



Microbial Nutrients

[en.angelyeast.com](http://en.angelyeast.com)



**Focus On Yeast Biotechnology**  
**Innovate For Healthy Life**

## PROFILE

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Angel Yeast Co., Ltd, a yeast technology driven manufacturer with 10 state of the art production bases in China, Egypt and Russia, offers products across diversified segments such as bakery, food, microbial nutrition, human nutrition, animal nutrition, plant nutrition, brewing and special enzyme.

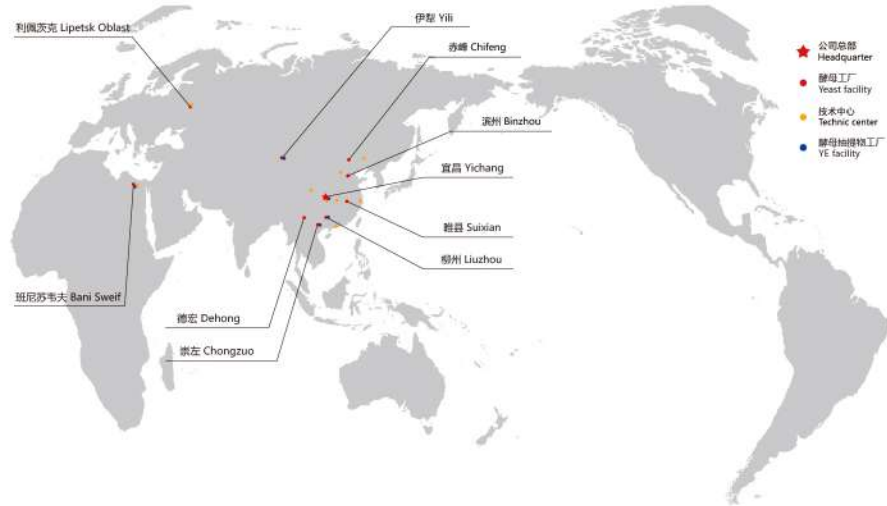
## ANGEL MICROBIAL NUTRIENTS

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In 2009, Angel microbial nutrition division was established on the expanding of global fermentation industry. Angel fermentation nutrient products correspond to the demand of refined nutrients in commercial fermentation of bio-chemicals, pharmaceuticals, probiotics, bio-control compounds and dehydrated culture media by enhancing growth and improving accumulation of metabolites on microorganisms and cells. Angel's management idea "Safe and Clean, Efficient and Stable" has been widely accepted by customers and partners.



# YEAST EXTRACT CAPACITY LEADING THE WORLD



Angel has 5 yeast extract production sites located in Yichang, Yili, Liuzhou and Chongzuo in China, Bani Sweif in Egypt, the total capacity of which is over 75,000 tons/year, and the capacity of Liuzhou is over 40,000tons/year.

## 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.



# CERTIFICATION

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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.



# Quality Control

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

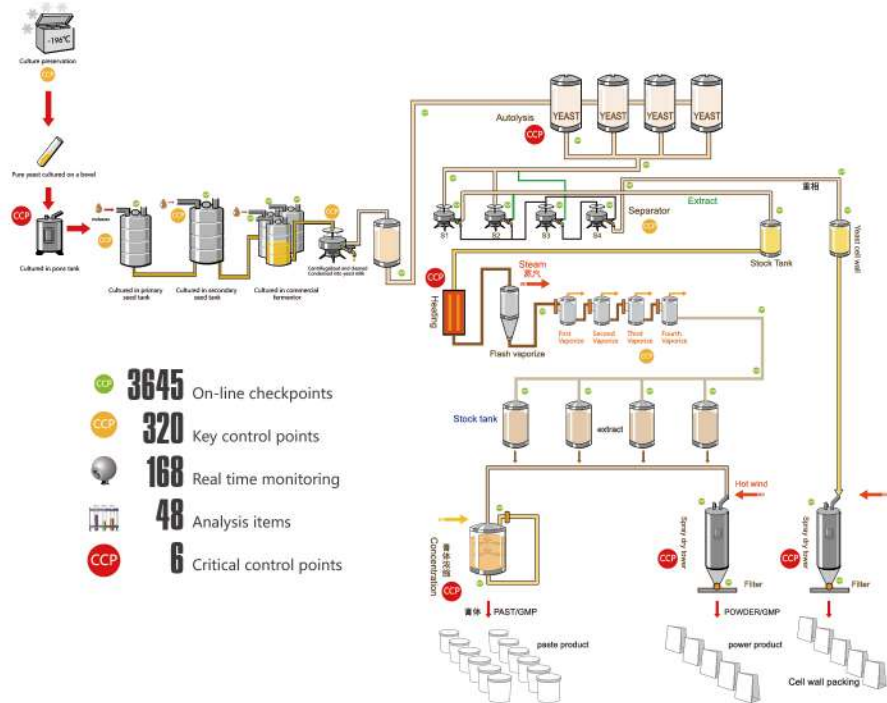
# Global Service

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- Angel has built 8 headquarters and 10 technology centers in the world.
- Angel has set up sales network in more than 150 countries and regions.
- Angel has been using the SAP system for globalization management.
- Angel participates in more than 100 exhibitions around the world every year to contact with customers.
- Angel has more than 300 engineers of application technology to serve the customers around the globe.



# PROCESS OF PRODUCTION



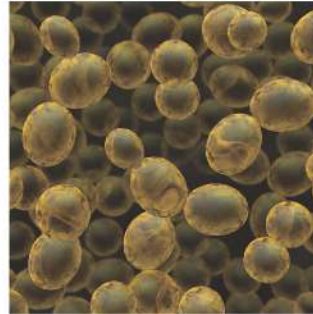
# Production Management

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



# ANGEL YEAST EXTRACT

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## FUNCTIONALITY OF YEAST EXTRACT

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### 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.

## WHY CHOOSE ANGEL YEAST EXTRACT

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### Clean & Safe

- GMO free
- Animal free
- Non allergen

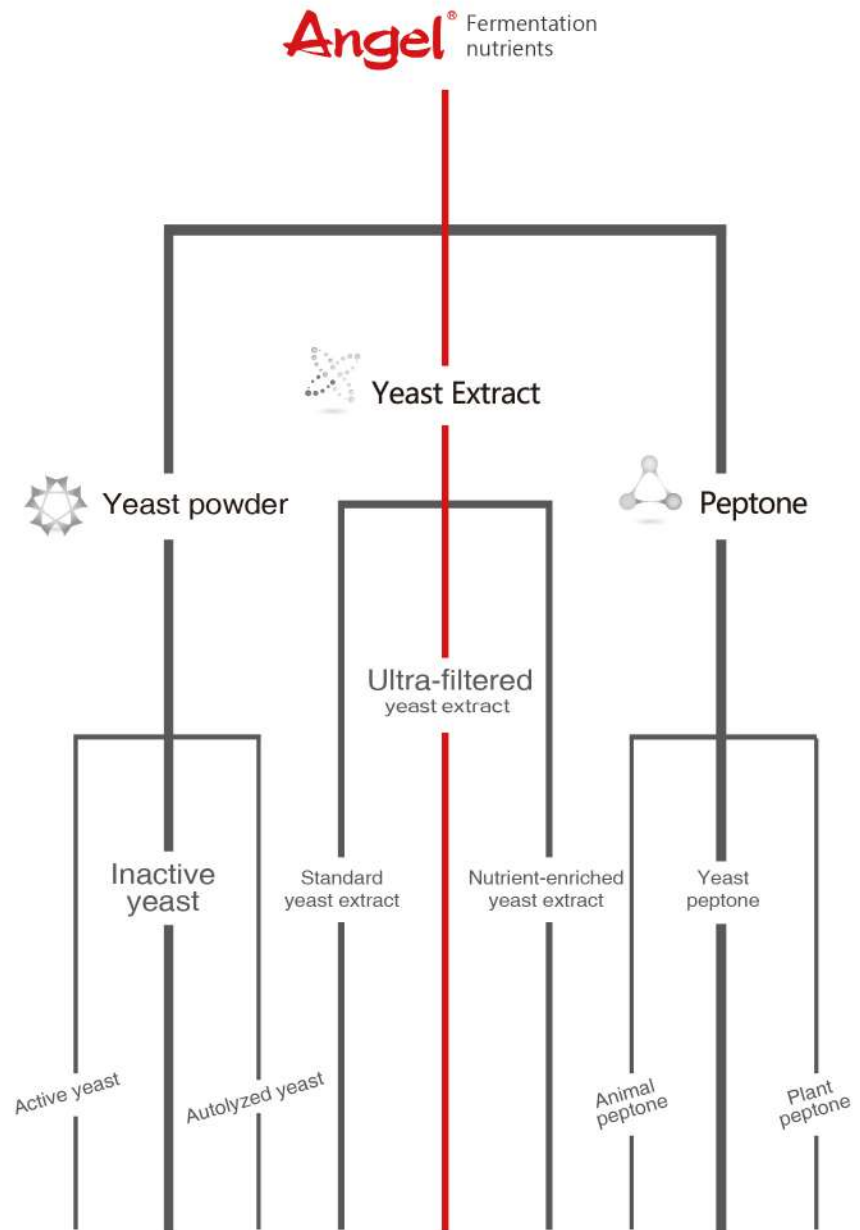
### Stable Quality

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

### High performance

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

# RANGE OF PRODUCTS





# APPLICATION

## Agricultural and environmental industry

- Bio-pesticides
- Bio-insecticides
- Bio-plastic
- Bioremediation
- Probiotics for agriculture, environment



Recommendation	FM902	FM801	FM701
Total soluble	√		
Light color	√	√	√
High nitrogen level	√		
Rich in peptides	√		
High consistency	√	√	√
Cost effective	√	√	√
No harm for human and environment	√	√	√
Recommendation level	★★★★★	★★★★	★★★★★

## Biomass production industry

- Starter culture
- Yogurt and Probiotic Beverage
- Probiotics for human health and animal feed
- Cultivation of mushroom and macrofungi



Recommendation	FM808	FM803	FM902	FP103	FM502
Good solubility	√				
Total soluble	√	√	√	√	√
Light color	√	√	√	√	√
High nitrogen level	√	√		√	
Rich in peptides	√			√	√
Rich in free amino acids		√			
Rich in Nucleotides					√
Animal origin peptone substitute				√	
High consistency	√	√	√	√	√
Cost effective	√	√	√	√	√
Recommendation level	★★★★	★★★★★	★★★	★★★★★	★★★★★

# APPLICATION

## Bioactive molecules and chemicals industry

- Enzymes
- Organic acids
- Antibiotics
- Amino acids and peptides
- Other type of large scale fermentation
- Hormones
- Vitamins



Recommendation	FM808	FM902	FM801	LM800	LD00	FP103	YP108
Good solubility	√						
Total soluble	√	√		√	√		
Light color	√	√	√		√	√	√
High nitrogen level	√	√		√	√	√	
Rich in peptides	√					√	
Animal origin peptone substitute						√	
Slow released nutrients			√				√
High consistency	√	√	√	√	√	√	√
Cost effective		√	√	√	√		√
Recommendation level	★★★★	★★★★★	★★★	★★★★	★★★★	★★★★	★★★

## Culture media and diagnostics industry

- Bench scale research
- Diagnostics
- Dehydrated culture media
- Cell culture

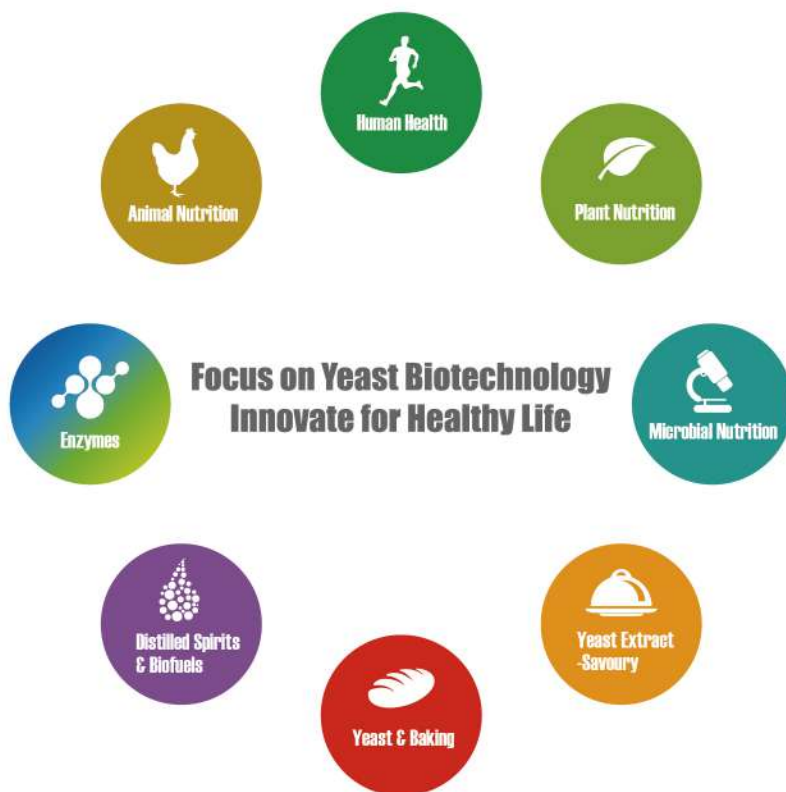


Recommendation	FM888	FM808
Non phosphate sediments	√	
Good solubility	√	√
Total soluble	√	√
Light color	√	√
High nitrogen level	√	√
Rich in peptides	√	√
Rich in free amino acids	√	
Low endotoxin	√	
High consistency	√	√
Recommendation level	★★★★★	★★★★

# TYPICAL PRODUCTS

Grow with you, Smart choice of you, Customized for you.

ITEM	Ultra-filtered Yeast extract	Nutrients enriched Yeast extract	Standard Yeast extract	Yeast Peptone	Autolyzed Yeast	Inactive Yeast
Product	FM888	FM803	FM902	LD00	FM801	YP108
Physical form	Powder	Powder	Powder	Liquid	Powder	Powder
Total nitrogen (on dry, %)	≥10	≥10	≥9	≥10	≥6.4	Protein ≥40
Amino nitrogen (on dry, %)	≥5	≥5	≥3	≥4	≥2.5	/
pH (2% solution)	6.8-7.2	5.3-7.2	5.3-7.2	4.0-6.0	5.3-7.2	4.0-6.5
Sodium chloride (%)	≤2	≤2	≤2	≤2	≤2	≤2
Ash (%)	≤15	≤15	≤15	≤15	≤15	≤8
Dry matter (%)	≥94	≥94	≥94	≥51	≥94	≥92
Aerobic count (cfu/g)	≤10000	≤10000	≤50000	≤10000	≤50000	/
Coliforms (MPN/100g)	≤30	≤30	≤30	≤30	≤30	≤30
Salmonella	Negative	Negative	Negative	Negative	Negative	Negative
Lead (ppm)	≤1	≤1	≤1	≤1	≤1	≤2
Arsenic (ppm)	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5	≤2
Mercury (ppm)	≤0.5	≤0.5	≤0.5	≤0.5	≤0.5	≤2
Package	20KG/bag	20KG/bag	20KG/bag	20KG/bucket 1.1MT/IBC	20KG/bag	25KG/bag
Shelf life	24months	24months	24months	12months	24months	24months



**ANGEL YEAST CO., LTD.**

Address: 168 Chengdong Avenue, Yichang, Hubei, China. 443003  
 Tel: +86 717 6369227, +86 717 6369701  
 Fax: +86 717 6368757  
 Email: [bio@angelyeast.com](mailto:bio@angelyeast.com)