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生产基地:陕西海斯夫生物工程有限公司

地址:陕西省杨凌示范区火炬产业园海斯夫厂区

Manufacturing Site: Shaanxi Healthful Bioengineering Co.,Ltd.

Add: C1~C5 Building, Torch Industrial Park, Yangling District, Shaanxi, China.



## 致海斯夫

#### Thanks to HEALTHFUL

我们感恩你海斯夫

分享健康理念的同时可以与我们的合作伙伴 共同成长:

我们崇尚创业精神

期待有一天海斯夫能成长成参天大树

为我们避暑纳凉;

我们喜欢阳光沙滩,

总想在健康的世界里打破这禁锢人思维的

繁文与枷锁;

我们坚信人人不凡

再不具名气的小人物他的世界也有你想象不到 的色彩斑斓。 Thanks to HEALTHFUL,

that we have an opportunity to

grow up with our respected customers

Thanks to entrepreneurship.

that the days are approaching when

we can get the shelter from HSF towering tree;

Thanks to sunny beach.

that we are able to embrace the

healthy world gracefully and inclusively:

thanks to self-confidence

hat we are born equal to make our

own dream to be near and more realistic.

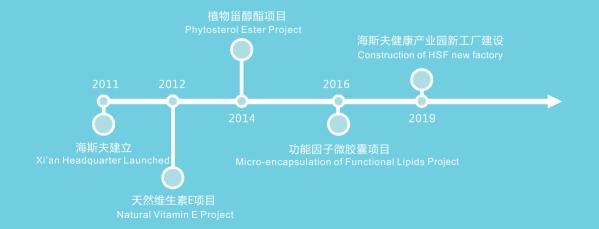
## 海斯夫战略

**HSF STRATEGY** 

我们将始终以一个"挑战者"的姿态,凭借不断的研发和商业模式的创新,在与世界一流企业的竞争中胜出。力争成为一个真正对人类健康做出贡献的全球性企业。

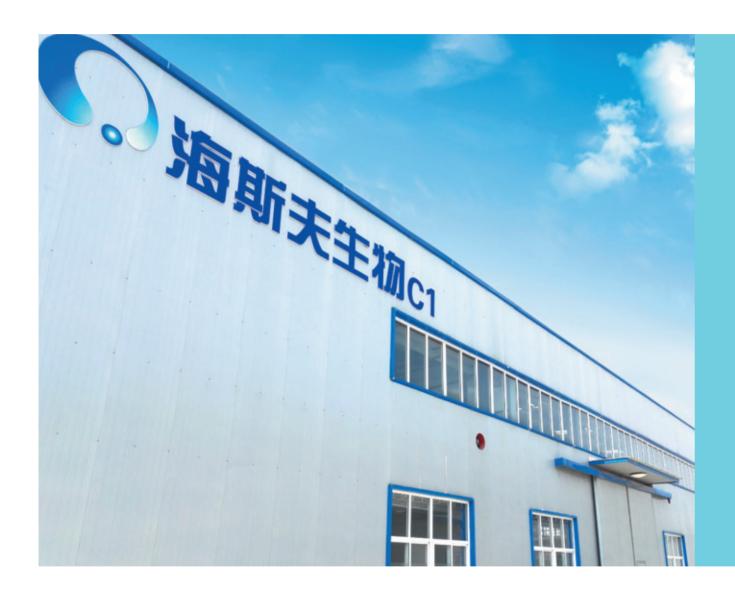
We will strive as always as a "Challenger" to win against the global competition by our longstanding innovation on R&D and business model, aiming at being a multinational corporation contributing to human health.

## 海斯夫成长历程 HSF BACKGROUND





## 卓越的不仅仅是产品 Excellent,beyond the products.

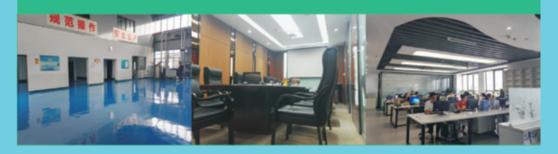


## 海纳百川,永远的追求;

That the sea can hold water from thousands of rivers indicates our continuous pursuit;

## 有容乃大,不变的情怀。

as well as unchangeable feelings for the great tolerance.



海斯夫在创立之初,就具备国际化视野的基因,着眼于全球功能性健康产品技术和应用发展趋势。以功能性健康产品原料作为研发载体,海斯夫应用已经取得的科技成果和专利技术积极推动其产业化。

在功能性油脂、天然抗氧化剂、类胡萝卜素及微胶囊化等产品上储备了一大批核心专利技术。海斯夫利用现代生物菌发酵工程技术制备功能因子,进一步发掘和提取天然功能成分,应用于功能食品加工,提高了产品附加值,拓展了产品应用的广度和深度。

HSF has been devoting to global functional health product technology application and development trends with an international vision since its establishment in 2011. Taking the functional ingredients as the research and development carrier, HSF actively promotes its industrialization with technology achievements and patented has acquired. Till now, HSF has gained a host of core patented technologies in the fields of functional lipids, natural anti-oxidants, carotenoids and micro-encapsulations etc. With its frontier research on modern biological bacteria fermentation, HSF will fulfill the breadth and depth of applications for natural functional factors used in high-valued health food productions.

海斯夫愿景 HSF Vision 全球功能性健康产品解决方案的领导者 Worldwide Innovator of Solutions for Functional Health Products

> 海斯夫使命 H S F Mission

为功能性健康产品企业在其产业生态链上提供全方位的产品解决方案

Supplying Functional Health Corporations with All-round Solutions for its Ecological Products Chains

## 关于海斯夫

### **About HSF Biotech**

海斯夫作为一家以研发创新为核心竞争力并快速发展的高科技企业,在掌握全球领先的生物技术和客户核心需求的基础上,公司研发和市场部门始终致力于提供系统性的产品解决方案,从而更好地服务于全球品牌客户,尤其是功能性食品、饮料、医药、保健品和化妆品等领域的客户。

Since 2011, HSF Biotech has been devoted to the R&D of functional and healthcare products. Born with an international vision, HSF Biotech grows fast with fruitful R&D researches and patented technologies. By far, we have achieved numbers of patents in the fields of functional lipids, natural anti-oxidants, carotenoids, micro-encapsulations, and etc. Based on its research on modern biological bacteria fermentation technology, HSF Biotech greatly expands the applications of naturally-occurring ingredients in functional food and healthcare industry.

#### 海斯夫科研实力 R&D Capacity

海斯夫致力于走科技创新、技术先行的道路。公司拥有多名在生物和食品领域具备较强自主研发和产业化的博士后、研究生为主导的技术团队,在多项前沿生物技术领域具有核心的专利技术。同时,海斯夫与中国农业大学、江南大学、华南理工大学、暨南大学和东北农业大学等在全国生物、食品领域知名的院校开展产学研合作,走出一条研发和市场双引擎驱动、强力竞争优势的特色化经营模式。

HSF Biotech aims to be an innovation-oriented and hi-tech-led enterprise. We have our technical team led by post-doctors, graduates from biology and food, who are skilled at independent R&D and in industrialization. HSF has dozens of key patents in some frontier biological technologies. Meanwhile, we made some close industry education-research institution collaborations with many Chinese famous universities like: China Agricultural University, Jiangnan University, South China University of Technology, Jinan University and Northeast Agricultural University, which ensures us to establish a new business two-engine-drived model with powerful R&D and Marketing capabilities.



## 海斯夫专利及荣誉 HSF Patents and Honors

#### 专利 Patents

海斯夫拥有22项发明专利,涉及天然维生素E、植物甾醇、植物甾醇酯、豆甾醇、阿魏酸、功能油脂微囊粉等。

HSF owns totally 22 patents for inventions, involving in products of natural vitamin E, phytosterol, phytosterol ester, stigmasterol, ferulic aid and micro-encapsulated oil powders etc

#### 国家标准 National Standard

海斯夫参与起草和制定了植物甾醇、植物甾醇酯、天然维生素E原料DD油三个产品的国家行业标准。

HSF participates in drafting China's National Standard of phytosterol ester and Natural Vitamin E DD oil.

## 荣誉 Honor

- ▶ 2016.01 被评为杨凌示范区2015年度明星创业企业
- ▶ 2017.02 被评为杨凌示范区2016年度产业化项目建设先进单位
- ▶ 2017.10 被授予杨凌示范区工程技术研究中心
- ▶ 2017.10 西安海斯夫生物科技有限公司被认定为高新技术企业
- ▶ 2018.01 被授予杨凌示范区瞪羚企业称号
- ▶ 2018.09 被授予陕西省中小企业创新研发中心
- ▶ 2018.11 陕西海斯夫生物工程有限公司被认定为高新技术企业
- ▶ 2018.11 被认定为陕西省技术创新示范企业







海斯夫通过认证体系:ISO9001、ISO22000、 cGMP、IP(Non-GMO)、Kosher、HALAL、 Organic等

HSF passed certification systems: ISO9001, ISO22000, cGMP, IP(Non-GMO), Kosher, HALAL, Organic etc.

## 海斯夫健康产业园新工厂建设 Construction of HSF new Factory

2019年起计划投资2.8亿元开工建设"海斯夫(杨凌)健康产业园",园区占地70亩,项目包括:功能性油脂微囊化生产线、功能性固体原料微囊化、植物甾醇生产线、微生物工程菌发酵生产线等。

海斯夫健康产业园的建立大大丰富了海斯夫现有产品线,提高了产品的国际竞争优势,完善了海斯夫现有产品的上下游产业链,并加速企业国际化进程。



### 海斯夫植物甾醇/酯系列

# LowCho TM Phytosterol/Ester



产品名称	规 格	用 途 、 优 点	外 观
大豆来源植物甾醇酯	97%	功能性食品、乳制品、食用油、涂抹酱、人造黄油、 化妆品及个人护理用品。低熔点、易添加、无异味、 稳定性好	黄色至类白色膏状
松木来源植物甾醇酯	97%	功能性食品、乳制品、食用油、涂抹酱、人造黄油、 化妆品及个人护理用品。低熔点、易添加、无异味、 较稳定。β-谷甾醇含量高	黄色至类白色膏状
水溶性植物甾醇酯微囊粉	50%、67%	功能性食品、固体饮料、干法工艺乳制品、化妆品。 水溶性较好、稳定性好	白色至类白色粉末
植物甾醇(大豆, 松木)	95%、98%	甾体激素原料、压片制品、硬胶囊等	白色至类白色粉末
豆甾醇	95%	植物生长调节剂、载体药物及激素、化妆品、保健 品等产品领域	白色至类白色粉末
客 户 定 制 规 格 植 物 甾 醇 酯	客户定制	个性化定制、多领域用途、产品剂型多样	白色至类白色膏状

Product Name	Specification	Benefits	Appearance
Phytosterol Ester Soybean Source	97%	Low melting point compared to sterols, dispersible in oil ,used in food ,spread, cosmetics, nutrient and dairy products	Light yellow to off-white paste
Phytosterol Ester Pine Tree Source	97%	Low melting point compared to sterols, dispersible in oil, used in food, spread, cosmetics, nutrient and dairy products	Light yellow to off-white paste
Water Dispersible Phytosterol Ester Microencapsulat- ed Powder	50%、67%	Used in food, solid beverage, dairy, cosmetics and personal care products, water-based formulations	Light yellow to off-white water dispersible po- wder
Phytosterol Powder (Soya, Pine)	95%、98%	Used in tablets or hard capsules, ability to blend with other dry ingredients	
Customized Phyto- sterol Ester	customized	Customized with various sterols and fa- tty acids sources	Light yellow to off-white paste

## 海斯夫天然维生素E系列 Natural Vitamin E VegeToc<sup>TM</sup>

产品名称	规 格	外 观	应 用
混合生育酚浓缩物	50%,70%,90%,95%	棕红色油状	抗氧化剂、膳食补充剂、动物饲料等
混合生育酚微囊粉	30%	浅黄色粉末	抗氧化剂、膳食补充剂、动物饲料等
D-α 生育酚	1000~1430IU/g	棕红色油状	膳食补充剂、营养强化剂、化妆品原料等
D-α 醋酸生育酚	1000IU~1360IU/g	浅黄色油状	膳食补充剂、营养强化剂、化妆品原料;软胶囊等
D-α 醋酸生育酚粉	500~700IU/g、CWD、TAB	白色粉末	膳食补充剂、营养强化剂、化妆品原料;硬胶囊、片剂等
D-α 琥珀酸生育酚	1185IU/g,1210IU/g	白色晶体粉末	医药原料、膳食补充剂、营养强化剂;硬胶囊、片剂等

Product Name	Specification	Appearance	Applications
Mixed Tocopherol	50%,70%,90%,95%	Brownish red oil	Anti-oxidant food additives, dietary supplements, animal feed, cosmetics etc.
Mixed Tocopherol Powder	30%	Red to yellow powder	Anti-oxidant food additives, pet food, cosmetics, and beverages etc.
D-alpha Tocopherol	1000~1430IU/g	Brownish red oil	Nutrition supplements, functional food etc.
D-alpha Tocopheryl Acetate	1000IU~1360IU/g	Light yellow oil	Nutrition supplements, pet food, softgel capsules, cosmetics etc.
D-alpha Tocopheryl Acetate Powder CWS	500~700IU/g、CWD、TAB	Light yellow powder	Nutrition supplement, pet food, softgel capsules, cosmetics etc.
D-alpha Tocopheryl Acid Succinate	1185IU/g,1210IU/g	Off-white crystalline	Nutrition supplements tablets, hard capsules.

#### 海斯夫LowChol™植物甾醇/酯系列发明专利:

"合成与分离植物甾醇饱和脂肪酸酯和不饱和脂肪酸酯的方法"

专利号: ZL201210019987.2

"水溶性植物甾醇不饱和脂肪酸微胶囊及其制备方法"

专利号: ZL201210114826.1

"利用分子蒸溜技术提取松果中植物甾醇的方法"

专利号: ZL2014101511080

"一种植物甾醇脂肪酸及催化合成方法"

专利号: ZL201410445798.0

#### **HSF** patents

The synthesis and separation methods of the phytosterol saturated fatty acid esters and unsaturated fatty acid esters.

Patent No.:ZL201210019987.2

The study and the preparation method of the water soluble phytosterol unsaturated fatty acid esters micr-oencapsul ated powder.  $\label{eq:control}$ 

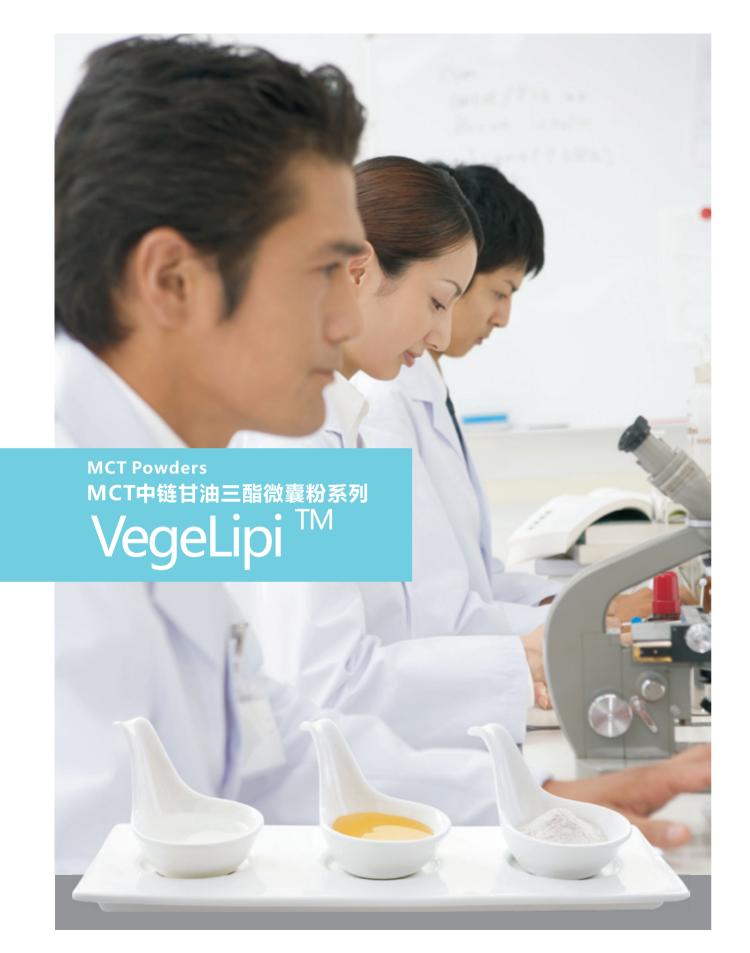
Patent No.:ZL201210114826.1

The method of extraction of phytosterols from the pinecone by molecular distillation. Patent No.:ZL2014101511080

The study and the preparation method of one kind of phytosterol esters.

Patent No.:ZL201410445798.0





## 中链甘油三酯微囊粉系列

产品分类	产品型号	配方	特 征	应用
	MCT-A70	棕榈仁油/椰子油来源 70% MCT Oil, C8:C10=60:40 载体:阿拉伯胶	素食、清洁标签、 膳食纤维	生酮饮食、 体重管理
素食型	MCT-A70-OS	椰子油来源 70% MCT Oil, C8:C10=60:40 载体:阿拉伯胶	有机认证、素食、 清洁标签、膳食纤维	生酮饮食、 体重管理
	MCT-SM50	50% MCT Oil, C8:C10=60:40 载体:淀粉	素食、速溶	饮料、固体饮料等
北美会刑	MCT-CI70	70% MCT Oil,C8:C10=60:40 载体:酪蛋白酸钠	速溶、乳品配方	生酮饮食、 体重管理
非素食型	MCT-CM50	50% MCT Oil, C8:C10=60:40 载体: 酪蛋白酸钠	速溶、乳品配方	饮料、固体饮料等
定制型	МС	T Oil 50%~75%,椰子油或棕榈油来源	ī, C8:C10=70: 30, 纯	īC8

#### **MCT Powders**

Classification	Code	Formula	Features	Application
	MCT-A70	70% MCT Oil: C8:C10=60:40 Carrier: Acacia Fiber	Vegan, Clean Label, Dietary Fiber	Keto Diet, Weight Management
Vegan	MCT-A70-OS	70% MCT Oil: C8:C10=60:40 Carrier: Acacia Fiber	Organic,Vegan, Clean Label, Dietary Fiber	Keto Diet, Weight Management
	MCT-SM50	50% MCT Oil: C8:C10=60:40 Carrier: Starch	Vegan, Instant	Beverages, Protein Powders
Non-Vegan	MCT-CI70	70% MCT Oil: C8:C10=60:40 Carrier: Sodium Caseinate	Instant, Dairy Formla	Keto Diet, Weight Management
Non-vegan	MCT-CM50	50% MCT Oil: C8:C10=60:40 Carrier: Sodium Caseinate	Instant, Dairy Formla	Beverages, Protein Powders
Customized	МС	T Oil 50%~75%, Coconut/Palm	Source, C8:C10=70: 30	, Pure C8



## Omega-3,6,9 不饱和脂肪酸系列微囊粉 Omega-3,6,9 Oil Powders

产品名称	Product Name	规 格 Specification	外观 Appearance
粉末亚麻籽油	Flaxseed Oil Powder	50%	
粉末紫苏籽油	Perilla Oil Powder	50%	白色至
粉末葵花籽油	Sunflower Oil Powder	50%	淡黄色粉末
粉末月见草油	Evening Primrose Oil Powder	50%	White to milky
粉末琉璃苣油	Borage Oil Powder	50%	or yellowish
粉末红花籽油	Safflower Seed Oil Powder	50%	powder
粉末橄榄油	Olive Oil Podwer	50%	
粉末高油酸葵花籽油	High Oleic Acid Sunflower Oil Powde	r 50%-70%	

## 饱和脂肪酸系列微囊粉 Saturated Fatty Acid Oil Powders

产品名称 Product Name	规 格 Specification	外 观 Appearance
粉末椰子油(初榨&精炼) Coconut Oil Powder (Virgin & RBD & Organic)	50%、70%	白色至 淡黄色粉末
粉末黄油(草饲) Grass-Fed Butter Powder	70%	White to milky or yellowish powder

## 其他功能油脂微囊粉 Funcional Oil Powder

产品名称 Product Name	规 格 Specification	外 观 Appearance
粉末共轭亚油酸甘油酯	60%	白色至 淡黄色粉末
Conjugated Linoleic Acid Powder	00 %	White to milky or yellowish powder

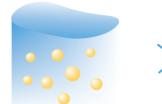
## 配方类型 Formula Option

素食型载体 Vegan Carrier	非素食型载体 Non-Vegan Carrier	
淀粉、糊精、阿拉伯胶树胶纤维 Starch, Maltodextrin, Acacia Fiber	酪蛋白酸钠 Sodium Caseinate	

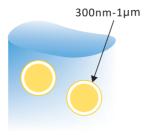
#### 海斯夫微囊化工艺示意图 HSF Micro-encapsulation Procedure











壁材多次聚集完全

包裹芯材

Wall materials wrap core

lipids completely.





10-100µm

#### 冷喷干燥 首次 First agglomeratio

#### 功能因子 Functional Lipids

#### 乳化均质 Emulsification&Homogenization

采用优质壁材,添加乳化剂, 经高速剪切与高压均质

Homogenize the qualified wall materials and functional lipids with the bioemulsifier by high speed and high pressure shearing

## bioemulsifier by high speed a high pressure shearing

## 海斯夫功能因子微囊化产品的特点 HSF Products Features

传统产品

功能因子不稳定、易挥发、水溶性差、生物利用度低,功能油脂易氧化、口味不佳、难以预混等

海斯夫微囊化产品

提高了对光、热、氧、PH的稳定性、延长食品的货架期、不易挥发、水溶性好、不易串味、易运

俞和储存等

速溶:对微小颗粒进行复聚,获得速溶性

缓释:在纯乳清蛋白逐步分解后,逐渐释放芯材成分

海斯夫功能因子微囊化核心专利技术:乳化技术、包埋加固技术、Beadlets&CWS微囊化技术、Wurster法喷雾造粒、多级复聚技术

**Traditional Products** 

Instability, low water-solubility, low bioavailability, hard to premix, easy oxidation, poor taste etc.

HSF Micro-encapsulated Products

Improve stability to light, heat, oxygen, PH, extend the shelf life, less volatile, better water-solubility, convenient transport and storage.

Instant: Better instant using multistage agglomeration of small particles.

**Slow Release:** Gradually release of core materials after progressive decomposition of pure whey protein.

HSF Leading Patented Technology to Functional Factors' Micro-encapsulations: Emulsification, Embedding, WURS-TER Spray Granulation, Multistage agglomeration



#### 项目简介 Introduction ▶

海斯夫微囊化产品ODM、OEM项目是依托公司强大的综合研发实力和国际领先的微囊化技术,为客户量身定制个性化的产品解决方案。

HSF is developing the project of ODM, OEM microencapsulation relying on the company's strong R&D capabilities and leading microencapsulation technology, as to provide customers with innovative products and customized service and intelligent solutions.

#### 海斯夫微囊化产品ODM、OEM项目优势 Advantages ▶

- 海斯夫拥有在生物医药和食品化工领域资深的教授和博士后团队,具有自主知识产权和产业 化的实战经验。
- 与中国农业大学、江南大学、华南理工大学、暨南大学和东北大学等食品专业的知名教授和 专家密切合作。
- 进口的微囊化实验设备,可以完成客户产品立项、配方开发、小试、中试和产业化整套客户 定制开发流程
- □ 完善的质量管理体系,公司通过了食品生产许可证(SC)、ISO90001、ISO22000、cGMP、IP(Non-GMO)、Kosher、HALAL等认证资质。
- 海斯夫具备功能因子的合成、提取、分子蒸馏、纯化、微囊化和检测等一整套先进的产业化 设备,保证客户产品的稳定性和先进性。

海斯夫利用国际领先的微囊化技术和复配方案,解决天然抗氧化剂和功能因子不稳定、水溶性差、生物利用度低、难以预混等应用难题。公司在乳化、包埋、Wurster法喷雾造粒。多级复聚技术等领域具有核心专利技术。同时,海斯夫联合中国农业大学、江南大学、华南理工大学、暨南大学和东北农业大学等众多知名高校开展产学研合作,为客户提供一体化产品设计和应用的解决方案。

- HSF has a set of advanced industrial equipments for functional factor synthesis, extraction, distillation, purification, micro-encapsulation and testing, as to ensure the stability and advantage of customers' products.
- Cooperate closely with professors and well-known food professional experts from China Agricultural University, Jiang'nan University, South China University of Technology, Ji'nan University and the Northeast Agricultural University
- The introduction of imported microencapsulation laboratory equipment gives the ability to complete a whole set of customized product development including product project setting up, formula development, small scale test, pilot test and industrialization.
- Perfect Quality Management System, proved by, SC, ISO90001, ISO-22000, GMP, IP(Non-GMO), Kosher, HAHAL certification.
- HSF has set of advanced industrial equipments for functional factor synthesis, extraction, distillation, purification, microencapsulation and testing, as to ensure stability and advance of customers' products.

with a leading technology solutions of micro-encapsulation, HSF Biotech solves the application problems of natural antioxidant and functional factors with instability, low water-solubility, low bioavailability, hard to premix etc. We possess patented technology in emulsification, embedding, WURSTER spray granulation.

海斯夫微囊化产品ODM、OEM项目 ODM, OEM Business of Microencapsulation



项目类型	应用范围
复合喷雾技术	复合维生素、膳食纤维、营养素等
水包油型微囊化技术	香精、香料、功能性油脂、多不饱和脂肪酸、脂溶性维生素等
速溶型喷雾技术	胶原蛋白、多肽、氨基酸等
Beadlets微粒化喷雾技术	类胡萝卜素、香精、香料、功能性油脂、多不饱和脂肪酸、脂溶性维生素等

#### **ODM, OEM Microencapsulated Range**

Customized	Business Application
Compound Spray Technology	Complex vitamins, dietary fiber, and other nutrients, etc.
Oil- in-water microencapsulation technology	Flavors, fragrances, functional oils, polyunsaturated fatty acids, fat- soluble vitamins etc.
Instant Spray Technology	Collagen, peptides, amino acids, etc.
Beadlets atomized spray technology	Carotenoids, flavours, fragrances, functional oils, polyunsaturated fatty acids, fat-soluble vitamins, etc.