

How is fish oil produced?

From the production to the sale of fish oil, it is necessary to go through such a process: the raw materials of fish oil are purchased from suppliers with legal qualifications, and the manufacturers regularly perform quality inspection on the raw materials of the suppliers according to national standards; in the production process, each step is passed. After the inspection, the qualified one can enter the next process. Finally, the person in charge of the quality management department issues the finished product qualification report and the finished product release order before leaving the factory. Before the product leaves the factory, the person in charge of the pharmacy must also look at the qualification of the pharmaceutical company and the approval of the product. And the enterprise standard of the product, as well as the inspection report of each batch of products entering the pharmacy, can be sold in the pharmacy.

The refinement of marine fish oil into food and health products, and even medicines, is a very complicated process, which is far more difficult than the refining of conventional edible vegetable oils such as soybean oil and peanut oil.

This is closely related to the characteristics of marine fish oil, namely the instability of unsaturated fatty acids in marine fish oil. In marine fish oil, ethyl carp fish oil with a total concentration of EPA and DHA exceeding 50% has a strong polarity and is extremely unstable, and it is very easy to oxidize with oxygen in the air during its processing. Therefore, the entire process needs to be carried out under vacuum or nitrogen. The following is a brief introduction and exploration of the process technology of refined fish oil processing in our actual work.

Marine fish oil is mainly derived from pressed oil in the processing of fishmeal. The fish oil in the fish is mainly collected by cooking and centrifugation, pressing and centrifugation. The fish oil is called hair oil.

Hair oil is the raw material for refined fish oil. Hair oil is generally dark, very viscous, and has a strong smell of fish. The shark fish oil is then pretreated to remove the gum from the fish oil to improve its viscosity and remove impurities; the acid value in the oil is lowered to improve the hydrolysis and rancidity of the oil; after the initial decolorization, Let the fish oil color lighter and pre-treated fish oil into multiple processing techniques such as esterification, molecular distillation, urine bag, winterization and deodorization, and some processes will be repeated.

Some have to set the process according to the customer's requirements for the product.

Currently, the most popular marine refined fish oils for food, health care products and medicines are as follows: EPA/DHA content is 18/12, total content is 30% concentration. The product is generally triglyceride type, and there is also an ethyl ester type before. At present, the 18/12 type of ethyl ester type is relatively rare in the market. Products with a total EPA/DHA content of 50% to 75%, such as 30/20, 33/ 22, 40/20, 40/30, 10/50 and 45/25, etc. For these products, they are generally ethyl ester products. There are few triglyceride types, and only a few companies in the world can achieve high concentration triglyceride type. The total content of EPA/DHA is above 80%, such as 70/10, 75/10 and 80/10. It is basically prescribed as medicinal, all of which are ethyl ester type, so it is also called "polyethylenoate".

Production must be carried out in a 100,000-level purification zone to ensure no pollution

For the production workshop of health products, the state requirements must be carried out in

the 100,000-level purification zone. Hu Rongguo explained that the 100,000-level purification zone in the production workshop is mainly for controlling the content of microorganisms and dust particles. By purifying the space, filtering the filter (including three stages of initial effect, medium efficiency and high efficiency), temperature and humidity control, and ventilation (Requires 15-20 times per hour) to ensure the environmental standards of the production workshop to ensure that the product meets the quality standards (ie microbiological requirements). Therefore, both the production staff and the management personnel should wear sterile clothes when entering the production workshop.

Workers can pass the strict screening and pass the examination before they can enter the workshop.

"The workers in our production workshops are selected through layer-by-layer screening. We have requirements for the applicants' work experience when recruiting. After recruiting, the company will train them in production skills. Only the employees who pass the assessment can In addition, each workshop is fixed and fixed, each position has a clear job standard, and employees must strictly follow the job standards to perform production tasks." Hu Rongguo added.

The finished product must have an inspection report and a release slip when it leaves the factory.

After the raw materials enter the factory, they will be inspected according to national standards. After passing the materials, they will be weighed and batched. Leader Edible Oil Refining Processes said that through a series of processes such as pressure pelleting, drying, washing, sorting, and intermediate station inspection, the products can only be qualified after entering the factory. After the storage, the inner packaging (into aluminum package and bottled) is carried out. After the inspection, the finished product is packaged. The finished product must have the finished product inspection report and the finished product release sheet before leaving the factory.

According to Leader Edible Oil Refining Processes, these links are very important in the whole production process: the drying process, the air blown by the air conditioner in the drying room is specially treated, this wind is dehumidifying on the one hand, and on the one hand in the washing process, some The shaped pellets and the leaking pills must be picked out, and the picking work is all done manually; after the pellets are washed, the quality department staff will inspect the products in the area to be tested, including the composition indicators, shapes, etc. Qualified areas, non-conforming to the unqualified area, all qualified products are packaged and placed in the semi-finished product to be tested for inspection.

Compared with the simple fish oil products on the market, the approval process for fish oil vitamin E soft capsules is more complicated. Leader [Edible Oil Refining](#) Processes explains: "Vitamin E-containing fish oil can prevent the degradation of active ingredients (EPA and DHA) in fish oil, ensuring stable content and enhancing absorption. Our fish oil vitamin E soft capsule does not add any during production and processing. Excipients, the price is relatively low compared to the fish oil sold on the market, so that more low- and middle-income families can

afford fish oil."