



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



## GREAT PRODUCT OPPORTUNITIES

B&H Biotechnology is an international trading company specializing in the pharmaceutical and health care products, such as high-quality APIs and Intermediates for Anticoagulants, Antidepressants, Cephalosporin and Cardiovascular Drugs, the series products of Nonionic Contrast Agent and Levofloxacin, Vitamins and Amino Acids, and the series products of 5'-nucleotides, fructose-1,6-diphosphate salts and their derivatives which are widely used in dairy, food and pharmaceutical industry.

We also provide custom manufacturing services to companies and research institutes to develop and produce the new APIs and Intermediates for their own purpose.

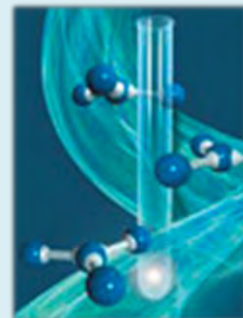
Quick response, best services and competitive prices are our mission.

We have more than 20 years of experience in international trading business and have customers in more than 30 countries and regions in the world. With highly qualified employees and professional work team, we have established broad trading network and good relationship with customers and local producers.

We provide:

### APIS AND INTERMEDIATES

- APIs and Intermediates for Anticoagulants, Antidepressants and Cardiovascular Drugs
- APIs and Intermediates for Cephalosporin and Cardiovascular Drugs
- The Series of X-CT Non-Ionic Contrast Agent
- The Series of Levofloxacin
- Intermediates of Dapoxetine
- Intermediate of Oxiracetam
- Custom Manufacturing





## FUNCTIONAL FOOD INGREDIENTS

### ➤ Series of 5'-Nucleotides (NUC)

5'-nucleotides are being widely used in the industries of food, pharmaceutical, agriculture and fine chemical, especially as one kind of important infant powder milk additives.

#### Applications

- Used as functional food additives, and can be added to breads and biscuits, particularly in the food for babies.
- They can improve the human immunity, can enhance the ability of babies to resist bacillary dysentery effectively and can reduce the incidence rate of diarrhea.
- Used as the intermediates for nucleotide drugs.
- Used as animal feed additives.
- Used in the preparation of health foods.
- As a plant growth regulator, it can be used in agriculture to increase the yield and improve the quality of agricultural products.

### ➤ Series of Fructose-1,6-Diphosphate(FDP)

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.

#### Applications

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

### ➤ $\alpha$ - Amylase Inhibitor (Extract From Wheat)

$\alpha$ -Amylase inhibitors extracted from wheat can actively against salivary and pancreas amylase which in turn cause reduction in starch digestion. It demonstrated that the wheat amylase inhibitors could reduce hyperglycemia and hyperinsulinemia in diabetic patients. Therefore they are also drug-design targets for the treatment of diabetes and digestion disorders.

### Applications

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

### ➤ Sucralose

The majority of ingested sucralose is not broken down by the body and therefore it is non-caloric. It is approximately 600 times as sweet as sucrose (table sugar), twice as sweet as saccharin, and 3.3 times as sweet as aspartame. It is stable under heat and over a broad range of pH conditions. Therefore, it can be used in baking or in products that require a longer shelf life. The commercial success of sucralose-based products stems from its favorable comparison to other low-calorie sweeteners in terms of taste, stability, and safety.

## **VITAMINES AND AMINO ACIDS**

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## PRODUCT LIST

### FUNCTIONAL FOOD INGREDIENTS

#### The Series of 5'- Nucleotides and Fructose-1,6-Diphosphate (FDP)

Products		CAS No.	EC(EINECS) No.	Purity (%)
<b>5'-AMP</b>	Adenosine 5'-monophosphoric acid	61-19-8	200-500-0	≥98.0
<b>5'-AMP Na2</b>	Adenosine 5'-monophosphoric disodium salt	4578-31-8	224-961-2	≥98.0
<b>5'-CMP</b>	Cytidine 5'-monophosphate acid	63-37-6	200-556-6	≥98.0
<b>5'-CMP Na2</b>	Cytidine 5'-monophosphoric disodium salt	6757-06-8	229-819-3	≥98.0
<b>5'-UMP Na2</b>	Uridine 5'-monophosphoric disodium salt	3387-36-8	222-211-9	≥98.0
<b>5'-GMP Na2</b>	Guanosine 5'-monophosphate disodium salt	5550-12-9	226-914-1	≥98.0
<b>AR</b>	Adenosine	58-61-7	200-389-9	99.0~101.0
<b>CR</b>	Cytidine	65-46-3	/	≥99.0
<b>ATP</b>	Adenosine 5'-triphosphoric disodium salt	987-65-5	/	≥95.0
<b>Camp</b>	Adenosine 3',5'-cyclic monophosphate	60-92-4	200-492-9	97.0~103.0
<b>CDP Na2</b>	Cytidine-5'-diphosphate disodium salt	54394-90-0	/	≥98.0
<b>FDP Na3</b>	D-Fructose-1,6-bisphosphate trisodium salt	38099-82-0	253-778-0	≥98.0
<b>FDP Ca</b>	D-Fructose 1,6-bisphosphate calcium salt	103213-33-8	/	≥98.0
<b>FDP Ca2</b>	D-Fructose 1,6-bisphosphate dicalcium salt	6055-82-9	227-979-9	≥98.0
<b>FDP Mg</b>	D-Fructose 1,6-bisphosphate magnesium salt	/	/	≥98.0

### APIS AND INTERMEDIATES

#### APIs and Intermediates for Anticoagulants, Antidepressants and Cardiovascular Drugs

##### ➤ APIs

Product Name	CAS NO.	Specification	Applications
<b>Ticlopidine Hcl</b>	53885-35-1	EP, BP, JP	Anticoagulant
<b>Clopidogrel Bisulfate</b>	120202-66-6	USP	Anticoagulant
<b>Mirtazapine</b>	61337-67-5	EP, USP	Antidepressant
<b>Duloxetine Hcl</b>	136434-34-9	IHS	Antidepressant
<b>Ranolazine</b>	95635-55-5	IHS	Antiangina

➤ INTERMEDIATES

Product Name	CAS NO	Purity	Application
2-Thiophene Ethanol	5402-55-1	99.0%	Clopidogrel Ticlopidine
2-Thiophene Ethylamine	30433-91-1	99.0%	Clopidogrel
4,5,6,7-tetrahydrothieno[3,2-C]pyridine Hcl	28783-41-7	99.0%	Clopidogrel
$\alpha$ -Bromo-2-chlorophenylacetic acid	141109-25-3	99.0%	Clopidogrel
D-(+)-Methyl-alpha-(2-Thienylethamino)(2-Chlorophenyl)acetate Hydrochloride	141109-19-5	99.0%	Clopidogrel
1-Methyl-3-Phenylpiperazine	5271-27-2	99.0%	Mirtazapine
1-(3-Hydroxymethylpyridin-2-yl)-4-methyl-2-phenylpiperazine	61337-89-1	99.0%	Mirtazapine
S(-)-N,N-dimethyl-3-Hydroxy-3-(2-thienyl)propanamine	132335-44-5	98%-102%	Duloxetine
S(+)-N,N-dimethyl-3-(1-naphthalenyloxy)-3-(2-thienyl)-propanamine oxalate	132335-47-8	99.0%	Duloxetine
3,4-Dimethoxy Phenylacetone nitrile	93-17-4	99%	Verapamil Bevantolol
3,4-Dimethoxy Phenylethylamine	120-20-7	98%	Verapamil Bevantolol
3,4-Dimethoxy Phenyl acetic acid	93-40-3	99%	
5,6,7,7a-tetrahydrothieno[3,2-C]pyridine-2(4H)-one Hydrochloride	115473-15-9	98%	Prasugrel
5,6,7,7a-Tetrahydrothieno[3,2-c]pyridine-2(4H)-one para-toluenesulfonic acid salt	178688-49-8	98%	Prasugrel
2-Bromo-2-(2-fluorophenyl)-1-cyclopropylethanone	204205-33-4	98%	Prasugrel
2-Thiophene Carboxaldehyde	98-03-3	99%	
2-Acetyl Thiophene	88-15-3	99%	Tiemonium
2-Bromothiophene	1003-09-4	99%	
2-Thiophene Methanol	636-72-6	99%	
2-Thiopheneacetyl Chloride	39098-97-0	99%	
2-Thiopheneacetic Acid	1918-77-0	99%	
2-Thiophene Methylamine	27757-85-3	99%	
2-(2-Bromoethyl)thiophene	26478-16-0	99.0%	

<b>6,7-Dimethoxy-1,2,3,4-tetrahydroisoquinoline hydrochloride</b>	2328-12-3	99.0%
<b>Methylene Dioxy Benzene</b>	274-09-9	99.0%
<b>3,4-Methylene Dioxy Aniline</b>	14268-66-7	99%

### APIs and Intermediates for Cephalosporin and Cardiovascular Drugs

#### ➤ APIs

Product Name	Executive Standard	Package Size	Applications
<b>Mycophenolate Mofetil</b>	YBH36062005	5.0, 10, 25kg	Immunosuppressor drug
<b>Propiverine Hydrochloride</b>	WS-(X-088)-2004Z	1.0, 5.0,10, 25kg	urinary tract Antispasmodic drug
<b>Ganciclovir</b>	CHP2005	1.0, 5.0, 10, 25kg	Anti-virus drug

#### ➤ INTERMEDIATES

Product Name	CAS NO	Purity	Application
<b>5-Ethylthio-1H-Tetrazole</b>	89797-68-2	≥98%	Pharmaceutical and pesticide intermediates, RNA active agent,protective agent of DNA synthesis
<b>5-Benzylthio-1H-Tetrazole</b>	21871-47-6	≥98.5%	Intermediate of Cephalosporin drugs, 2-O-TBDMS activator of RNA synthesis
<b>1-methyl-5-mercapto-1H-tetrazole (MMTZ)</b>	13183-79-4	≥ 99%	intermediate of cefoperazone, cefeminox, cefmenoxime, Cefpiramide, 7-MAC etc.
<b>Sodium Azide</b>	26628-22-8	≥99%; 99.5%	Intermediate of TAA and some other pharmaceuticals, also for making safe air-bag
<b>1,1,3,3-Tetramethylguanidine (TMG)</b>	/	/	/
<b>5-mercapto-1,2,3,4-tetrazole methyl sulfonic acid disodium salt (SMT-DS)</b>	66242-82-8	/	cefonicid
<b>1H-tetrazol-5-ethyl formate (ETC)</b>	55408-10-1	≥ 98%	For anti-depressants and asthma drugs

<b>1-(2-Dimethylaminoethyl)-5-Mercapto-1,2,3,4-Tetrazole (DMMT)</b>	61607-68-9	≥ 98%	Cefotiam
<b>2-(2-Formylaminothiazol-4-yl) acetic acid (NF-ATAA)</b>	75890-68-5	≥ 98%	Cefotiam
<b>Ethyl 2-(2-aminothiazol-4-yl) acetate (EATA)</b>	53266-94-7	≥ 98%	Cefotiam
<b>2-(2-Aminothiazol-4-yl) acetic acid, hydrochloride (ATAA.HCL)</b>	86299-46-9	≥ 98%	Cefotiam
<b>Cefuroxime Acid</b>	65238-63-2	≥ 99%	Cefuroxime
<b>2-(2-Aminothiazole-4-yl)-2-[2-(tertbutoxycarbonyl)isopropoxyimino]acetic acid (AT-TBA)</b>	86299-46-9	≥ 98%	Ceftazidime
<b>Ethyl ( Z )-2-(2-aminothiazol-4-yl)-2-hydroxyiminoacetate (EHATA)</b>	64485-82-1	≥ 99%	Ceftazidime, cefdinir
<b>S-2-benzothiazolyl-(2)-2-(1-terbatoxycarbonyl-1-methylethoxyimino)-4-thiazole acetate (TAEM)</b>	158183-05-2	≥ 98%	Ceftazidime
<b>1H-Tetrazolyl-1-Acetic Acid (TAA)</b>	21732-17-2	≥ 99%	cefazolin
<b>(Z-2-Methoxyimino-2-(furyl-2-yl)acetic acid, ammonium salt (SMIA)</b>	97148-39-5	≥ 99%	Cefuroxim
<b>Methoxyamine Hydrochloride (OMHA)</b>	593-56-6	≥ 99%	Cefuroxim and bactericide

### The Series of X-CT Non-Ionic Contrast Agent

Product Name	CAS NO	Purity	Standard
<b>Iohexol</b>	66108-95-0	98.0-102.0%	USP30-NF25
<b>5-(Acetyl amino) N,N'-bis(2,3-dihydroxypropyl)-2,4,6-triiodo-1,3-benzenedicarboxamide</b>	/	≥95.0%	In-house standard
<b>5-Amino N,N'-bis(2,3-dihydroxypropyl)-2,4,6-triiodo-1,3-benzenedicarboxamide</b>	76801-93-9	≥98.0%	In-house standard

<b>loversol</b>	87771-40-2	97.0-101.0%	USP30-NF25
<b>lopamidol</b>	60166-93-0	98.0~101.0%	USP30-NF25
<b>lopromide</b>	73334-07-3	97.0%-102.5%	USP30-NF25
<b>Iodixanol</b>	92339-11-2	98.6%~ 101.0%	Current SP31
<b>lomeprol</b>	60166-93-0	98.0~101.0%	USP30-NF25
<b>Gadobenate Dimeglumine</b>	73334-07-3	97.0%-102.5%	USP30-NF25

### The Series of Levofloxacin

Product Name	CAS NO	Purity	Standard
<b>Levofloxacin</b>	100986-85-4	≥98.5%	In-house standard
<b>Levofloxacin Hydrochloride</b>	/	≥89.5%	National Standard
<b>Levofloxacin acid ester</b>	/	≥99.0%	In-house standard
<b>Levofloxacin acid</b>	100986-89-8	≥99.0%	In-house Standard
<b>Pazufloxacin</b>	127045-41-4	≥99.0%	In-house standard
<b>Pazufloxacin Mesylate</b>	163680-77-1	C <sub>16</sub> H <sub>15</sub> FN <sub>2</sub> O <sub>4</sub> ≥75.7%  CH <sub>4</sub> SO <sub>3</sub> between 22.0% to 24.4%	National Standard

### Intermediate Of Dapoxetine

1 3-(1-Naphthyl)phenylpropanon

Molecular formula: C<sub>19</sub>H<sub>16</sub>O<sub>2</sub>

Molecular Weight: 276.00

Purity: 90% Min

Appearance: Yellow oily liquid

2 3-(1-naphthyl)phenylpropylamine hydrochloride

Molecular Formula: C<sub>19</sub>H<sub>19</sub>NO.HCL

Molecular Weight: 313.50

Purity: 99% Min

Appearance: White powder crystal

3 N,N-dimethyl-3-(1-naphthyl)phenylpropylamine hydrochlori

Molecular Formula: C<sub>21</sub>H<sub>23</sub>NO.HCL

Molecular Formula:341.50

Purity: 99% Min



Appearance: White powder crystal

#### Intermediate of Oxiracetam

1 4-HYDROXY-2-OXO-PYRROLIDINEACETAMIDE

Molecular Formula: C<sub>6</sub>H<sub>10</sub>N<sub>2</sub>O<sub>3</sub>

Molecular Weight: 158.16

Purity: 99.9% Min

Appearance: White powder crystal

Melt Point: 165-168 °C

#### **Other Products**

- 1,1-Cyclohexane Diacetic Acid 99% Min
- 1h-Tetrazole-5-Ethyl Formate(Etc)
- 2-Chloro Methyl-3,4-Dimethoxy Pyrine Hcl
- 4-(3,4-Dichlorophenyl)-1-Tetralone
- 5-Difluoro Methoxy-2-Mercapto Benzimidazole
- 6-Methoxy-2-Bromonaphthalene
- 6-Methoxy-2-Naphthaldehyde
- 6-Methoxy-2-Acetyl-Naphthalene
- 8-Hydroxyquine
- Amantadine Hydrochloride Cpv 2005
- Bronopol(2-Bromo-2-Nitro-1,3-Propanedio1)
- Caronic Anhydride 99%
- D-Biotin Usp
- Estrdiol Benzoate
- Glutaraldehyde 50%
- Inositol Nf
- Lincomycin Hcl Bp
- Rutin Nf12
- Spectinomycin Hcl
- Spectinomycin Sulfate
- Spiramycin Ep3
- Vancomycin Hcl
- Yara Yara(2-Methoxynaphthalene)
- A- Chymotrypsin

#### **VITAMINES AND AMINO ACIDS**

- Vitamin B12 BP
- Vitamin D3 HIGH Purity Resinoid BP/USP
- Vitamin K3 USP
- L-Leucine
- L-Valine
- DL-Serine
- D-Serine

### **CUSTOM MANUFACTURING**

With the close cooperation with local producers and research institutes, we also provide custom manufacturing services to customers to develop and produce the new APIs and Intermediates.

