



Nutrimax

**New Generation Yeast Concentrates
Spray Drying Production Process**

Suitable For Poultry, Aquaculture, Livestock Replace Fish Meal & Improve Intestinal Healthy

To bring more wider practical value for nutrimax, we pioneering to spray drying yeast fermentation liquid to get ideal nutrition balanced values, mainly used for poultry, livestock, and aquaculture diets to improve nutritional values of protein, and improve intestinal development to promote nutrition absorption.



One Product Two Functions

The new generation of yeast concentrates

Benefits



Replace Fish Meal

Single-cell protein SCP, with protein 55% and Amino acid 25-35%, ideal ingredients to replace expensive fish meal, production process controlled, more safe, more economical, and more efficiency.



Improve Intestinal Health

Yeast fermentation process brings prebiotic of oligose, both mannan oligosaccharide and glucan reaches 10%, resist mycotoxin and improve beneficial flora balance, effectively improve intestinal health for promote animal growth.

Nutrimax

Nutrimax® is spray drying yeast fermentation liquid into powder, to get its quality protein with highly amino acid, with its special prebiotic of mannan oligosaccharide and glucan, to supply animal growth nutrition and improve intestinal health.

Specifications	Value
Protein	55% min
Amino Acid	25%-35%
Mannan Oligosaccharide	10% min
β -Glucan	10% min
Digestibility	90% min
Ash	10% max
Fiber	10% max
Moisture	10% max

Nutrimax is single-cell yeast protein provides high quality microbial proteins between meat-based protein and plant-based protein which extracted from substrate by deep fermentation of saccharomyces cerevisiae based on culture medium.

Through the metabolism of saccharomyces cerevisiae, nutrimax is not only capable with high protein levels, but the macromolecular nutrients in culture medium can be degraded to converted into biologically active small peptides, amino acids, mannans, organic acids, growth factors and other easily digestible and absorbed nutrients, which means it is an ideal ingredient to replace a part of expensive feed ingredients such as fish meal but more economical.

Instructions	
Package	25kg per bag, shelf life is 12 months. Stored in a cool, ventilated, and dry conditions in closed bags. Make full use in short term after the packing is opened.
Dosage	Suggested 1%-3% per ton feeds. Customer also can choose to replace fish meal or other animal sources proteins based on cost-effective principle.

01 BROILER APPLICATION DATA

NUTRIMAX IDEAL FEED INGREDIENTS FOR GROWTH

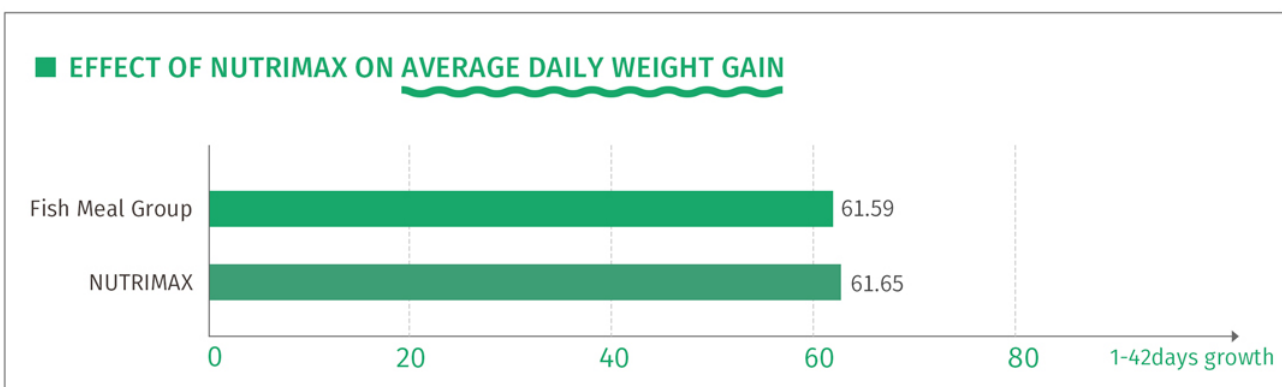
NUTRIAMX not only provides ideal protein for animal growth, but also effectively improve intestinal develop to get higher nutrition absorption.

A total of 4000 1-day-old white feather broiler randomly divided into 2 groups with 8 replicates, 250 broilers per replicate, the fish meal group including 3% fish meal, the nutrimax group using 3% nutrimax to replace fish meal, the trial last 42 days.

The trial result shows the nutrimax can completely replace 3% fish meal to get the same ideal growth rate. meanwhile, since nutrimax contains oligosaccharide which can improve intestinal development to get better intestinal villus, this brings higher nutrition absorption rate, which result in growth promotion purpose.

1-42days Growth	Average Daily Weight Gain (g).	Average daily feed intake (g).	Feed-gain ratio
Fish Meal Group	61.59	90.54	1.47
Nutrimax Group	61.65	89.49	1.45

Duodenum Develop	Villus Height (um)	Crypt Depth (um)	Villus Height / Crypt Depth
Fish Meal Group	1724	241	7.15
Nutrimax Group	1810	240	7.54



CONCLUSION

Compared with the fish meal group, the NUTRIMAX group reaches same growth effect.



02 AQUATIC APPLICATION DATA

NUTRIMAX IDEAL FEED INGREDIENTS FOR GROWTH

Fish meal take a large ratio in shrimp feeds usually reaches 20-30%, based on trial, Nutrimax can fully competently replace a part of fish meal, and with same ideal growth performance.

5400 penaeus vannamei shrimp were randomly divided into 3 groups with 6 replicates per group, 300 shrimp per replicate, cage cultured for 42days.

Not as same of poultry, the fish meal dosage take a large of ratio in shrimp feeds, we set up an group of 25% fish meal feeds, and set up three groups to replace fish meal with different ratio, the trial results shows Nutrimax can ideally replace 15-30% of fish meal without any influence for growth, but the results shows the performance will be declined after replace for 45% fish meal group, which means, based on the trials, Nutrimax can be fully competently replace 15-30% fish meal in shrimp feeds.

	25% Fish Meal Group	Replace 15% Fish Meal	Replace 30% Fish Meal	Replace 45% Fish Meal
Initial Weight / g	7.51	7.49	7.59	7.48
Final Weight / g	16.3	16.18	16.42	15.9
Weight Gain %	117	116	116	112
Feed Coefficient	1.35	1.38	1.37	1.42

	25% Fish Meal Group	Replace 15% Fish Meal	Replace 30% Fish Meal	Replace 45% Fish Meal
Crude Protein	87.09	87.01	87.59	86.46
Crude Fat	6.75	6.98	6.65	6.33
Ash	5.89	5.74	5.64	5.84

Notice: 25% fish meal group means it contains 25% of fish meal in feeds, 1000kg shrimp feeds contains 250kg fish meal
Replace 15% fish meal group means replace 37.5kg fish meal (250kgx15%=37.5kg)
Replace 30% fish meal group means replace 75kg fish meal (250kgx30%=75kg)
Replace 45% fish meal group means replace 112.5kg fish meal (250kgx45%=112.5kg)

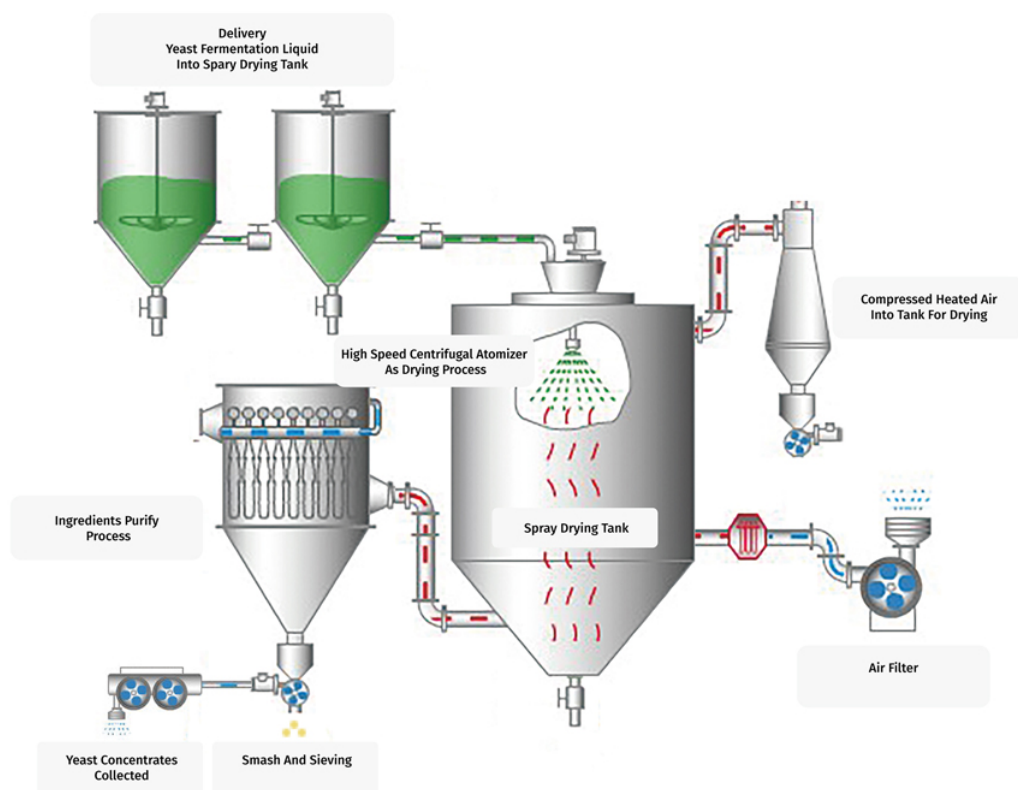


03 PRODUCTION

SPECIAL SPRAY DRYING PROCESS

By spray drying the yeast fermentation liquid into powder to get Nutrimax, it contains high protein and rich in amino acid, with the metabolites of yeast fermentation brings oligose to act as prebiotic, the nutrimax plays double functions of supply protein and improve intestinal healthy.

Among these, the production process of Nutrimax is fully controlled, differ with meat protein always with salmonella and bacteria risk, differ with plant protein with aspergillus flavus risk, nutrimax as yeast cell protein is safe and efficiency.



Equipements

1. Storage system including tank for Yeast fermentation liquid
2. Production system including centrifugal spray drying for mixing and drying
3. Packing system including wrapping machine
4. Dust pelletizing system including dusting machine
5. All equipments connected by pipeline and can be automatic operated

Production Process

1. Prepare yeast fermentation
2. Yeast fermentation liquid sprayed through centrifugal spray drying tower, compressed heated air will be induced at bottom of tower to make the mixed wet materials under state of suspended motion, during tossing movement, mixed wet materials dried.
3. Final product smashing into 50-60mesh powder, then been packaged

Bivigro® is an innovative technology-based company focusing on research, production and sales of antibiotic substitutes and animal nutritional products, the aim is to offer animal performance solutions, and making your effort to be more efficiency.

Learn more at bivigro-animal-health.com

Questions?

Email at business@bivigro.com

Whatsapp at +86-18653376864

Nutrimax

Nutrimax is single-cell yeast protein provides high quality microbial proteins between meat-based protein and plant-based protein which extracted from substrate by deep fermentation of *saccharomyces cerevisiae* based on culture medium.

Through the metabolism of *saccharomyces cerevisiae*, nutrimax is not only capable with high protein levels, but the macromolecular nutrients in culture medium can be degraded to converted into biologically active small peptides, amino acids, mannans, organic acids, growth factors and other easily digestible and absorbed nutrients, which means it is an ideal ingredient to replace a part of expensive feed ingredients such as fish meal but more economical.

BIVIGRO
Create New Type of Feed Additive