



INNOVATION SCHEME

For Fermentation
Nutrients

Developing Yeast Biotechnology
Innovate for Healthy Life



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ANGEL YEAST CO., LTD.

About Us



Angel Yeast Co., Ltd. is a leading global yeast and biotechnology company, dedicated to developing natural ingredient solutions for the food & beverage, nutritional, and biotechnology industries. Founded in 1986, Angel has established a strong global footprint with 33 modern production bases, supplying products and services to over 170 countries. With a workforce of over 12,000 employees, Angel shares a unified mission: "Developing yeast biotechnology, innovating for a healthy life."



Angel Fermentation Nutrients

Since its inception in 2009, the Angel Fermentation Nutrients R&D team has been dedicated to the research, development, and promotion of microbial fermentation and cell culture nutrient sources. The product line leverages advanced yeast technology to deliver safe, efficient, and clean yeast extracts, along with comprehensive solution for microbial nutrition and bio-fermentation. The dedicated technical service team provides tailored formulation and process optimization support, fostering the application of innovative products and technologies in the biotechnology sector. Angel is committed to driving industrial advancement and promoting sustainable, green development.

Certification

Angel has obtained certifications including the ISO9001, ISO22000, HACCP, Kosher (OU), MUI Muslim, HALAL certification, BRC certification, SEDEX moral audit certification. And the testing center has been recognized by CNAS, which is the only one national laboratory accreditation in yeast industry in China.

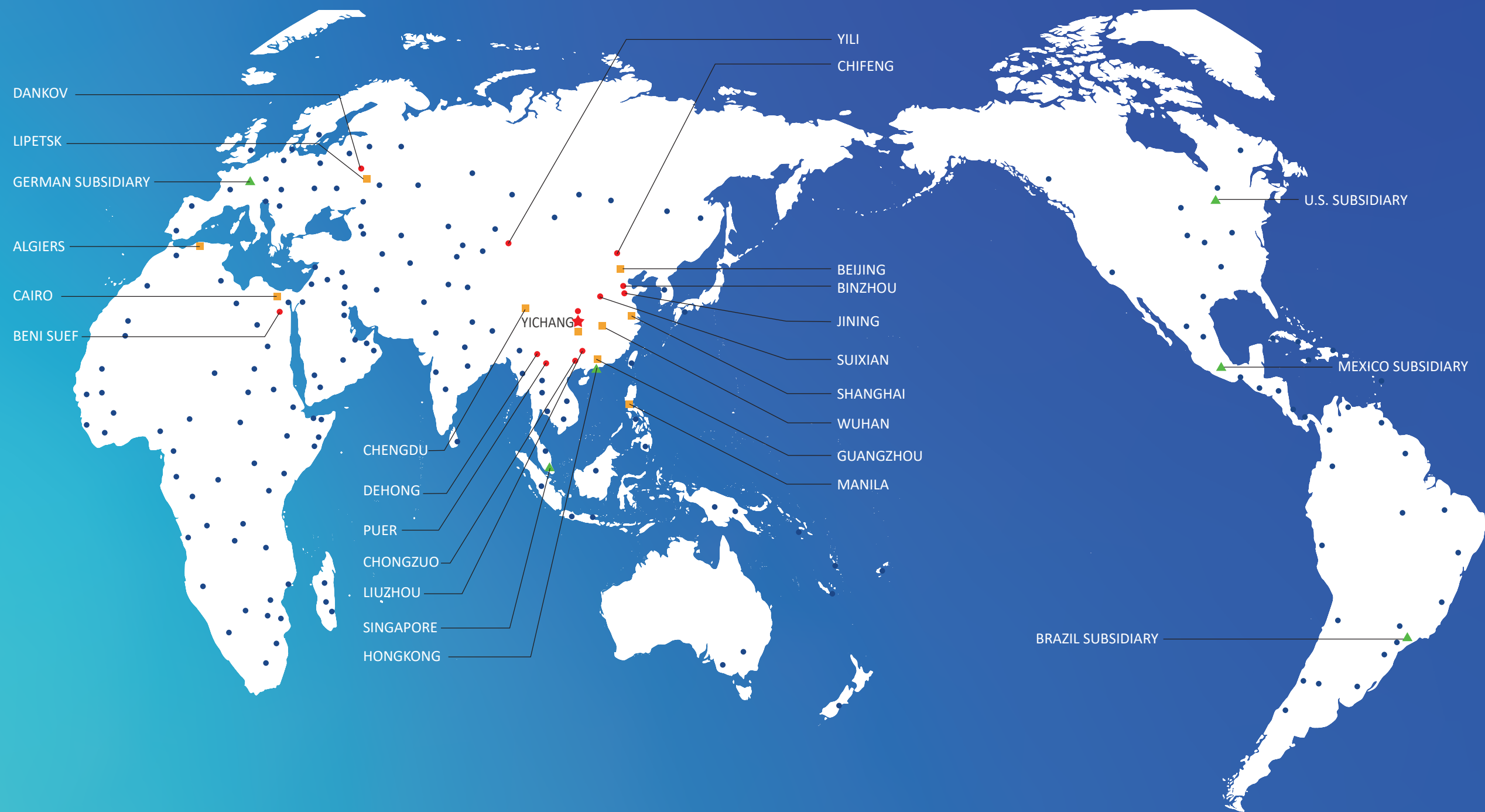


Intelligent Manufacturing System

Angel production line, supported by advanced distributed control system, adopts PCS7 system, supplemented by comprehensive monitoring, which improves production efficiency and ensures the stability of product quality.



Yeast Extract Capacity Leading The World



Angel Yeast, the world's largest producer of yeast extracts, has 10 production sites around the world. The total capacity is over 200,000 tons/year, and the capacity of Liuzhou factory is over 50,000 tons/year.

- ★ HEADQUARTERS
- PRODUCTION BASE
- APPLIED SCIENCE SERVICE CENTER
- OVERSEAS CUSTOMER
- ▲ OVERSEAS SUBSIDIARY

Why Choose Angel Yeast Extract



- GMO free
- Animal free
- Non allergen



- High consistency
- Strict quality control system
- Advanced analytical and testing advices



- Good solubility
- Rich and complete nutrition
- Advanced production technology

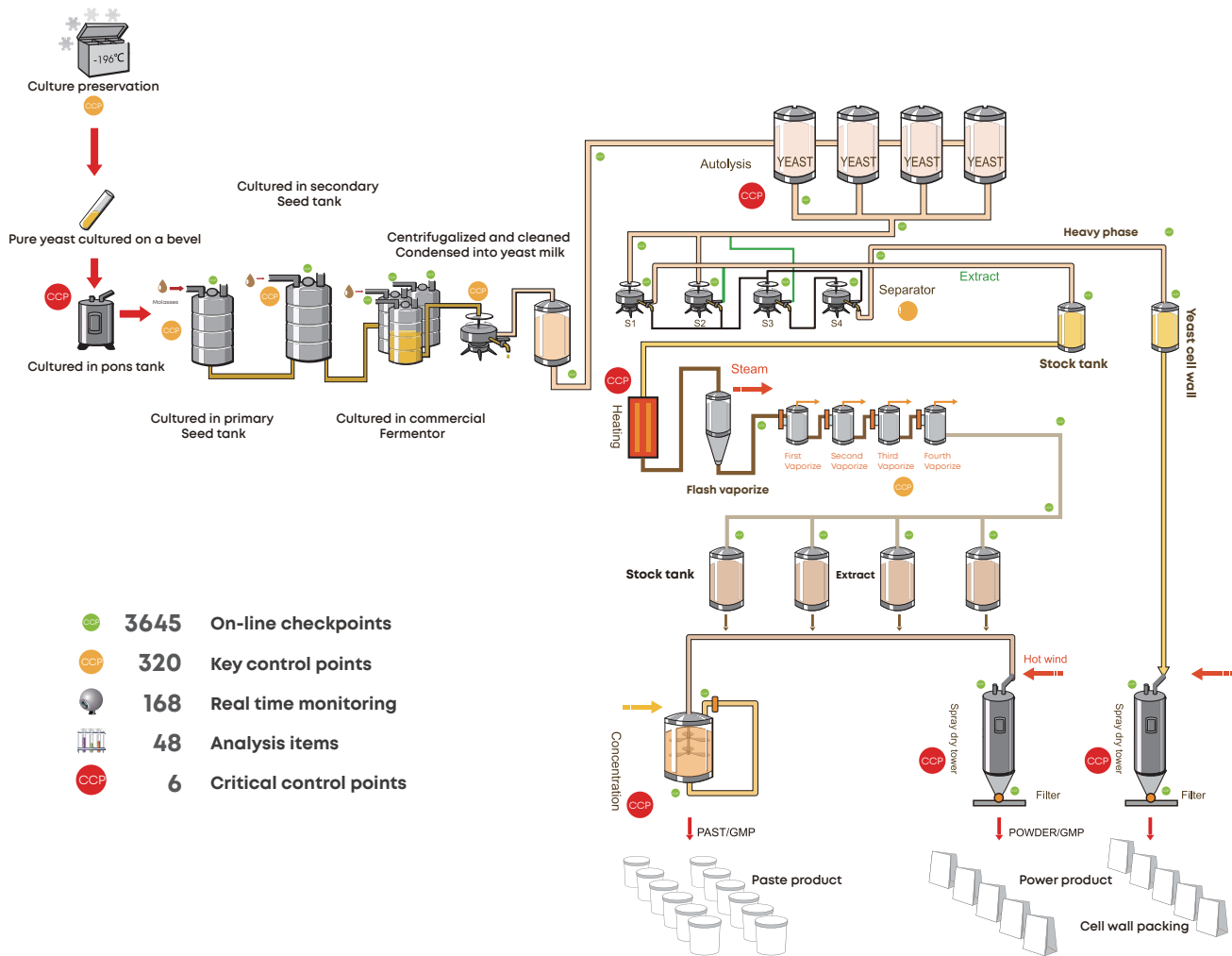
Quality Control

Angel's production lines are equipped with advanced distributed control system, equipment, the whole process CIP cleaning, and fully integrated automation to ensure the high quality and safety of the products.

Production Management

- Well-established quality control system
- Traceability of whole process
- Food safety management
- World-leading production capacity
- Customized production
- Flexible forms of packaging

Process Of Production



Angel Yeast Extract

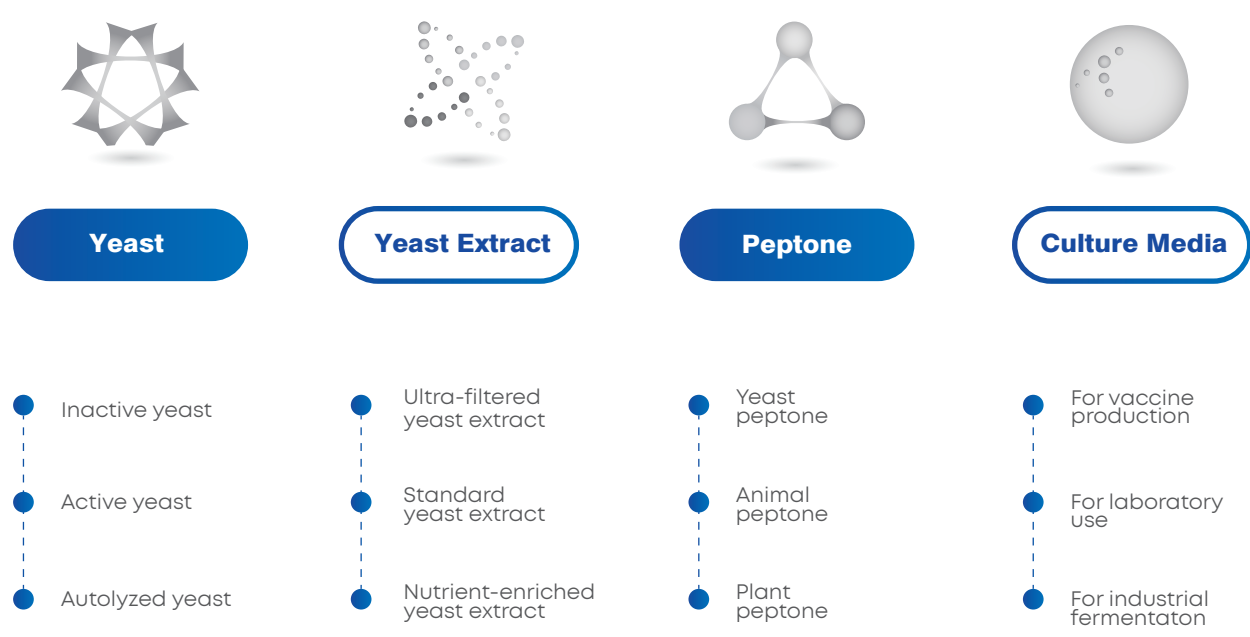
Increase biomass

Yeast extract with good solubility in water could be easily assimilated by microorganisms and cells, and meet the growth requirements of microorganisms and cells.

Improve the accumulation of metabolites

Yeast extract provides microorganisms and cells with essential nutrients such as vitamins, trace elements, growth factors, amino acids and peptides with balanced composition, which could improve the product synthesis.

Angel Fermentation Nutrients



Probiotics and Starter Culture

Probiotics and food culture are widely used in dairy, food processing, and human health. Angel optimized a series of fermentation nutrients for the cultivation of lactic acid bacteria, bacillus, starter cultures and other specific strains for dietary supplements.

Benefits

- Higher biomass yield
- Better viability
- Better adaptability
- Better stability

Products	Features	Applications
Yeast extract	- Rich in nutrients - Rich in growth factors - High consistency - Natural property - Food grade - Non-GMO - Allergen-free	Lactic acid bacteria
Yeast powder		Bacillus
Culture media		Starter culture
Peptone		(yogurt starter, meat starter)

Bio-chemistry

Different from the traditional industry, the developing of Bio-chemistry industry will play a positive role in solving the major problems of resources, energy, food, health and environment. More and more important Bio-chemical compounds are fermented with Angel fermentation nutrients, such as bio-degradable polymers, bio-based building blocks, long chain organic acid, bio-energy to meet the demand of reducing industrial consumption.



Products	Features	Applications
Yeast extract Yeast peptone Peptone	- Balanced nutrition - High nitrogen level - Good solubility - Cost-effective - High consistency	Bio-degradable polymers
		Bio-based building blocks
		Long chain organic acid
		Bio-energy

Food & Feed Bioingredients

Angel supply diverse of fermentation nutrients to Food & Feed ingredients industry, such as amino acid, vitamins, enzymes, organic acid, sugar alcohol, nucleotides, biological preservatives, flavor and essence. Angel fermentation nutrients perform high efficiency with cost-effective.



Products	Features	Applications
Yeast extract Yeast peptone Yeast powder	-Balanced nutrition - High nitrogen level - Cost-effective - High consistency - Natural property - Food grade - Non-GMO - Allergen-free	Amino acids
		Vitamins
		Enzymes
		Organic acid
		Sugar alcohol
		Flavor and essence

Bio-pharmaceutical



Angel professional fermentation nutrients are widely used in insulin, antibiotics, vaccine, antibody, recombinant proteins and cell therapy, also used in the production of dehydrated culture media, cell culture media, ready-to-use culture media.

Products	Features	Applications
Yeast extract Yeast peptone Plant peptone	- Ultra-filtered - Good solubility - Good performance for protein expression - High consistency - Cost-effective - Low endotoxin - No phosphate sediment	Insulin
		Vaccine
		Antibody
		Recombinant proteins
		Cell therapy
		Antibiotics
		Dehydrated culture media

Bio-agriculture

Fermentation processing is increasingly applied in the manufacturing of biopesticide, bio-fungicides, bioremediation and bio-fertilizer, as well as biostimulants. Angel fermentation nutrients and yeast-sourced biostimulants are a good choice for sustainable agriculture.



Products	Features	Applications
Yeast extract Yeast powder Culture media Peptone	- Balanced nutrition - High nitrogen level - High consistency - Good solubility - Cost-effective	Biopesticide
		Bio-fungicides
		Bioremediation
		Bio-fertilizer
		Biostimulants

Products Ranges

Yeast peptone

Type	Applications	Features
FP108	Replancement of animal origin peptone Probiotics and biopharmaceutical fermentation	● Rich in peptides ● Protein content≥78% ● Good solubility
FP103		● Rich in peptides ● Protein content≥78% ● Good solubility
FP102		● Rich in peptides ● Protein content≥70% ● Good solubility
FP101		● Rich in peptides ● Protein content≥60% ● Solubility≥2%

Yeast extract

Type	Applications	Features
FM888/FM885	Dehydrated culture media Biopharmaceutical fermentation Probiotics production	● Ultra-filtered ● Solubility≥30% ● No phosphate sediment ● Low endotoxin ● Good performance for protein expression
FM808		● Rich in peptides ● Good solubility
FM601/FM602		● Rich in glutione
FM985/FM986		● Rich in nucleotides and peptides ● Nucleotides≥1%
FM502/FM503		● Rich in peptide and nucleotides ● Nucleotides≥3%
FM505		● Rich in nucleotides ● Nucleotides≥3%
FM803		● Rich in free amino acids
FM408		● Rich in vitamins
FM401		● Rich in free amino acids
FM303/FM305		● Balanced nutrition ● Cost-effective
FM902/FM903	Industrial fermentation Food and feed ingredients	● Balanced nutrition ● Cost-effective
FM921/FM923		
LD00/LM800		
LM902/FM904		

Yeast

Type	Applications	Features
YP106/YP116	Widely used in antibiotics and bio-pharmaceutical fermentation Suitable for long-period fermentation	● Premium products
YP108		● High quality ● Protein content≥50%
YP103		● Protein content≥50%
YP501/YP601		● Protein content≥40%
YP600		● Cost-effective ● Protein content≥50%
YP200		● Brewer's yeast ● Protein content≥40%
YP202		● Brewer's yeast ● Protein content≥40%
YA801		● Autolyzed yeast ● Cost-effective
YA200		● ≥20 billion/g
YA400		● ≥10 billion/g

Peptone

Type	Applications	Features
FP408 Soy peptone	Dehydrated culture media	● Phosphate-free sterilization precipitation ● Non-GMO ● Alkaline-free sterilization precipitation ● Non-animal
FP228 Wheat peptone		
FP406 Soy peptone	Probiotic fermentation	● Non-GMO ● Non-animal
FP402 Soy peptone	Industrial fermentation	● Non-GMO ● Non-animal
FP400/FP401 Soy peptone		● Non-GMO ● Rich in small peptides and carbohydrates
FP220 Wheat peptone		● Rich in glutamine and proline ● Low ash content ● Non-GMO ● Non-animal
FP319 Tryptone	Dehydrated culture media	● Rich in protein content ● Good solubility
FP316 Tryptone	Industrial fermentation	● Rich in protein content ● Cost-effective
FP328/FP541 Biological peptone	Dehydrated culture media	● Biological peptone ● High clarity in solution ● No phosphate sediment
FP326 Animal sourced peptone	Industrial fermentation	● Industrial grade peptone ● High protein content ● Cost-effective ● High clarity in solution
FP351 Fish peptone		

Dehydrated culture media

Type	Applications	Features
Vinegar starter	Liquid fermentation of vinegar	● Easy to use, fast acid production rate ● High production efficiency
Mushroom medium	Liquid cultivation of mushroom	● Accelerated spore germination and mycelial growth
Bacillus medium	Bacillus fermentation	● Balanced nutrition ● Beneficial to biomass accumulation ● Enhanced sporulation
LB medium	E.coli culture	● Standard products, widely used in the cultivation of common microorganisms in laboratories
TB medium	Protein expression	● Suitable for recombinant protein expression ● High expression efficiency ● Yield improvement
Tryptic soy broth	Vaccine fermentation	● Beneficial to industrial fermentation of hard-to-grow microorganisms ● Rich in nutrients
Streptococcus medium		● Convenient to use ● High Streptococcus cfu count
Lactobacillus culture medium	Aquatic probiotics fermentation	● High viable cell count during fermentation ● Convenient to use
Mold culture medium	Agricultural fungal femmentation	● High fungal biomass ● High sporulation rate