

Feed Grade Fish Oils

Cod Liver Oil • Cod Oil • Omega-3 Fish Oil • Salmon Oil



SINCE 1938





Natural Quality Products

Established in 1938, LYSI hf. is one of the world's largest producers of marine oils for human consumption and an original pioneer of fish oil production. Today, LYSI maintains its position as a leader fuelled by expertise in manufacturing high-demand fish oil products from both Icelandic fish stocks and imported crude fish oils from other parts of the world.

Although fish oil for human consumption is the main focus LYSI also offers a range of feed grade fish oils of high quality.

The emphasis is on marine fish oils in their original form. Our products comply with all EU regulations for feed application. They meet official regulatory standards with regards to environmental contaminants, and are free of genetically modified materials (GMO).

Our certified quality system meets the requirements of ISO 9001, GMP/API and BRC Global Standard for Food Safety.

LYSI collection system for cod livers is very efficient, and there is a strong emphasis on maintaining effective sourcing connections and relations with crude oil suppliers. LYSI runs its own primary rendering plant for cod liver from wild Atlantic cod. The products are delivered in variable package sizes: 22 kg buckets, 55 & 190 kg drums, 900 kg IBCs, 21.000 kg tank containers and in 20.000 kg flexi-tanks. Batch sizes normally range from 2–65 metric tons; however standard products can be made available in smaller batches if required.





The Processes

All the feed grade oils are neutralised and bleached but can also be winterised and/or deodorised, depending on the customers requirements. An overview of the processing steps:

- **Neutralisation**
The oil is neutralised by removing free fatty acids using caustic soda.
- **Bleaching**
Pigments and contaminants are removed by the use of adsorbents such as bleaching earth and activated carbon.
- **Winterisation**
High melting triglycerides are removed by cooling the oil and filtering off the solid fraction.
- **Deodorisation**
Volatile components are removed with steam injection under high vacuum and elevated temperature.



Essential Supplements

LYSI offers a wide range of marine lipids with variable levels of EPA/DHA omega-3 fatty acids, such as Cod Liver Oil, Cod Oil, Omega-3 Fish Oil and Salmon Oil.

Not only are the vitamins essential, the benefits of the omega-3 fatty acids for pets and other animals are also unquestionable. These nutrients are needed by animals as well as humans. Icelandic farmers are very well aware of the wholesome properties of fish oil. They have been giving their cattle and sheep cod liver oil for decades in order to improve their general health and fertility. Many Icelandic horse owners give their horses fish oil during the active period from January to April when horses are kept indoors. Owners of horses, dogs and cats claim fish oil is good for the fur/skin of their pets and can be of help in alleviating skin problems. Due to their anti-inflammatory properties, the omega-3 fatty acids support joint health.

- Cod Liver Oil is obtained from the liver of cod. It is the traditional liver oil, rich in vitamins A and D and provides both the benefits of vitamins and the omega-3 fatty acids. Cod Liver Oil is fully refined with only a slight fishy odour.
- Cod Oil is fish body oil, obtained from codfishes, such as blue whiting. Like Cod Liver Oil it is rich in omega-3 and vitamins A and D.
- Omega-3 Fish Oil is made from anchovy and sardine. It has a very high level of omega-3, but does not contain vitamins.
- Salmon Oil is derived from farmed salmon. It contains omega-3, but no vitamins.

The oils are refined under ideal conditions in LYSI's refinery in Iceland, thereby meeting European legislation for feed.

Products can be tailor-made according to customer requirements, by blending different oils and/or adding vitamins, antioxidants and flavour.

	Cod Liver Oil	Cod Oil	Omega-3 Oil	Salmon Oil
Main nutrients	Provides vitamins A and D and omega-3	Provides vitamins A and D and omega-3	Provides high levels of omega-3	Provides omega-3
Raw material	Oil from cod liver	Fish oil from codfishes	Fish oil from anchovy and sardine	Fish oil from farmed salmon
EPA mg/g	80	80	165	25
DHA mg/g	105	100	110	30
Omega-3 total mg/g	245	240	350	135
Vitamin A (IU/g)	1000	1000		
Vitamin D (IU/g)	100	100		

The Environment

Respect for the environment is a major factor in every aspect of LYSI's operations and part of our quality ethos. At LYSI we:

- Recognise the importance of sustainable fisheries
- Use energy from renewable sources
- Maximise the utilisation of raw material
- Guarantee effective waste management

All manufacturing by-products are well managed and their sales are legally documented and fully traceable. All the production takes place in Iceland, a country renowned for its pure and unspoiled environment, fresh water and clean air.



It's Pure – It's Clean – It's Icelandic