

# Do You Know The Main Components And Physiological Functions Of Fish Feed?

The protein ingested from the bait is digested into amino acids by the chemical action of digestive system enzymes and intestinal peristalsis. The amino acids are absorbed into the fish body to synthesize fish protein for growth, reproduction, tissue repair and life maintenance.

## 1. Protein

Protein is the material basis of fish life. Fish's skin, muscle, blood, internal organs and enzymes and nitrogenous hormones required for life metabolism are all composed of protein. The protein ingested from the bait is digested into amino acids by the chemical action of digestive system enzymes and intestinal peristalsis. The amino acids are absorbed into the fish body to synthesize fish protein for growth, reproduction, tissue repair and life maintenance.

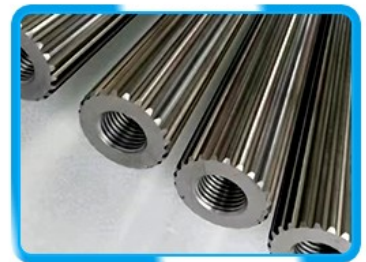
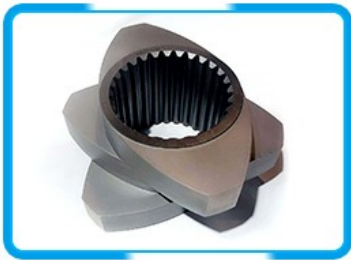


The proportion of fish bait protein converted into body protein does not exceed 30%, that is, about 70% is used to maintain life and exclude from the digestive system. The content of the animal is very small or the amount synthesized in the body cannot meet the needs of fish, and the amino acids that must be provided by the bait are called essential amino acids. The essential amino acids in fish food include: isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophan, valine, arginine and histidine. Only if the protein in the bait is sufficient in quantity, the variety of amino acids is complete, and the proportion is right, can it meet the

needs of fish growth.

## 2. Carbohydrate

Carbohydrates include crude fiber, sugar and starch. Most fish have a low utilization rate of crude fiber in bait, but a small amount of crude fiber can stimulate the peristalsis of the digestive tract and help food pass through the digestive tract. Therefore, the crude fiber content in fish bait should not be too high. Starch and carbohydrates can be digested by fish into monosaccharides, and the monosaccharides absorbed by fish are converted into fat and ribonucleic acid in the body, forming part of the fish body and participating in the life activities of the fish.



## 3. Fat

Fat is decomposed into fatty acids and glycerol by enzymes in the digestive organs and then absorbed. Fatty acids and glycerol are absorbed and then synthesized into fat, which is stored in the subcutaneous tissue, the gap between muscles and connective tissue, and the abdominal cavity. Phospholipids are a component of cell protoplasm. Fat helps the absorption of fat-soluble vitamins.

The fatty acids that cannot be synthesized or synthesized in fish can not meet the needs of fish growth and reproduction, and the fatty acids that must be provided by the bait are called essential fatty acids. Essential fish fatty acids include linoleic acid, linolenic acid and arachidonic

acid. During the storage of fish bait, fat is easily oxidized and decomposed into harmful substances. Therefore, adding antioxidants to fish bait or adding lipids before feeding can avoid the harm caused by fat oxidation.



#### 4. Dietary mineral

Inorganic salt is an important part of the fish body, and the bones, muscles and body fluids of fish contain inorganic salts. The mineral elements contained in fish mainly include the main elements such as calcium, phosphorus, potassium, sodium, magnesium, sulfur and chlorine and the trace elements such as iron, zinc, copper, iodine, manganese, cobalt, molybdenum, selenium, tin and chromium. . The mineral elements in fish have the function of maintaining the osmotic pressure and pH stability of body fluids. Some mineral elements are an important part of the enzyme system in the body and participate in the metabolism of fish energy and substances.

#### 5. Vitamin

Vitamins are a class of organic compounds with small molecular weight. According to the solubility of vitamins, they can be divided into water-soluble vitamins and fat-soluble vitamins. Water-soluble vitamins include vitamin B1, vitamin B2, vitamin PP, vitamin B6, ubiquitin (pantothenic acid), para-aminobenzoic acid, inositol, folic acid, vitamin H, vitamin B12, vitamin C, etc. Fat-soluble vitamins include vitamin A, vitamin D, vitamin E, and vitamin K. Vitamins in animals are mainly derived from bait. If the bait lacks vitamins, it will cause fish metabolism

disorders, and severe cases may cause diseases.