



升福生物科技
SUNFU BIOTECHNOLOGY CO., LTD

Biotech Feed Fermentation Specialist

ISO22000 (HACCP) Certified

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升福生物科技有限公司

ENVIRONMENTAL FRIENDLY PRODUCT (ACTPEP-3)
Can replace fish meal in feed and reduce use of the antibiotics

PRESENTATION

ACTPEP-3 is a premium bioactive peptide specifically designed with nutrients and pure natural to increase attractiveness, palatability, and FCR of Livestock feed or aquaculture feed.

It's manufactured from complex ingredients and multiple fermentation. Base on natural raw materials like tuna fish meal, poultry meal, wheat germ, soy bean, maize, rice brain and by way of dry fermentation to get unique performance of superior attractiveness and good FCR product.

ACTPEP-3 is rich in marine bioactive peptides, marine collagen peptide, soy peptide, wheat germ peptide, rice protein peptide, nucleotides, UGF, taurine, SODlike enzyme, free amino acids and probiotics.

These bioactive peptides are well know to have a direct action on key biological mechanisms (immune-modulator, anti-microbial, hormone-like growth factor peptide.....) allowing animal higher resistance to stress and pathogens thus leading to better health and survival.

In addition to animal health benefit, these low molecular weight compounds are easy to assimilate and quickly cross the intestine membrane leading to an improved feed efficiency and a faster growth

ACTPEP-3 is a new type of microbial fermentation feed. It's a unique product made through the advanced dry anaerobic fermentation process with both animals and plants protein. This product are provided with high protein, high peptide, high SODlike enzyme, high biological bioactive, high heat resistance (can be used in feed processing), these performance of property to increasing animal feed consumption, promoting animal growth, improving the microbial flora balance of intestinal, preventing digestive tract diseases, etc .

TEN BENEFITS

- * Improving Intestinal nutrients absorption (protein, carbohydrate and lipid) of poultry and Livestock. promote their FCR at least 10% - 15%.
- * Promote the microbial flora balance in intestinal, kill pathogens and inhibit microbial capacity. Reduce use of the antibiotics.
- * Increase attractiveness and palatability of feed. Promote the animals' food intake and faster their growth.
- * Intensify functions of digestive system. Improve nutrient absorption of intestinal. Boosting animals' metabolism rate and can improve their meat quality.
- * Reinforcing vitamins, minerals and trace elements in feed. Adjusting the ratio of calcium to phosphorus in feed and increased phosphorus absorption. Intensify stress-resistance of animal and enhance the survival rate.
- * Can decrease animal dropping and lower ammonia gas and hydrogen sulfide smell, cut down environmental pollution. Reduce the risk to infect disease of upper respiratory tract.
- * Shorten the time of growth and fattening (poultry and livestock). Faster the aquaculture production cycle and reduce feed consumption around 10%.
- * It's high protein content, can replace fish meal in feed and more efficient.
- * Improve the water quality bring on stable ecosystem of the fish pond. Positive effect on survival rate and increase yield 15% -25% (fish & shrimp).
- * High SODlike enzyme content, can powerful regeneration and repair capacity of animals and improved the animal immune system, prevent secondary infection.



Env Friendly

APPLICATION BENEFITS OF ACTPEP-3



broiler	Improve immune function, reduce disease, less antibiotics, less disinfectant, FCR improve, shorten the time of slaughter a couple days, good meat quality, rich in gelatin, odor free, good taste.
layer	good appetite, reduce disease, energetic, extend the laying period, improve the eggshell quality. decrease dropping and lower ammonia gas and hydrogen sulfide smell, less antibiotics, less disinfectant.
Fish & shrimp	Increase attractiveness and palatability of feed, FCR improve, faster grow, increase yield 15%-25%, Improve the immune system reduce infection diseases, Intensify stress-resistance (fish & shrimp) to anti-stress, stable ecosystem of the fish pond, enhanced environment, improve survival rate.

NUTRITIONAL ANALYSIS

Protein :	43 - 45 %	Calcium : 0.82 %
Lipid :	0.9 – 1.2 %	Phosphorus : 0.62 %
Ash :	1.6 – 1.9 %	
HCL insoluble :	0.3 – 0.4 %	

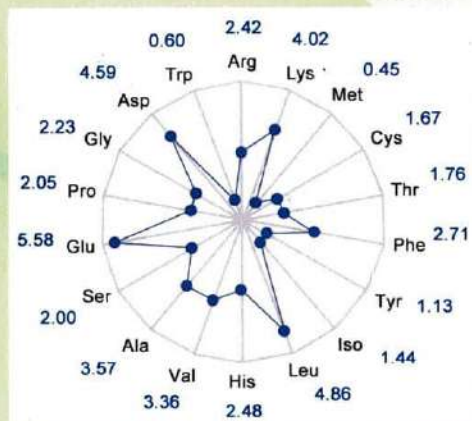
DIGESTIBILITY

Pepsin Digestibility : 97.9 % (Animal protein : 60% , Plant protein : 40% of product)

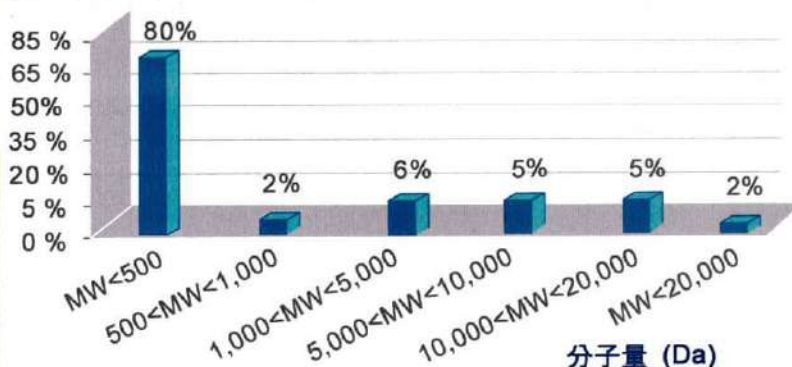
PROTEIN QUALITY

- Soluble protein 85 % (of total protein)
- Total peptide 36 % (of total protein)
- Total amino acids 46 % (of total protein)
- Nucleotides 1 % (of product)
- Taurine 0.35 % (of product)

Main Amino acids (% of product)



Molecular weight repartition (% of peptide)



- In general; 2 -10 amino acids bonded together are Short chain polypeptide also be referred to as oligo-peptide, the molecular weight always below 1,000Da. 10 - 100 amino acids bonded together are Polypeptide, most of their molecular weight around 1,000 Da—5,000Da. the molecular weight more than 10,000 Da are called protein.
- Short chain polypeptide (Bioactive peptide) are natural growth promoters (NGPs), Promote the microbial flora balance in intestinal, kill pathogens and inhibit microbial capacity, reduce use of the antibiotics. It can improve the intestinal environment hyperplasia the intestinal villus, Improving Intestinal nutrients absorption. In addition to, short chain polypeptide also able to restore cell growth And enhance DNA synthesis, synthesis or inhibition the converting enzyme and coenzyme to promote animal development and growth

SODlike ENZYME CONTENT

ACTPEP-3 content bioactivity unit 23,000 SODlike enzyme per gram at least.

Superoxide Dismutase (SOD), is most amazing enzyme in animals' body, will scavenging free radical inside the body. Also, SOD can eliminate inflammation, treatment of ulcers, powerful regeneration and repair capacity, improve the immune system, prevent secondary infection and anti-aging, it's fundamental of health and life.

OVERVIEW OF KEY TRIAL RESULTS AND RESEARCH DATA

Recommended Application

classification	Application Qt.
poultry	2.5% - 5%
fish	2% - 5%
shrimp	2.5% - 10%

PACKING

- 25kg / bag

***		- feed efficiency (FE) : improvement 10 - 15% - survival ratio : improvement 6 - 8% - shorten the time of slaughter 10 days - lower ammonia gas and hydrogen sulfide smell at lease 80% - total drug use : reduce 30% - disease recovery time : reduce 40 - 50%
***		- feed efficiency (FE) : improvement 10 - 12% - survival ratio : improvement 4 - 6% - shorten the time of slaughter 2 - 4 day - lower ammonia gas and hydrogen sulfide smell at lease 50% - total drug use : reduce 40% - disease recovery time : reduce 30 - 40%
***		- feed efficiency (FE) : improvement 15 - 20% - survival ratio : improvement 10 - 12% - annual yield : improvement 16 - 25% - production cycle : reduce 15 - 25% - total drug use : reduce 40% - disease recovery time : reduce 40 - 50%
***		- Strengthen the hepatopancreas functionhrimp of the shrimps - Reduce the amount of drugs (at least 40%) - Improve shrimp harvest (15%-25% biomass output) due to improved survival rate and Individual body weight - partial replacement of fish meal and animal resource for keep the cost down of shrimp feeds (penaeus vannamei and P. monodon) - partial replacement of lecithin, cholesterol, squid oil and fish oil