

# HydrolyFort-FL (I) (Hydrolyzed Fish Liquid)



## PRODUCT DESCRIPTION

- **HydrolyFort-FL (Hydrolyzed Fish Liquid)** it is a liquid concentrate of bioactive peptides with low molecular weight (<1200 daltons) elaborated by enzymatic hydrolysis with controlled pH, time, and temperature from fresh byproducts of the fish processing Ecuadorian industries which process fish for human consumption.
- With the guarantee of Fortidex S.A., one of the main high biologic content marine protein producers in Ecuador.

## INGREDIENTS

- Fresh byproducts from processing of fish for human consumption, with the addition of preservatives.
- Antioxidants free of ethoxyquin.
- Preservatives: phosphoric acid; Organic acids: propionic, acetic and butyric.

## FUNCTIONAL PROPERTIES

- Nutritional and functional strength of **HydrolyFort-FL (Hydrolyzed Fish Liquid)** is based on the high content of low molecular weight peptides (< 1200 dalton), product of the controlled enzymatic hydrolysis.
- Benefits obtained from supplying peptides to aquaculture animals, specially shrimp, have been tested in assays and there is plenty of scientific information on them. Among the benefits we include:
  - *Immunomodulating effect*
  - *Antibacterial properties*
  - *Increases factor of resistance to clinical conditions from virus and bacteria attacks.*
  - *Antioxidant properties*
  - *Natural growth promoters.*
- Additionally, it complies with the attracting-palatability features of aquaculture food which, added to the high digestibility of the protein section, substantially improves food intake and FCR (Feed conversion ratio).
- Finally, **HydrolyFort-FL (Hydrolyzed Fish Liquid)** has natural agglutinant properties with which high hydro-stability aquaculture products are achieved, thus there will be less losses from lixiviation of critical nutrients, such as vitamins and minerals.

## SPECIFIC APPLICATIONS

- Its profile of components is ideal for optimizing functional diets, for the first stages of feeding or for stressful situations.
- It works for partially but efficiently replacing expensive marine fish meals such as Premium fish meal, krill meal, and squid meal.
- It is the proper tool to be used in formulation strategies of aquaculture food with higher levels of vegetable protein, thus lowering the use of marine protein.

## USE RECOMMENDATIONS

- Almost 6% of the formulation may be used, but it highly depends on the technological level of aquaculture foods' manufacturing process.

## TECHNICAL

PROXIMAL ANALYSIS		
PARAMETER	UNIT	GUARANTEED VALUE
Moisture	%	Max. 75.0
Protein	%	Min. 13.0 – 16.0
Fat	%	Max. 6.0
Ash	%	Max. 10.0
PROTEIN QUALITY		
Protein Solubility	%	Min. 98.0
AMINO ACIDS PROFILE (% of product, as it is)		
Aspartic acid	%	Min. 1.3
Glutamic acid	%	Min. 1.2
Alanine	%	Min. 2.4
Arginine	%	Min. 1.3
Cystine	%	Min. 0.2
Phenylalanine	%	Min. 0.6
Glycine	%	Min. 1.6
Histidine	%	Min. 1.8
Isoleucine	%	Min. 0.6
Leucine	%	Min. 1.1
Lysine	%	Min. 1.0
Methionine	%	Min. 0.5
Proline	%	Min. 1.5
Serine	%	Min. 0.9
Tyrosine	%	Min. 0.2
Threonine	%	Min. 1.4
Valine	%	Min. 0.8
FUNCTIONAL NUTRIENTS		
Low molecular weight peptides <sup>(1)</sup>	%	Min. 90.0 of soluble protein Min. 14.0 of total product
MICROBIOLOGICAL QUALITY		
Salmonella	CFU/gr	Absence/25 gr
Enterobacteria	CFU/gr	Max. 300.0
TVN	mg/100 g	Max. 300.0
pH <sup>(2)</sup>		Max. 4.5

<sup>(1)</sup> Bioactive Peptides and Free Amino Acids, with a molecular weight less than 1200 Dalton.

<sup>(2)</sup> The preservation of the product is guaranteed minimum 6 months, after the production date.

Version 3.1: January/2021



**Producers of High Biological and  
Functional Value Marine Protein**

### ADDRESS:

Cdla.Urdesa; Cedros 200 y Todos los Santos  
Tel. 2880410-2880411

E-mail: [ventas@fortidex.com](mailto:ventas@fortidex.com)

Guayaquil-Ecuador