

STATEMENT OF QUALITY

Omega Protein, Inc. derives its Menhaden fishmeal, fish oil, and fish solubles solely from Menhaden (*Brevoortia sp.*). Menhaden are small, herring-like, pelagic, ocean fish that feed on mineral rich plankton, resulting in essential trace minerals, micro-nutrients, and Omega-3 fatty acids in the final product. They are caught along the coastal waters of the Atlantic Ocean and Gulf of Mexico by refrigerated fishing vessels owned and operated by Omega Protein for that purpose. The fishmeal, oil and solubles made from Menhaden by Omega Protein are not by-products from other fishing efforts. All products are made from chilled, fresh fish. No diseased or spoiled fish are used in our process. These products are manufactured to meet specific customer needs.

Whole, fresh menhaden are cooked by heat from indirect steam at temperatures ranging from 185°F to 200°F for 15 to 20 minutes to allow for easy separation of the oil and water from the meat. Low temperature cooking preserves the natural nutrient qualities of the amino acids, minerals, fats, and vitamins, and aids in freeing the oil from the fat cells.

The meat is dried in temperature controlled, rotary dryers at 190°F (product discharge temperature) for 20 to 30 minutes to a 10% moisture, 60% protein meal. The temperature controlled drying retains over 95% of the protein's digestibility as measured by the *Association of Official Analytical Chemists* method 971.09. Antioxidants are immediately added to retard oxidation of the fats, and the meal is stored under constant monitoring until shipped. Normally, ethoxyquin is the antioxidant used, but other antioxidants may be substituted by customer request. The meal is tested to assure it meets the quality requirements at the time of production, and periodically during storage.

The oil is separated from the water by centrifuges, and stored in large storage tanks for shipment. Typically, the oil contains less than 2% free fatty acids, and has a peroxide value of less than 5 meq. Storage in this manner does not normally require the addition of antioxidants. Omega Protein DOES NOT add antioxidants of any type at any time to its oil. However, antioxidants may be added at customer request to meet their desire for a specific type or amount of antioxidant. The tanks are monitored regularly to insure the quality.

The aqueous liquid, once separated from the meat and oil, is rapidly concentrated under vacuum at temperatures not exceeding 165°F to typically 30% protein and 50% refined solids, and termed solubles or emulsion. Adjusting the pH to 3.9 with food grade sulfuric acid is used to stabilize the solubles, and inhibit microbial growth. When requested, other acidulants can be used to meet customer requirements. Omega Protein's fish solubles are a palatable, nutritious, natural, marine, liquid protein source. It can be a beneficial addition to petfoods as well as animal and aquaculture feeds.

Transport vehicles must conform to the US BSE Compliance Program as set forth in 21CFR589.2000. When shipped in bulk, the trailers are inspected prior to loading. When shipped in bulk containers or bags, the containers/bags are clean, new packages.

Our Quality Control department monitors the entire process to insure freshness and adherence to customers' specifications.

Omega Protein warrants that all of its feed ingredients are safe when used as directed, and conform to all applicable AAFCO regulations.



Earl N. Louviere, Director of Quality Control

For further information, call 1-800-345-8805.