

Natural Fish Oils

Bulk & Consumer Products



SINCE 1938



World leaders

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.

During its early years, the company concentrated on exporting bulk products. Later, in the 1960s, it started to produce consumer packs of winterised medicinal cod liver oil, a valuable source of vitamins A and D. More recently, the health benefits of omega-3 fatty acids have also become increasingly clear.

Today, **LYSI** maintains a leadership position in its field, 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. Getting the most out of its extensive equipment and know-how, **LYSI** offers its customers, many of whom have been with the company for decades, a broad range of natural health products.





Products to be proud of

Flexibility is our trademark

LYSI prides itself in delivering high quality products, made with the best materials available and produced in accordance with strict international standards.

Our emphasis is on marine fish oils in their original form and our products comply with all major pharmacopoeias and the GOED monograph (industry quality standard). They meet official regulatory standards with regards to environmental contaminants, and are free of genetically modified materials (GMO) and components.

LYSI products are sold around the world, and our goal is simple:



The **LYSI** portfolio:

- Cod liver oil, omega-3 fish oil, cod oil, tuna oil, shark liver oil, salmon oil and omega-3 concentrates, along with fish oil blends
- A wide range of other dietary supplements combined with fish oil
- Custom-made products
- Products from an approved and certified facility (GMP-certified, BRC Global Standard for Food Safety and ISO 9001 approved)

Meeting individual customer requirements is a priority at **LYSI**. Aware of the importance of flexibility and specific adjustments, we have the capacity to:

- Produce different types of oils according to customer needs and specifications
- Utilise our extensive experience, expertise and cutting-edge technology to achieve optimum results for the customer
- Develop different business concepts with different customers



Bulk products

LYSI offers a wide range of marine lipids with variable levels of omega-3 EPA/DHA fatty acids. Products can be tailor made according to customer requirements, by blending different oils and/or adding vitamins, antioxidants and flavours.

Our collection system for cod liver raw material is very efficient, and we have a strong emphasis on maintaining effective sourcing connections and relations with crude oil suppliers. We also run our own primary rendering plant for cod liver from wild north-Atlantic cod.

LYSI delivers bulk products in variable package sizes: 22kg (buckets), 190kg (drums), 900kg (IBCs), 21,000kg (tank containers) and in flexi-tanks. Batch sizes normally range from 2–65 metric tons; however standard products can be made available in smaller batches if required.



Fish oil processing includes:

- **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.
- **Short-path distillation (when required)**
The oil is stripped of contaminants by distillation under ultra-high vacuum and elevated temperature.

As production is completed, a process of standardisation occurs to balance vitamin content and add antioxidants and flavours if required.

Consumer products



LYSI offers a wide range of own-brand, as well as private label products in the omega-3 and related dietary supplements segment. If any modifications are required to meet individual market specifications, LYSI has the knowledge, capability and necessary networks to ensure such requirements are met.

Our consumer product portfolio encompasses:

- A variety of oils and other dietary supplements: omega-3 fish oil, cod liver oil, tuna oil, shark liver oil and different types of omega-3 concentrates
- Fully packaged consumer products in jars, bottles or blister packs
- Capsules in various sizes and shapes
- Liquid fish oils, natural and flavoured
- A selection of vitamins and antioxidants
- Support with packaging solutions

Amongst our customers are pharmaceutical companies, supermarket chains, health chains and wholesalers and distributors across the world.





Quality

LYSI is committed to being a reliable producer of marine oils. The company's quality policy is based on continuous training, the production of defect-free products, research and constant improvement. A strong quality department is backed by an expert in-house laboratory.

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



The environment

Respect for the environment is a major factor in every aspect of our operations and part of our quality ethos. At **LYSI** we aim always to:

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

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





Research & development

For decades, **LYSI** has recognised the importance of R&D, a factor that has led to the development of new products, targeted towards specific markets. The continuing success of our R&D enables:

- Enhanced product and analytical-method development
- Production support
- Close cooperation with developers of medicinal products
- Research cooperation with different academic institutions

LYSI has an in-house quality control and R&D laboratory that is well equipped and fully accredited to ISO 9001 and GMP standards, led by an AOCS Approved Chemist.

High-tech production

An expansion of our state-of-the-art fish oil refinery, originally built in 2005, was completed in 2012. As a result of the expansion, annual production capacity has increased from 6,500 to 13,000 tons.

The **LYSI** refinery is specially designed for flexibility and customised solutions. Independent processing steps provide the opportunity to work on different types of oil simultaneously, allowing **LYSI** to maintain the shortest lead times possible. We use the latest technology to help ensure compliance with strict regulations and meet consumer requirements for low contaminant levels in the final product.



LYSI products
are shipped to
over 70 countries
around the globe





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