (DHA, C22:6).
- The end product is a pure, white-to-slightly yellowish oil.
- Our typical Fish Oils contain approx. 18% EPA and approx. 12% DHA.
- Other variants as well as different concentrates are available.
Please contact us for further information.

Applications

- Used as a dietary supplement to aid the metabolism due to its Omega-3 fatty acids DHA and EPA.
- Contributes to maintaining a desirable ratio of Omega-3 to Omega-6 fatty acids, which can reduce inflammation in the body.
- DHA and EPA have positive effects on the cardiovascular system e.g. reducing the risk of coronary heart disease, and maintaining normal blood pressure and blood-lipid levels.

Omega-3 Fish Oils

EPA (Omega-3)	18 %
DHA (Omega-3)	12 %
Omega-6/Omega-3	1:7
total Omega-3 FA	37 %
Qualities	
refined	

Qualities

refined





We respect natural resources

As an internationally operating company that deals with natural raw materials, we are always aware of our responsibility to the environment and society. We check our suppliers carefully and ensure complete traceability back to the source.

All our products are harvested in a controlled manner and/or originate from controlled fisheries.



DE-ÖKO-003



MSC-C-54612



ASC-C-00693



Note: Not all certifications apply to all products.

Social responsibility in the business process

- Member of the BSCI (Business Social Compliance Initiative) since 2012
- Dedicated to improving social standards in the global supply chain
- We maintain a permanent presence on site where our goods are produced
- We benefit from on-site support from independent auditors
- Our sustainability circle consists of management and senior staff
- We produce an annual sustainability report





Henry Lamotte Oils GmbH

We think oils!

Henry Lamotte Oils is a leading supplier and producer of superior oils, fats, waxes and similar base materials. Our clients are trusted companies in the food industry as well as the pharmaceuticals, cosmetics, chemicals and animal feed industry. High-quality products, an experienced supply chain management and an excellent quality assurance system set Henry Lamotte Oils apart from our competitors. We provide our clients with pragmatic yet creative solutions in line with our philosophy **“Quality – Service – Reliability”**.

Challenge us and see for yourself how Henry Lamotte Oils can benefit your company.

www.lamotte-oils.de • omega3@lamotte-oils.de



Our services:

- Worldwide purchasing and sales
- Manufacturing and processing
- Contract bottling and filling
- Efficient Supply-Chain-Management
- Product development and customer-specific formulas and recipes
- Quality assurance and in-house laboratories
- Wide range of quality accreditations

Warranty information:

The data contained herein are based on our current knowledge and experience. This does not relieve the company producing and/or placing a product on the market from carrying out own research and tests. These data neither warrants certain properties nor the suitability of the product for a specific purpose. Data given herein may change without prior information and is not to be considered as part of our terms and conditions of sale.



**Filled with
passion**
since 1925



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