

## SeaPro® 40 Fish Bone Meal

**SeaPro® 40** is a high-organic mineral fish meal derived from fresh cuttings of marine whitefish and related species harvested and processed for human consumption. All processing is domestic and shore-based. All facilities are federally inspected. Commercial fisheries targeting Pacific Whiting (*Merluccius productus*) and ground fish species on the West Coast of the United States conform to [Marine Stewardship Council](#) standards and reflect our “Sustainability Mission” to promote socially and ecologically responsible marine resource management practices worldwide. Utilizing only fish cuttings from established marine fisheries managed as sustainable natural resources is the best way to ensure our product is wholesome, renewable and consistently available.

**SeaPro® 40** is a unique, consistent feed ingredient. Product specifications do not vary seasonally and each production lot is formulated to standard, strict nutrient levels. Our ingredient is a source of highly digestible fish protein, provides high levels of digestible organic minerals, and is ideal for validating flavor, natural and organic claims. It is stabilized with natural antioxidants.

**SeaPro® 40** is produced solely in the United States of America. It is traceable with documentation showing source and processing of raw material utilized in production and final product formulation. Our company benefits from vertical integration within a human seafood company, Pacific Seafood Group, through access to their electronic tracking of fish catch, landings and processing, and the subsequent disposition of fresh fish cuttings. Pacific Seafood Group maintains strict quality standards based on scientifically-derived FSMA/HACCP systems at all our locations to ensure that the product you receive is the highest quality.

Customers are always welcome to visit our facilities and review our practices. Our definition of excellence, “*consistently doing your best and always striving to do better*”, demonstrates our commitment to providing a traceable, sustainable and wholesome product to our customers and yours.

### Guaranteed Analysis

Crude Protein (min)	37.0 %
Crude Fat (min)	0.5 %
Crude Fiber (max)	1.5 %
Ash (max)	50.0 %
Moisture (max)	10.0 %
Calcium (min/max)	13.5 / 18.0 %
Phosphorus (min)	7.0 %
Magnesium (max)	0.40 %
Salt (max)	2.0 %

**Freshness**

Histamine	50 mg / kg meal
Total Volatile Nitrogen	100 mg N / 100 g meal

<b>Amino Acids</b>	<b>(% meal)</b>	<b>(g / 100 g protein)</b>
Alanine	3.1	7.7
Arginine	3.3	8.1
Aspartic acid	2.8	7.0
Cystine	n.d.	n.d.
Glutamic acid	4.3	10.7
Glycine	6.3	15.6
Histidine	0.5	1.4
Isoleucine	0.9	2.3
Leucine	1.6	4.0
Lysine	1.6	4.0
Methionine	0.9	2.3
Phenylalanine	1.1	2.8
Proline	3.3	7.9
Serine	1.8	4.4
Threonine	1.3	3.3
Tryptophan	n.d.	n.d.
Tyrosine	0.7	1.9
Valine	1.2	3.0

**Protein Digestibility**

Pepsin Digestibility (0.0002% pepsin)	96.0 %
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<b>Minerals</b>	<b>(% meal)</b>
Calcium	15.0
Phosphorus	7.5
Potassium	0.4
Sodium	0.6
Sulfur	0.4
Magnesium	0.3

<b>Minerals</b>	<b>(mg/kg meal)</b>
Iron	150
Zinc	90
Boron	35
Manganese	35
Copper	15
Barium	7
Chromium	3
Arsenic	BDL
Cadmium	BDL
Cobalt	BDL
Lead	BDL
Mercury	BDL
Molybdenum	BDL
Nickel	BDL
Selenium	BDL
Silver	BDL

**Microbial Analysis**

Aerobic Plate Count      100,000 cfu / g

**Product Characteristics**

Color                      Light brown  
 Odor                        Mild fish  
 Physical                    Free-flowing  
 Density                    Approximately 30 - 35 lb / ft<sup>3</sup>  
 pH                            7.0 – 7.5  
 Storage                    Store in a cool, dry place in original packaging  
 Stability                    12 months when appropriately stored

**Packaging**                      Bulk bags

**AAFCO Definition**              Fish Meal, Fish Bone Meal

## Processing Statements

Allergen: This product contains fish and is processed in a facility that processes crustacean shellfish.

This product is not intended for human consumption.

The values for amino acids, minerals, microbial analysis and product characteristics are typical.

## Manufacturer

BioOregon Protein, Inc.

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