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# CLOSTRIDIUM BUTYRICUM

JIANGSU YIMING BIOLOGICAL  
TECHNOLOGY CO., LTD





# COMPANY INTRODUCTION

CREATE PERFECT QUALITY

Located in prosperous east China, Yiming Biotech is the leading high-tech enterprise specializing in fermentation of food-grade enzymes and other enhancers for the food industry for over 30 years. In the faith of consistently providing outstanding products and ensuring customer satisfaction, we continuously improve our facilities to meet the highest standard in the industry. The company consists of three manufacturing plants and one advanced laboratory with more than 30 researchers. Now we have an extensive sales network in China and look forward to collaborating new sales channels all over the globe.



### Core Values




Appreciation, professionalism, innovation



# CLOSTRIDIUM BUTYRICUM

CREATE PERFECT QUALITY

## BAN ON ANTIBIOTICS

<p><b>1986</b></p> <p>Sweden prohibited the use of growth-promoting antibiotics in feed</p> 	<p><b>2006</b></p> <p>The EU prohibited the use of antibiotics in feed</p> 	<p><b>2014</b></p> <p>The US prohibited the use of antibiotics in feed</p> 	<p><b>July 1, 2020</b></p> <p>China prohibited the use of antibiotics in feed</p> 
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## DEVELOPMENT HISTORY

<p><b>2003</b></p> <p>EU approves clostridium butyricum as feed additive for broiler chicken and weaned piglets</p> 	<p><b>2013</b></p> <p>Clostridium butyricum has been listed in the Catalogue of Feed Additives issued by China Ministry of Agriculture</p> 	<p><b>2014</b></p> <p>The European Commission approved clostridium butyricum (CBM 588) to be put on the market as a novel feed additive</p> 	<p><b>2021</b></p> <p>European Union approved clostridium butyricum as gut microbiota stabilizer for poultry and piglet feed.</p> 
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## INTRODUCTION

Clostridium butyricum is a strictly anaerobic endospore-forming Gram-positive butyric acid. The first clostridium butyricum strain was isolated from the feces of Dr. Chikaji Miyairi in Japan in 1933. In 1935, Dr. Kingi Miyairi of the Russian Institute of Microbiology isolated clostridium butyricum from soil and human feces. Later, Kingi found that the filtrate contained a few fatty acids, which could inhibit pathogenic bacteria and promote the growth of bifidobacterium, lactobacillus and other beneficial bacteria in the intestine.

In 1992, the Institute of Microbiology Heilongjiang Academy of Sciences introduced clostridium butyricum from Russian Institute of Microbiology and cultivated it in China.

## CHARACTERISTICS

### LONG BACTERIAL COLONIZATION

- Colonized in aquatic animals for over 72 hours
- Adhere to intestinal tract and not be washed away by peristalsis

### NO OXYGEN CONSUMPTION

- Do not consume oxygen in water

### HIGH STABILITY

- Resistant to high temperature, gastric acid and bile
- Survive under 90 Celsius degrees for 10 min

### GOOD DRUG TOLERANCE

- Compatible with most of the antibiotics

### WIDE APPLICATION

- Used with a variety of bacteria

### LONG SHELF LIFE

- Stored for 3 years under room temperature



## PROSPECT

Clostridium butyricum can produce butyric acid and other metabolites in intestines to improve functions of intestines and stomachs. As a novel feed additive, it is the first choice to inhibit pathogenic bacteria, protect intestinal health and improve animal productivity. Against the background of ban on antibiotics globally, it is of great significance to reduce antibiotic abuse and improve animal health.

### • MAINTAIN GUT MICROBIOTA BALANCE

Dysbacteriosis may cause various diseases. Clostridium butyricum can promote the proliferation of bifidobacterium, lactic acid bacteria and bacteroides. Meanwhile, it can inhibit the proliferation of staphylococcus, candida, klebsiella, campylobacter and other harmful microbiota.

### • STRENGTHEN IMMUNE SYSTEM

Amino acids, vitamins, organic acids and phosphorus and other nutrients will be increased in animal feeds fermented by clostridium butyricum. It can also substitute some antibiotics and prevent animal diseases.

### • PRODUCE BENEFICIAL SUBSTANCES

Butyric acid, the main metabolite of clostridium butyricum, is a major nutrient for energy metabolism and growth of colonic epithelial cells. Clostridium butyricum can also produce acetic acid, propionic acid and other short-chain fatty acids, which can stimulate intestinal peristalsis.

### • HEALTH CARE

Clostridium butyricum can produce B vitamins, vitamin K, amylase and other substances in intestinal tracts.

### • HELP THE CYTOTHESIS OF INTESTINAL EPITHELIAL CELLS

Butyric acid, the main metabolite of clostridium butyricum, plays an important role in the regeneration and cytothesis of intestinal epithelial cells.



## APPLICATIONS

**LIVESTOCK**  
150-200g/ton  
Protect alimentary canals and improve feed efficiency



**FUR-BEARING ANIMALS**  
200-300g/ton  
Protect alimentary canals and ensure fur quality



**POULTRY**  
80-100g/ton  
Promote growth and prevent enteritis



**AQUATIC PRODUCTS**  
200-300g/ton  
Improve water quality and yield



# APPLICATION OF CLOSTRIDIUM BUTYRICUM



## Poultry

Clostridium butyricum can keep poultry's intestinal microbes at a steady level and improve the quality of poultry products. It can help to reduce the use of antibiotics and improve the safety of meat and eggs.

For laying hens: decrease the odor of feces in henhouses and prevent thin-shell eggs; improve laying rate and eggshell quality.

For broiler chicken: improve intestinal microflora, prevent lipidosis, and thus improve meat quality.



## Pig

Clostridium butyricum can keep livestock's intestinal microbes at a steady level and improve the quality of livestock products.

For sows: prevent constipation before farrowing, increase farrowing rate and efficiency.

For piglets: prevent yellow-white dysentery and diarrhea and promote growth.





## Ruminant

Promote rumination, balance rumen microbial ecosystem, enhance digestion and absorption, prevent diarrhea and indigestion.

Keep intestinal microecological balance by inhibiting pathogenic bacteria from multiplying in digestive tracts. Strengthen immunity by improve gastrointestinal functions.

Improve meat quality and increase lean meat percentage.

Improve feed efficiency, help to save protein feeds, and reduce the ratio of meat to feed.

## Aquatic Animals


Improve water quality by inhibiting the reproduction of bacteria and parasites, eliminate odor, reduce COD by 30-50%.

Promote the development of beneficial intestinal flora and improve the quality and yield of aquatic products.

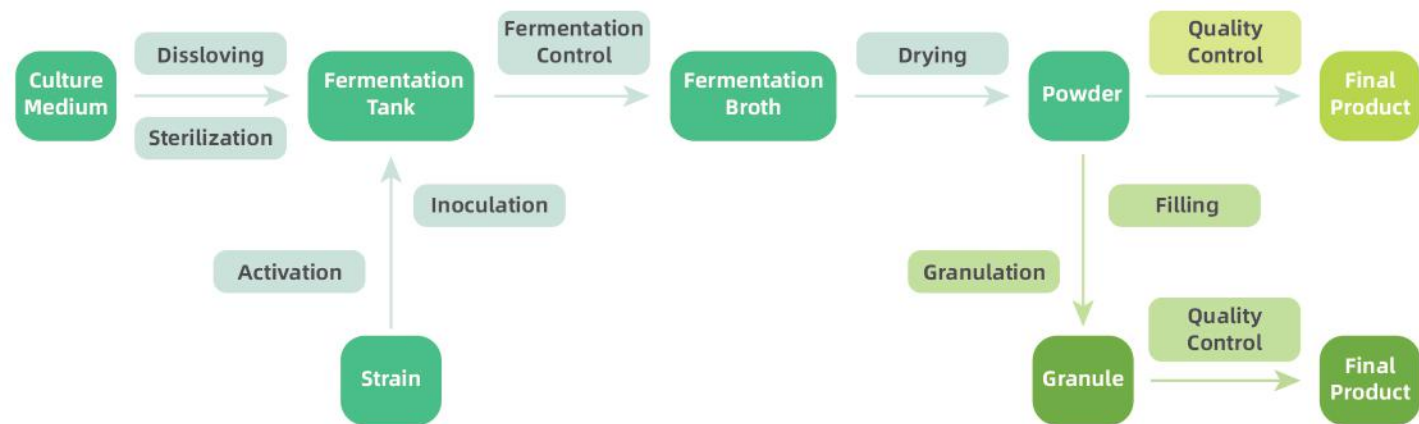
Help to produce B and K vitamins, amylase, protease, and glycosidase. Improve the digestion and absorption of fat and protein.

Repair intestinal epithelial tissue and improve liver metabolism.

## PRODUCT INFORMATION

<b>PRODUCT NAME</b> Clostridium Butyricum	<b>BRAND NAME</b> BetterFeeds	<b>PACKAGING</b> 1kg/bag, 25kg/bag, 25kg/barrel	<b>PRODUCT CONTENT</b> Clostridium Butyricum, Maltodextrin
<b>SPECIFICATION</b> Effective Bacteria ≥2bn CFU/g ≥5bn CFU/g ≥10bn CFU/g	<b>NUTRITIONAL ANALYSIS</b> Effective Bacteria≥ ≥2bn CFU/g ≥5bn CFU/g ≥10bn CFU/g Moisture Content ≤10%	<b>METHOD</b> Mixed with other additives or feed ingredients, or added to potable water directly	

## PRODUCTION PROCESS



## DOSAGE OF CLOSTRIDIUM BUTYRICUM

(Based on 20kg feed per bag)

CFU/g	200 million	2 billion	5 billion	10 billion
Perch, Shrimp	60	6	2.5	1
Crab	60	6	2.5	1
Fish	30	3	1-2	0.5-1
Chick	100	10	4	2
Poultry	50	5	2	1
Piglet	100	10	4	2
Fattening Pig	50	5	2	1
Livestock	50	5	2	1
Ruminant	50	5	2	1

### Notes:

- Keep the product sealed and stored in a cool and dry place.
- Make sure the product is mixed well with other ingredients.
- Keep a low dosage at the beginning and increase it step by step.
- 2-5 times of the recommended dosage for the treatment of intestinal diseases.
- Long-term use ensures better effects.