

Empyreal® 75. A naturally pure, consistent source of protein. Every Shipment. Every Time.

Empyreal 75 is a natural source of high-purity corn protein delivered without artificial preservatives. Our quality assurance focus ensures product integrity, every shipment, every time. Empyreal 75 is a consistent, valuable source of low ash, highly digestible protein that is rich in nutrients and is also a natural source of antioxidants. This plant-based protein concentrate is an environmentally sustainable and economically affordable source of naturally pure protein. Because Empyreal 75 is manufactured on purpose and is not a by-product, you can depend on it to be consistent nutritionally and provide the same functional advantages every time. Empyreal 75 promotes superior texture, binding and physical characteristics when used as an ingredient in your products.

AAFCO 48.89 Corn Protein Concentrate

Typical Analysis (As-Is Basis)

Protein	76.2%	Ash	1.3%
Fat, Acid Hydrolysis	4.5%	Carbohydrates	5.3%
Crude Fiber	1.0%	Density, lb/cu ft	36–39
TDF	5.0%	Omega-6 (Linoleic Acid)	2.55%
Moisture	8.5%		

Nutritional Information

Amino Acid Content

Content	As-Is	% Protein
Alanine	6.17	8.16
Arginine	2.28	3.02
Aspartic Acid	4.24	5.62
Cystine	1.15	1.52
Glutamine/Glutamic Acid	15.29	20.26
Glycine	1.79	2.37
Histidine	1.55	2.06
Isoleucine	3.06	4.06
Leucine	12.63	16.73
Lysine	1.08	1.43
Methionine	1.70	2.29
Phenylalanine	4.65	6.16
Proline	6.68	8.84
Serine	3.47	4.60
Threonine	2.25	2.98
Tryptophan	0.32	0.42
Tyrosine	3.95	5.24
Valine	3.36	4.45

Vitamins (mg/kg)

Vitamin A (Retinol)	13.4
Choline	190
Niacin	46.9
Pantothenic Acid	1.88
Pyroxidine (B6)	5.45
Riboflavin (B2)	2.73
Thiamine (B1)	0.41
Biotin	0.18
Inositol	1604

Carotenoids/Antioxidants (ppm)

cis-Lutein	35–55
trans-Lutein	90–150
cis-Zeaxanthin	20–35
trans-Zeaxanthin	90–120
alpha-Cryptoxanthin	20–28
beta-Cryptoxanthin	10–16
alpha-Carotene	2–4
beta-Carotene	15–25

Minerals

Calcium	0.05%
Potassium	0.15%
Phosphorous	0.24%
Magnesium	0.05%
Chloride	0.29%
Sulfur	0.95%
Sodium	0.25%
Iron, ppm	73.6
Zinc, ppm	47.9
Manganese, ppm	4.3
Copper, ppm	11.1
Chromium, ppm	0.00
Molybdenum, ppm	0.74
Selenium, ppm	1.97
Iodine	<5.0

EMPYREAL®

75

dependably pure.

See the difference our protein makes.



For more information about Empyreal 75,

visit e75aqua.com or call 866.369.5498/+1.402.533.4282.

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Empyreal 75 is the first and only protein concentrate made from corn. This plant-based protein concentrate is an environmentally sustainable and economically affordable source of naturally pure protein. Because Empyreal 75 is manufactured on purpose and is not a by-product, you can depend on it to be consistent nutritionally and provide the same functional advantages every time. It contains a minimum of 75 percent protein, produced through a patented process. Product pasteurization provides a new level of product quality, creating a dependable, safe, high-protein ingredient source for aquaculture. Strict quality control measures ensure that product purity, uniformity, flowability and nutrient composition are consistent in every shipment. Empyreal 75 offers superior functionality of binding ingredients in pelleted diets and provides even, consistent expansion in extrusion applications. Research also shows Empyreal 75 is a highly digestible protein source that provides excellent feed intake and gain.

Protein Source Relative Comparisons					
	Empyreal 75	Wheat Gluten	Poultry Meal	Fish Meal	Soy Protein Concentrate
Ingredient Consistency	✓	✓			✓
Nutrient Availability	✓	✓	✓	✓	✓
Extrusion Functionality	✓	✓			✓
Binding Capability	✓	✓			✓
Shelf-Life (Stability)	✓	✓			✓
Low Ash	✓	✓			✓
Unit Protein Cost	✓				

Consistency

A quality product starts with a high-quality, consistent ingredient. Empyreal 75 provides:

- An excellent source of available nutrients.
- Exceptional product binding and ingredient commingling.
- Uniform, fine-cell structure in extrusion applications.
- Extrusion properties that allow consistent management of feed buoyancy and fat coating.

Cost Savings

Empyreal 75 is an environmentally sustainable and lower-cost option to most plant and animal-based

protein concentrates, including fish meals.

It provides:

- Reduced formulation costs by decreasing the dependency on expensive animal and plant-based protein concentrates as well as volatile fish meal markets.
- A cost-effective source of essential amino acids and a good source of natural antioxidants that promote health and help prevent rancidity.
- Reduced drying costs because less water is required in the extrusion process.
- Significantly reduced transportation costs thanks to much higher protein density.

Nutritional Profile

Empyreal 75 provides an excellent source of highly available protein along with:

- Low anti-nutritional factors compared to soybeans, wheat or rapeseed.
- A gluten-free option.
- A high concentration of methionine and other essential amino acids.
- An abundant supply of natural antioxidants — B-carotene, zeaxanthin and lutein — that extend product shelf life and promote animal health.
- Linoleic acid, a good source of omega-6 essential fatty acids.
- An all-natural protein option.



Formulation Advantages

Empyreal 75 is a naturally pure, highly concentrated protein. Its extrusion properties permit superior expansion with very low starch levels, facilitating the formulation and design of products your customers want and need. It offers:

- Low ash content and high protein concentration that complement other premium animal proteins in the diet.
- Higher protein concentration for extra "space in the diet," giving manufacturers a degree of freedom to vary ingredients to meet specific dietary needs economically.
- Superior extrusion qualities that result in reduced fines while permitting greater fat inclusion.
- Fine-cell structure for enhanced coating capability.
- Excellent product binding, eliminating the need for many non-nutritive binding agents in pellet applications.
- An environmentally sustainable plant-based option which addresses ingredient availability issues, public concerns and marketing pressures to greatly reduce, and potentially eliminate fish meal and other animal proteins whose availability and/or market acceptability may be at risk.

Safety First

Ingredient safety was our number one priority long before it became international headline news. Empyreal 75 begins with a wholesome, sustainable, natural source of plant protein. Through our pasteurization and washing processes, bacteria is destroyed which reduces the levels of mycotoxins, organophosphates and other contaminants. The result is improved safety through the use of Empyreal 75.

Innovation

We are committed to continually improving our process and exploring unique ingredient options that add value to your bottom line. This will result in better performing ingredients and better performing animals. We are partnering with some of the greatest minds in the global aquaculture industry as we design customized products for the freshwater and marine aquaculture industry.

Empyreal 75 Guaranteed Analysis

Crude Protein, min	75.0%
Crude Fat, min	2.0%
Crude Fiber, max	2.5%
Starch, max	1.0%
Ingredients: Corn Protein Concentrate	

Learn More

For complete details on Empyreal 75, visit e75aqua.com or call 866.369.5498 or 402.533.4282.

Empyreal 75 has received Kosher and Halal certification and GRAS status.

