Fermtek®

Customized Fermentation for Your Brand

Fermtek®

Fermentation by Nature

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Fermentation phase 2: HSF Industrial Park, Chuang Xin Road,Yangling Demonstration Zone, Shaanxi Province, P.R. China



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About Us

HSF--Leading Innovator in Functional Ingredients

Starting with manufacturing natural vitamin E, phytosterol and micro-encapsulated powders, HSF has created a rapid and healthy growth in global reputation and technology accumulation,with the help of more than 10 years' continuous technology innovation on fermentation, HSF introduces branded FERMTEK ® series products to enrich its products lines, creating more opportunities with our global partners.









Our History

2011
HSF Biotech was established

2012
Early 2012, HSF's laboratory set up to develop functional oil and cut-edge technology on microbiology

2014
Natural vitamin E lines put into production

2015
Phytosterol esters put into production

2016
Micro-encapsulation lines put into production

2018
Breakthrough in optimization of microbial strain

2019
The annual sales of HSF exceeded 200 million yuan;
Approved with the Research Center on National Key Programs;HSF (Yangling) Health Industrial Park new factory was established

2020
Second prize of Shaanxi science and Technology Award "Specialization, refinement, characteristics and novelty" small and medium-sized enterprises in Shaanxi Province

2021
The annual sales of HSF exceeded 300 million yuan;
Two national key R & D plans;
Shaanxi Gazelle Company (fast-growing entity of agricultural sci-tech)

2022
Fermtek ® Completion of fermentation production line;
The annual sales of HSF exceeded 400 million yuan

2023
The second phase of the Fermtek® fermentation project has been completed and put into operation.
Approved as Synthetic Biology Innovation Center by Shaanxi Province
The Shaanxi Province Functional Lipid Biomanufacturing Engineering Research Center was approved.

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Fermtek®
HSF-Factories and R&D Centers











Two individual fermentation and extracting production lines

Since 2012, with 10 years' continuous R&D and optimization of fermentation & extracting technology, HSF invested 4.8 million USD and 12.8 million USD in its first and second industries zone in city of Yangling. With the two individual manufacturing sites, Fermtek® can provide our customers options with small, mid-sized and large-scale production capacity, ranging from one –stop service.















Four laboratories

HSF Biotech pays great attention to original research and technical innovation with proprietary intellectual property rights. In order to accelerate the research and development of new products, the company has strengthened the cooperation with research institutes. The company established Shaanxi Biological Transformation Laboratory together with the Food College of Shaanxi Normal University. now we has four laboratores:

Ⅰ. Microbial research laboratories: strain screening, mutagenesis, stimulation of strain potential.

II. Biotransformation laboratory: study of strain metabolites and enzyme activities to improve product yields.

III. Fermentation laboratory: optimization of fermentation conditions, fermentation step by step expansion of suitable production.

IV. Extraction and separation laboratory: Study the specific extraction conditions based on product characteristics to improve yield and reduce costs.

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Product and Service



Fermtek® Customized Fermentation for Your Brand

With the help of more than 10 years'continuous technology innovation on fermentation,HSF introduces branded FERMTEK® series products to enrich its products lines, creating more opportunities with our global partners.

Fermtek® can provide our customers options with small, mid-sized and large-scale production capacity, ranging from natural Beta-Carotenoids, DHA , Co-enzyme Q10, and vast variety of customized and directional fermentation services.

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FermAlge®

Fermtek® Product Specification

Algal DHA Oil (Docose Hexaenoic Acid Oil)

- Low temperature extraction technology, no trans fatty acids
- Three-phase separation technology, clear and transparent, low odor
- Selection of excellent Schizochytrium HSc-01, higher DHA content
- Automated fermentation platform, controllable environment, more stable production batches
- Oil microencapsulation technology, meet demand and expand application areas

Product	Specification	Packaging	Application
Algal DHA Oil (Docose Hexaenoic Acid Oil)	40%/50%/60%	190kg/ drum, Customized	Dietary supplements, food&beverages, animal feed etc.
DHA Oil Powder (Docose Hexaenoic Acid Oil Powder)	5%/10%/20%	20kg/drum, Customized	Infant formulas, Dietary supplements, food&beverages, animal feed etc.
Algal DHA Schizochytrium Powder	20%	25kg/bag, or customized as required	Aquaculture, Animal Feed etc.

Fermtek® Product Specification

NutraColour®

Product	Specification	Type	Application
β-Carotene Powder	96%	Fine Powder	Dietary supplements, food&beverages, animal feed etc.
β-Carotene Oil Suspension	20%/30%	Oil Suspension	Softgel Capsules, Oily Form Products
Micro-encapsulated β-Carotene Powder	10%/20%	Cold Water Soluble & Beadlets	Solid beverage,Tablets, Hard Capsules
Lycopene Powder	96%	Fine Powder	Dietary supplements, food&beverages, animal feed etc.
Lycopene Oil Suspension	6%/10%	Oil Suspension	Softgel Capsules, Oily Form Products
Micro-encapsulated Lycopene Powder	1%/5%	Cold Water Soluble & Beadlets	Solid beverage,Tablets, Hard Capsules
Astaxanthin Oil Suspension	5%/10%	Oil Suspension	Softgel Capsules, Oily Form Products
Micro-encapsulated Astaxanthin Powder	1%/2%	Cold Water Soluble & Beadlets	Solid beverage,Tablets, Hard Capsules

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CoenPrime®

Fermtek® Product Specification

Product	Specification	Packaging	Application
Coenzyme Q10 Powder 10%	Cold Water Dispersible (CWD)	20kg/drum, Customized	Dietary supplements,food&beverages, cosmetics, animal feed etc.
Coenzyme Q10 Powder 10%	Granular	20kg/drum, Customized	Dietary supplements, tablets
Coenzyme Q10 Powder 20%	Cold Water Dispersible (CWD)	20kg/drum, Customized	Dietary supplements,food&beverages, cosmetics, animal feed etc.
Coenzyme Q10 Powder 40%	Cold Water Dispersible (CWD)	20kg/drum, Customized	Dietary supplements,food&beverages, cosmetics, animal feed etc.
Coenzyme Q10 Powder 98%	Crystalline Powder	5kg/tin, Customized	Dietary supplements, cosmetics, animal feed etc.

Fermtek® Customized

FermHerb® Series Ingredients

Fermented Papaya Powder	Fermented Maca Extract	Fermented Pomegranate Extract	Fermented Fruits&Vegetables
Fermented Green Tea Extract	Fermented Ginkgo Biloba Powder	Fermented Curcumin	Fermented Red Ginseng Powder

Customized combination available for various herbs, vegetable or fruits with safe and registered microbial strains

FermHerb® utilizes state-of-the-art fermentation technology with its own microbial strains like probiotics to increase the bioavailability and absorptivity, pre-digest the functional ingredients for human bodies.

Interested in partnering with us in developing your customized fermentation products? You need try our DeePPD® services, which means the deep product partnership development, sharing the opportunities created together with you. Just leave your ideas and concepts to us!

Fermtek®
Head of R&D Department of HSF Biotech



Dr.Meng

Chief scientist at HSF

Titles:

- Professor of the College of Food Engineering and Nutritional Science of Shaanxi Normal University
- Deputy Director of the High Value-added Fruit Research Center in Western China, Ministry of Education
- Secretary-General of Shaanxi Food Science and Technology Association
- Co-founder and CTO of HSF Biotech.

Personal Honors:

Dr. Meng is Ph.D. at China Agricultural University, postdoctoral at Beijing University of Chemical Technology, and senior visiting scholar at Washington State University.

- Till now, Dr. Meng has been engaged in:
- 2 general projects of the National Natural Science Foundation of China, 1 of the 863 Project of Ministry of Science and Technology,
- 2 Sub-project of National Key Research and Development Project
- Numbers of scientific research projects of Doctoral Funds of the
- Ministry of Education and Shaanxi Science and Technology Department

Academic Achievements:

- Published more than 90 papers, including 30+ SCI papers
- Obtained 53 patents of invention
- Second and Third Sci-tech Awards of Shaanxi Province
- Co-edited two monographs

Fermentation by Nature



Fermtek®
Core Strengths

Leading Microbial Fermentation Technology--Bring Your Ideas to Reality

Scientific research advantages

40 + Technical Staff
70+Patents of Invention
5+Cooperation with well-known universities

Technical advantages

Fully-controlled fermentation and extracting process
Two individual fermentation and extracting production lines
Free microbial fermentation of Quality assurance systems (like cGMP, HACCP, FSCC22000 etc.)

Innovation advantages

4 R&D Locations
Vast varieties and registered strains bank
120 + Microbial Strains Bank
Advanced laboratories that utilize state-of-the-art equipment

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Fermtek®

DeePPD® Services

Fermtek® Provides one-step service from **development** to **products**

To provide better customized services , HSF has formulated a perfect cooperation process for Fermtek® ,You can be involved in the entire process of product development



Six Steps for Vertically-Integrated DeePPD™ Services

1. Tell us what's your pain point and requests on your products and marketing
2. HSF's professional market and R&D teams will negotiate and work with you to customize a product solutions
3. Tailoring a specific timetable and schedule for this product development, and provide lab scale and pilot scale samples,contrast samples and related evaluation reports
4. Updating and modifying our solutions upon your comments or feedbacks from samples until you are satisfactory finally
5. Working on trademark, patenting, intellectual property protection and functional evaluation, sign agreements with HSF on confidentiality and cooperation
6. Schedule a massive production, packing and delivery etc. flowing chart, HSF will be open and transparent during the entire progress to you

Four Models for Partnerships Product Development

- Contract Manufacturing
- Customized Formula and Specifications
- Blend and Premix
- Patenting and Functional Evaluation



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Quality Control System

We have been approved by many cases of on-site audit on facilities and documentation from world well-known brands :

- HSF have the international advanced management concept of fermentation workshop and have built a strict quality management system. (cGMP,FSCC22000,ISO9001,Halal,Kosher,SC certification). Guarantee aseptic environment, product quality and stability between roduction batches to meet customers' requirements for product safety and high quality.
- HSF has registered Sedex and Ecovadis with high score.
- HSF maintains a healthy sustainability and social .responsibility, through our commitment to the high-quality management standards, including compliance and safety, we provide an unmatched level of certainty to our customers.