



B&H BIOTECHNOLOGY CO.
必致生物科技有限公司
TRADING DIVISION



FUNCTIONAL FOOD INGREDIENTS



GREAT PRODUCT OPPORTUNITIES

B&H Biotechnology Co., Ltd (Hong Kong) is an international trading company specializing in pharmaceutical products and functional food ingredients.

We have more than 20 years of experience in international trading business and have customers in more than 30 countries. Quick response, best service and competitive prices have made us the preferred partner.

FUNCTIONAL FOOD INGREDIENTS PRODUCT PORTFOLIO

- 5'- Nucleotide (NUC) products
- Fructose – 1,6-diphosphate (FDP) products
- Alpha-amylase inhibitor (wheat origin)
- Yeast
- RNA (Ribonucleic Acid)
- Casein Phosphopeptides, CPP
- Citicoline Sodium, CDPC
- S-Ademetionine, SAM
- Adenosine Monophosphate, AMP
- Adenosine Cyclphosphate, cAMP
- Cytidine Monophosphate, CMP
- Feed Nucleotides
- Other food ingredients and supplements





5'- NUCLEOTIDES AND FRUCTOSE-1,6-DIPHOSPHATE PRODUCTS

B&H Biotechnology Co., Ltd provides high quality 5'-nucleotides, fructose-1,6-diphosphate salts and their derivatives from the most reliable manufactures. These products are widely used in pharmaceutical and food industries. Among them, 5'-nucleotides are particularly competitive owing to breakthroughs in the bio-catalysis, bio- process and separation technologies. All products have the certifications of HACCP, Halal and Kosher. These products have a strong market position in China, and are exported into EU, USA, South America , Australia and Middle-East.

5'-Nucleotide (NUC) products

5'-nucleotides are widely used in the pharmaceutical and food industries, especially as infant powder milk additives. They can improve the human immunity, enhance the ability of babies to resist bacillary dysentery and can reduce the incidence rate of diarrhea. They can also be used as intermediates to synthesize anti-virus and anti-cancer drugs. Additionally nucleotide derivatives have important uses in the treatment of the illnesses of human central nervous system and circulatory system.

Applications

- functional food additives; can be added to breads and biscuits, particularly in the food for babies. Milk powder added with nucleotides can not only improve the development of gastrointestinal tract of infants, but also improve the immunological function of intestinal cells and build up the resistance to bacterial infection.
- intermediates for nucleotide drugs, which are widely applied in the treatment of hepatitis, gastritis, coronary heart disease, rheumatoid arthritis, leukocytopenia, cerebral concussion, angiocardopathy etc.



- animal feed additives; can increase the feed rate of pig, improve laying rate of chicken, promoting the growth and reproduction of fishes and aquatic animals.
- health food additives; the addition of nucleotides into functional foods help delay aging, extend life and improve immunity etc. An additional broad application is food seasoning with flavor nucleotides
- as plant growth regulator, used in agriculture to increase the yield and improve the quality of agricultural products.

The nucleotide products available from B&H Biotechnology are shown in the following table.

PRODUCTS		CAS No.	EC(EINECS) No.	Purity (%)	APPLICATION
5'-AMP	Adenosine 5'-monophosphoric Free acid	61-19-8	200-500-0	≥98.0	Food Additives API
5'-AMP Na2	Adenosine 5'-monophosphoric disodium salt	4578-31-8	224-961-2	≥98.0	Food Additives
5'-CMP	Cytidine 5'-monophosphate free acid	63-37-6	200-556-6	≥98.0	Food Additives
5'-CMP Na2	Cytidine 5'-monophosphoric disodium salt	6757-06-8	229-819-3	≥98.0	Food Additives API
5'-UMP Na2	Uridine 5'-monophosphoric disodium salt	3387-36-8	222-211-9	≥98.0	Food Additives API
5'-GMP Na2	Guanosine 5'-monophosphate disodium salt	5550-12-9	226-914-1	≥98.0	Food Additives API
Nucleotide Premix	Nucleotide Premix				Food Additives
Feed Nucleotides	Feed Nucleotides				Feed Additives
AR	Adenosine	58-61-7	200-389-9	99.0~101.0	
CR	Cytidine	65-46-3	/	≥99.0	
ATP	Adenosine 5'-triphosphoric disodium salt	987-65-5	/	≥95.0	
CAMP	Adenosine 3',5'-cyclic monophosphate	60-92-4	200-492-9	97.0~103.0	
CDP Na2	Cytidine-5'-diphosphate disodium salt	54394-90-0	/	≥98.0	
RNA	Ribonucleic Acid	63231-63-0			Food Additives Feed Additives
Yeast	Yeast	68876-77-7			Food additives Feed additives



Fructose-1,6-Diphosphate (FDP) products

FDP is an important intracellular intermediate of metabolism that controls the activities of some enzymes in glycometabolism and repairs and improves cell metabolism at the molecular level. The high purity products are obtained by using effective whole-cell catalysis, bio-separation and crystallization techniques.

Applications

- an intermediate for FDP analog medicines
- as an additive for promoting growth and improving animal health.
- in food additives and health-foods, replenishing the trace elements that are necessary substances for normal growth.
- clinically in treatment, or adjunctive treatment, of osteoporosis and male sexual dysfunction.

The FDP derivatives available from B&H Biotechnology are listed in the following table.

Products	CAS No.	EC(EINECS) No.	Purity (%)	Applications
FDP Na3 D-Fructose-1,6-bisphosphate trisodium salt	38099-82-0	253-778-0	≥98.0	Food Additives API
FDP Ca D-Fructose 1,6-bisphosphate calcium salt	103213-33-8	/	≥98.0	Food Additives API
FDP Ca2 D-Fructose 1,6-bisphosphate dicalcium salt	6055-82-9	227-979-9	≥98.0	Food Additives API
FDP Mg D-Fructose 1,6-bisphosphate magnesium salt	/	/	≥98.0	Food Additives API



α - AMYLASE INHIBITOR (WHEAT ORIGIN)

α -Amylase inhibitors extracted from wheat actively inhibit salivary and pancreas amylase, thus reducing starch digestion. It has been demonstrated that the wheat amylase inhibitors reduce hyperglycemia and hyperinsulinemia in diabetic patients. Therefore they are also drug-design targets for the treatment of diabetes and digestion disorders.

Applications

- Can be used as drugs and health food additives for weight reduction to prevent and treat adiposity, lipomatosis, atherosclerosis, hyperlipidemia, and diabetes.

CASEIN PHOSPHOPEPTIDES, CPP

Casein Phosphopeptides, CPP is one of functional food additives, which is the digest of casein. It can enhance the solubility of minerals, like calcium, iron, zinc, magnesium and so on, and their absorption in the digestive tract. It also can increase bone mass, prevent tooth decay, improve the capacity of animal breeding, improve the body immunity, and induce apoptosis.

Applications

- used as food additive; can be used as nutrients added to food or health food products.
- pharmaceutical raw material.
- toothpaste ingredient, mouthwash tablets and oral fluid to protect teeth, and to prevent caries.
- promote capacity of animal breeding.
- feed additive can be used to produce animal health feed for specific physiological stages



CITICOLINE SODIUM, CDPC

Citicoline Sodium, CDPC is endogenous intermediate of phosphatidylcholine synthesis, and an essential element in biological membrane construction. After injury of nerve, it is involved in repair and regeneration of nerve. Citicoline Sodium also plays a vital role in transfer of neurohumor and conduction of biological electricity. It has significant clinical therapeutic effect on acute stroke nerve injury caused by surgery, disturbance of consciousness, Parkinson's syndrome, dementia, and glaucoma.

Applications

- The main indications of Citicoline Sodium are acute traumatic brain injury and brain consciousness after the operation. Moreover, Citicoline Sodium can treat central nervous system dysfunction and unconsciousness caused by acute injury, paralysis agitans, tinnitus and nerve deafness, and poisoning caused by sleeping pills. In recent years, Citicoline Sodium is widely used in clinical for treatment of ischemic stroke, cerebral arteriosclerosis, multi-infarct dementia, Alzheimer's disease, and children viral encephalitis.

S-ADEMATIONINE, SAM

S-Ademetionine is a coenzyme found in all eukaryotic cells. SAM is an active form of methionine, and it is an important metabolic intermediate in animals and plants. It also plays a vital role in the human body as physiologically active substance involved in more than 40 biochemical reactions. SAM is an essential donor of methyl group in cell. Its physiological function is transferring methyl, aminopropyl and sulfur group.

Applications

S-Ademetionine is mainly used for the treatment of osteoarthritis (OA), depression, liver diseases such as viral hepatitis, cholestasis, liver damage caused by alcohol, liver cirrhosis and some other liver dysfunctions. It also can increase men's sperm vitality, can be used to treat migraines, alleviate the sequela of cerebral concussion symptoms, and have effect on muscle fiber pain and coronary heart disease.



NUCLEOTIDE PREMIX - NUCLEOTIDES FOR INFANT FORMULA

Nucleotide Premix is the mixture of 5 types nucleotides, including Adenosine 5'-monophosphate (AMP), Cytidine 5'-monophosphate (CMP), Uridine 5'-monophosphate (UMP), Guanosine 5'-monophosphate (GMP) and Inosinate 5'-monophosphate (IMP). Nucleotides Premix can be prepared according to customers' specification.

Benefits from nucleotides use

- Improve immune system development, aiding in maximizing the health and growth of the infants.
- Reduces the incidence of diarrhea, for a better repairment of intestinal mucosal in infants
- Promotes iron adsorption for a better growth performance of infants.
- Facilitates the development of intestine, for a better growth of intestinal cells.

ADENOSINE MONOPHOSPHATE (AMP)

Adenosine Monophosphate (AMP) is a high energy molecule, which plays an important role in the muscle contraction, cell's movement, initiative movement and biosynthesis. In clinic, AMP is being used to cure or assist-curing sweeny atrophy, block of myocardial infarction, hepatitis and other first-aid disease.

ADENOSINE CYCLPHOSPHATE (cAMP)

Cyclic AMP is a key 'second messenger' involved in numerous intracellular signaling pathways and has various physiological functions such as relaxing smooth muscle, expanding blood vessels, improving liver function and promoting nerve regeneration.

CYTIDINE MONOPHOSPHATE (CMP)

Cytidine monophosphate, also known as a 5'-cytidylic acid or simply cytidylate, and abbreviated CMP, is a nucleotide that is found in RNA. CMP can be used as pharmaceutical intermediates, to prepare cyclic-CMP, cytidine triphosphate, arabinocytidine, citicoline. It is also added into infant formula to enhance the baby's immunity.



FEED NUCLEOTIDES FOR ANIMALS

Feed Nucleotides is a mixture of four type nucleotides obtained from yeast RNA. Feed Nucleotides' exclusive composition is designed to compensate for the metabolic deficiencies in a specific manner. Adding feed nucleotide to creep feed diets and during the two weeks after weaning helps the animals to properly develop their immune system and intestinal mucosa. This results into healthier and stronger animals that are more resistant to different disease, especially those of digestive nature.

Benefits from feed nucleotides

- Improve immune system development, aiding in maximizing the health and growth of the animals
- Reduce unnecessary use of antibiotics, for a more cost-efficient and ethical farming system.
- Produce stronger and healthier animal bodies, for a better farm production performance.
- Enhance resistance to viral, bacterial and parasitic infections, for a higher survival rate of animal babies and production capacity.

Other food ingredients and supplements:

The following vitamins, amino acids and other supplements are available from B&H Biotechnology

Vitamins

- Vitamin B12 BP
- Vitamin D3 High Purity Resinoid BP/USP
- Vitamin K3 USP

Amino acids

- L-Leucine
- L-Valine
- DL-Serine
- D-Serine



Certifications

Our suppliers have the following certificates:

Domestic

- ISO 9001: 2008 Quality Management System
- HACCP Certification
- GMP
- Nucleotide Production Certificate

International Certification

- Kosher Certification
- Halal Certification



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