



平顶山金晶生物科技股份有限公司

PINGDINGSHAN JINJING BIOLOGICAL TECHNOLOGY CO.,LTD

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Pingdingshan Jinjing Biological Technology Co., Ltd

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酸性蛋白饮料稳定剂:

可溶性大豆多糖

SOLUBLE SOY POLYSACCHARIDES
NEW STABILIZER IN ACIDIC MILK DRINKS

中国·平顶山
CHINA·PINGDINGSHAN

关于金晶

平顶山金晶生物科技股份有限公司成立于2010年，并于2015年12月成功登陆新三板上市。我司致力于大豆产品的深加工，依靠自主研发，成功实现了可溶性大豆多糖和大豆膳食纤维的工业化生产。

我司可溶性大豆多糖以稳定性高，透明度好著称，可广泛用于酸性乳饮料、风味发酵乳、碳酸含乳饮料、酒精含乳饮料、啤酒、保健品以及米面制品。

我司大豆膳食纤维经过酶处理，因此具备普通纤维所无法比拟的功能性。

我司重视技术创新和应用研发，拥有博士4人，硕士生9人以及本科生等20余人组成的科研团队。我们与江南大学和华东师范大学合作，深入大豆产业，不断提高产品的技术含量。随着食品行业对功能性膳食纤维的需求激增，我司采用新技术，通过大豆纤维改性，生产新型大豆膳食纤维，并解决客户在使用中遇到的技术问题。

我们的产品带给你全心的体验，我们的服务实现双赢。您的需要，就是我们的使命。

ABOUT JINJING

Pingdingshan Jinjing Biological Technology Co., Ltd. was founded in 2010 and listed successfully on National Equities Exchange and Quotations in December 2015. Our company is committed to deep processing of by-product from soy products. We specialize in research and development and successfully realize industrial production of soluble soy polysaccharides (soybean hemicellulose).

Our soluble soy polysaccharides is known as high stability and excellent clarity. It can be widely used in fermented milk drinks, acidic milk drinks, carbonated milk drinks, alcohol milk drinks, beer, healthy food, rice and noodles products.

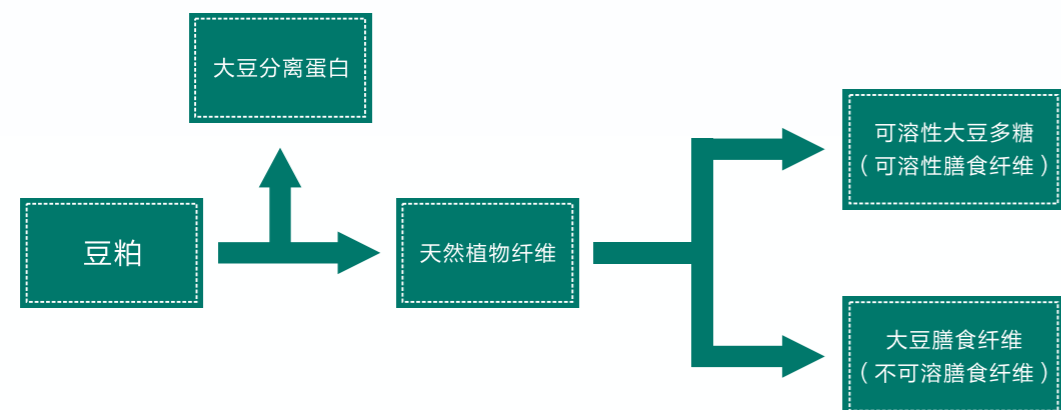
Our soy fiber is processed with enzyme. Compared with other common soy fiber, it offers superior functions.

We specialize in technology innovation and application development. Our R&D team has more than 20 people which includes 4 doctors, 9 masters and several bachelors. Our company runs cooperation with Jiangnan University and East China Normal University to deeply study soy industry and constantly improve the technology content of our products. With significant demands for dietary fiber in food industry, we adopt new technology to modify soy fiber and offer new type of dietary soy fiber to solve the problems in application.

Our products will bring you new experience and our service will realize win-win cooperation. It is our great mission to meet your demands.

可溶性大豆多糖

可溶性大豆多糖是以大豆或豆粕为原料，经加工提纯并精制而得到的纯天然的水溶性膳食纤维。可溶性大豆多糖常应用于酸性乳饮料、风味发酵乳，具有稳定蛋白的作用，且粘度低，口感清爽。还可广泛应用于碳酸饮料，鸡尾酒、米面制品、医药等领域，从而受到市场的日益关注。



产品特性

1. 高溶解性，对蛋白的稳定作用

可溶性大豆多糖可溶于冷、热水中，配制10%的水溶液不会出现凝胶现象。作为稳定剂用于低pH的酸性乳饮料及酸奶中，具有稳定蛋白、提高产品稳定性的作用。

2. 耐酸、耐热、耐盐的高稳定性

可溶性大豆多糖受热、酸、盐的影响很小，具有较高的稳定性。

3. 粘度低、口感清爽

相较于其它蛋白稳定剂，可溶性大豆多糖的粘度更低，有助于提升产品清爽的口感。

4. 富含膳食纤维

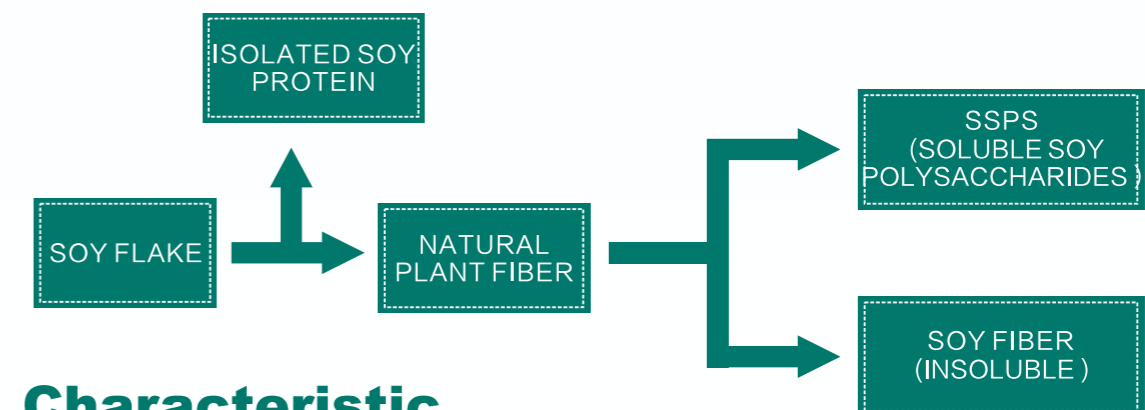
可溶性大豆多糖的膳食纤维含量高达70%以上，是补充膳食纤维的来源之一。

5. 良好的成膜性、乳化性、泡沫稳定性

可溶性大豆多糖具有良好的防粘连性、成膜性、乳化性、持泡性等特点，可广泛应用于寿司、鲜湿面等米面制品、鱼丸等调制冷冻食品、食用涂膜剂、香精香料、酱料、啤酒等领域。

Soluble Soy Polysaccharides (SSPS)

Soluble soy polysaccharides is a natural water-soluble dietary fiber, which is extracted from Non-GMO soybean. Soluble soy polysaccharides can be used in acidic milk drinks and fermented milk drinks. It can provide excellent protein stability and refreshing taste with low viscosity. In addition, soluble soy polysaccharides can also be widely used in carbonated beverages, cocktail, rice and noodles products, disintegrating agent and so on. Thus soluble soy polysaccharides receives increasing attention from global market.



Characteristic

1. Readily Solubility and Excellent Stability for Protein

Soluble soy polysaccharides can be dissolved in both cold and hot water. When formulating 10% solution, there is no gelation. As a stabilizer, it can be used in low pH value acidic milk drinks and drinking yoghurt to hold protein and improve stability of product.

2. High Stability and Endurance to Heat, Acid and Salt

Soluble soy polysaccharides is rarely affected by heat, acid, salt and can remain great stability.

3. Low Viscosity and Refreshing Mouth Feel

Compared with other protein stabilizers, soluble soy polysaccharides has lower viscosity and can improve refreshing mouth feel.

4. Rich in Dietary Fiber

Soluble soy polysaccharides contains over 70% soluble dietary fiber and is one of the sources of dietary fiber supplements.

5. Good Film Forming, Emulsifying and Foam Stability

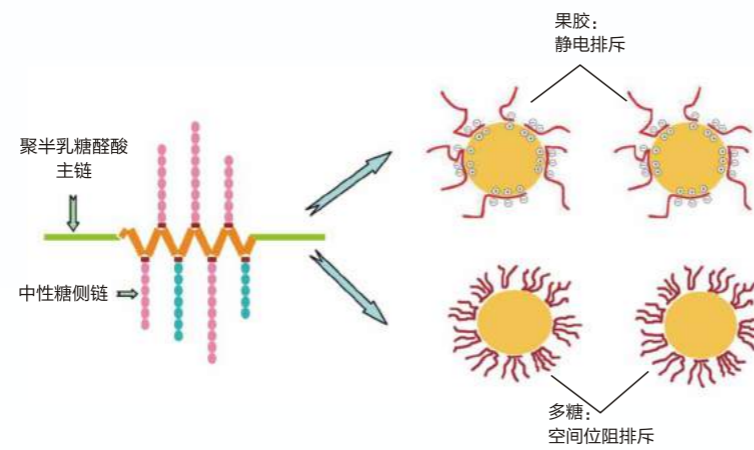
Soluble soy polysaccharides has good anti adhesion, film forming, emulsifying and foam holding properties. It can be widely used in sushi, long life noodles, fish balls and other frozen foods, edible coating agents, flavors and fragrances, sauces, beer and other fields.

可溶性大豆多糖

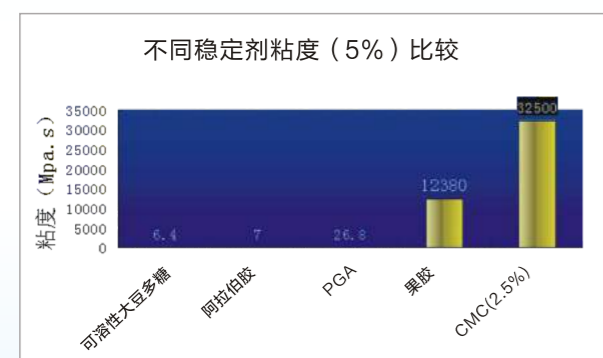
饮料应用篇

应用机理

可溶性大豆多糖和果胶都是由聚半乳糖醛酸主链和中性糖侧链组成，但果胶是根据主链与蛋白颗粒之间的静电排斥力稳定，而可溶性大豆多糖则主要依靠侧链在蛋白颗粒表面形成厚层的空间位阻排斥起稳定作用。由于作用机理不同，使得可溶性大豆多糖可以在比果胶更低的浓度下稳定和分散蛋白颗粒。因此可溶性大豆多糖在乳饮料应用中，具有很好的稳定性。



粘度比较



可溶性大豆多糖的水溶性好，粘度低，口感清爽。

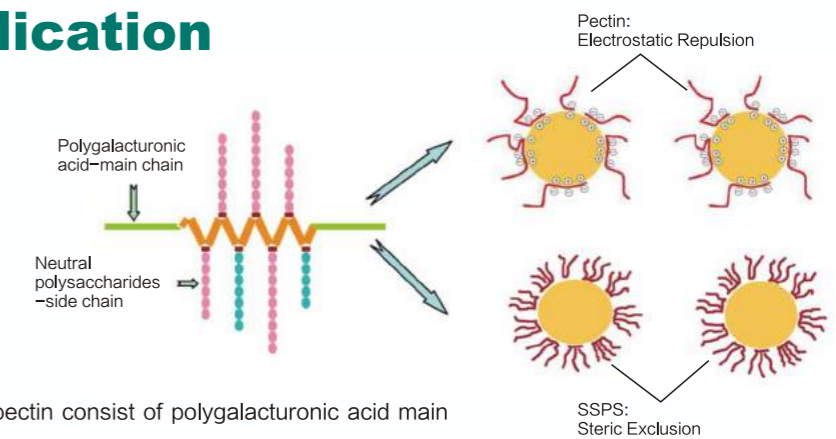
产品型号

型号	用途	功能特性
TJ-300 系列	pH3.2-4.5的乳酸菌饮料，风味发酵乳，豆奶，蛋白水等	稳定蛋白，粘度低，口感清爽，防止析水
TJ-200 系列	使用在米面制品中，如：寿司，乌冬面等	防粘连，改善淀粉类制品的品质
TJ-100 系列	乳化香精，乳化剂，化工等	良好的乳化性，涂膜性
	啤酒，冰激凌	良好的起泡性，提升口感，抑制冰晶的形成
	医药崩解剂	耐酸性好，溶解性适中

Soluble Soy Polysaccharides (SSPS)

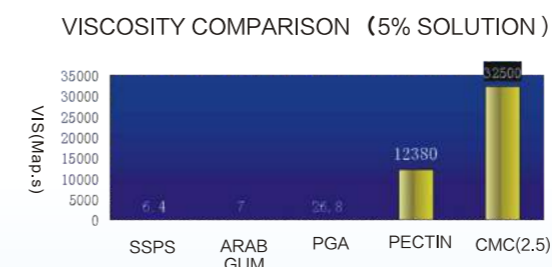
Beverage Application

Application Principle



Both soluble soy polysaccharides and pectin consist of polygalacturonic acid main chain and neutral polysaccharides side chain. The principle as a stabilizer for pectin is electrostatic repulsion between polygalacturonic acid main chain and casein. The principle for soluble soy polysaccharides is steric repulsion between neutral polysaccharides side chain and casein (see pictures above). Due to different stability principle, soluble soy polysaccharides can be used in low concentration to disperse and stabilize casein, so soluble soy polysaccharides has great stability in dairy beverages.

Comparison of Viscosity



SSPS has readily solubility, low viscosity, and can provide refreshing taste.

Product Series

Model	Application direction	Function
TJ-300 series	pH3.2-4.5 acidic milk drinks, drinking yoghurt, acidic soy milk, protein water etc.	Good protein stability, refreshing mouth feel with low viscosity, no water separation
TJ-200 series	Rice and noodles products, such as sushi, udon etc.	Anti adhesion, improving quality and structure of product
TJ-100 series	Emulsion flavor, emulsifier, chemical industry etc.	Good emulsifying and coating properties
	Beer, ice cream	Good foaming ability, enhancing the taste and inhibit the formation of ice crystals
	Pharmaceuticals such as disintegrating agent	Good acid resistance and solubility

可溶性大豆多糖

Soluble Soy Polysaccharides (SSPS)

产品特点

可溶性大豆多糖

- 良好的蛋白稳定性
- 粘度低
- 口感清爽
- 天然健康
- 富含膳食纤维



Main Features

SSPS

- Excellent Stability for Protein
- Low Viscosity
- Refreshing Taste
- Natural and Healthy
- Rich in Dietary Fiber



米面制品篇



- 特点:**
- 1 防止米粒之间、面条之间的粘连;
 - 2 促进米面吸收更多的水分, 提升米面表面的光泽度, 改善产品质量, 延长保质期;
 - 3 防止淀粉回生, 改善口感;
 - 4 提高产品的出品率, 降低成本, 增加效益。

Rice and Noodles Application



- Advantages:**
- 1.Prevent the adhesion among rice and noodles;
 - 2.Promote rice and noodles to absorb more water; improve lustrousness and products quality; extend shelf life;
 - 3.Prevent starch aging and improve mouth feel;
 - 4.Increase the output of final product, reduce cost and increase the yield.

烘焙应用篇



- 特点:**
- 1 起泡性好, 有助于打发, 增加产品的膨胀率, 提高出品率, 增加效益;
 - 2 保水性好, 改善质构, 使其口感松软, 香而不腻;
 - 3 可以很好的稳定果肉等风味材料, 使之均匀分散在糕点里, 带来丰富的口感和诱人的风味。

Bakery Application



- Advantages:**
- 1.Good foam ability; improving texture; increasing production yields and commercial profits.
 - 2.Good water holding ability and emulsibility; providing a supple and sweet mouthfeel and not greasy.
 - 3.Stabilizing pulp or other flavor material to make them evenly dispersed in the pastry and bring a rich texture and attractive flavor.

可溶性大豆多糖

Soluble Soy Polysaccharides (SSPS)

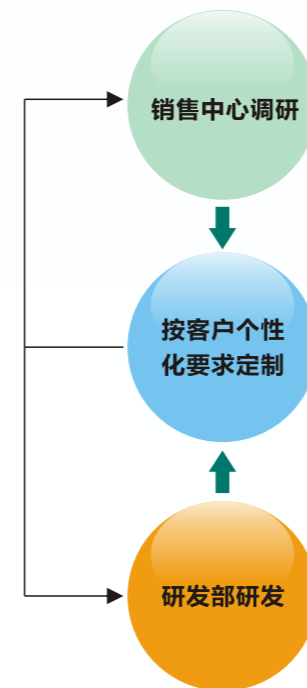
技术指标

理化指标

项目	指标
色泽	白色或微黄色
水分 (%)	≤7.0
粗蛋白度 (以干基计) (%)	≤8.0
粗灰分 (以干基计) (%)	≤10.0
粗脂肪 (%)	≤0.5
可溶性多糖 (%)	≥70.0
粘度 (10%水溶液, 20℃) mPa·s	30-100
成胶性 (10%水溶液)	煮沸后冷却至 4℃时, 不形成凝胶
pH 值 (1%水溶液)	5.5 ± 1.0
透明度 (%)	≥40
总砷 (mg/kg,以 As 计)	≤0.5
铅 (mg/kg,以 Pb 计)	≤1
菌落总数 (cfu/g)	≤500
大肠菌群 (MPN/100g)	≤30
致病菌 (指肠道致病菌和致病性球菌)	不得检出
霉菌和酵母菌总数 (cfu/g)	≤50

营销模式

公司采用个性化销售模式, 根据客户的不同要求, 提供专门的技术服务。



保存条件及保质期

通风干燥情况下贮存, 保质期24个月

包装形式

标准食品包装袋, 20kg/袋

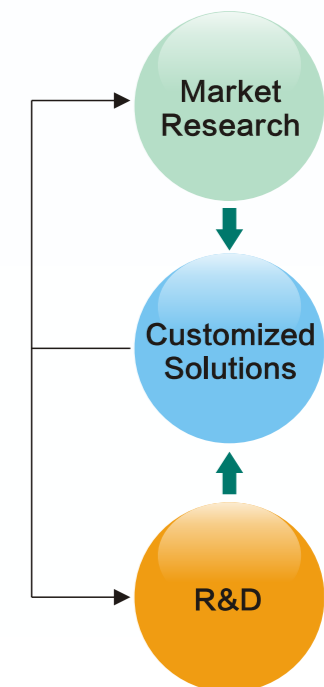
Specification

Physical and Chemical Index

ITEMS	SPECIFICATION
Color	White or slightly yellow
Moisture (%)	≤7.0
Protein Content (on Dry Basis) (%)	≤8.0
Ash Content (on Dry Basis) (%)	≤10.0
Fat (%)	≤0.5
SSPS Content (%)	≥70.0
Viscosity (10%sol,20℃) mPa.s	30-100
Gelling Formation (10% sol)	No gel (Cool conditions at 4℃after boiling)
PH Value (1% Sol)	5.5 ± 1.0
Transparency (%)	≥40
As(mg/kg)	≤0.5
Pb (mg/kg)	≤1
Total Plate Count (cfu/g)	≤500
Coliforms (MPN/100g)	≤30
Pathogenic Bacteria	Not detected
Mould and Yeast (cfu/g)	≤50

Marketing

To provide a specific service



Storage Condition&Shelf Life :

24month stored at the well ventilated and dry place

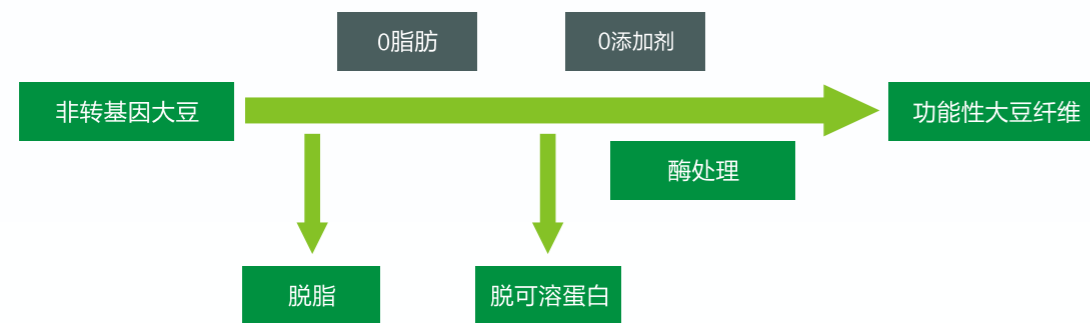
Package:

20kg net in food grade packing bag

大豆膳食纤维

大豆膳食纤维

大豆膳食纤维是从非转基因大豆中提取，经提纯、分离、干燥、粉碎等工艺生产得到的一种纯天然的食品原料。



产品功能性

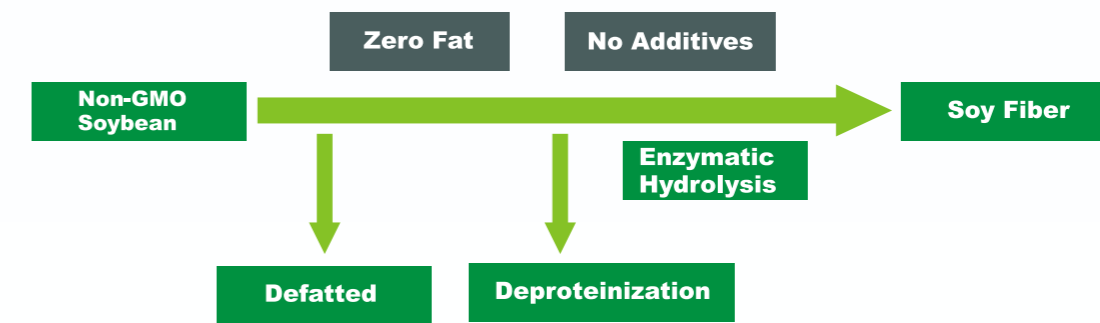
- 保水性1:18
- 改善质构
- 乳化稳定性
- 口感细腻
- 胶体热稳定性好
- 代油能力
- 保鲜作用
- 耐酸碱
- 天然膳食纤维
- 耐高温
- 减少热量
- 耐机械冲击



Soy Fiber

Soy Fiber

Soy fiber is a natural food material which is extracted from Non-GMO soybean. It is processed by purification, separation, drying, pulverization etc.



Functions

- Water Holding1:18
- Improve Texture
- Stabilize Emulsion
- Delicate Taste
- Stabilize Freeze and Thaw
- Oil Replacer
- Extend Shelf Life
- Endurance to Acid /Alkaline
- Natural Fiber Source
- Endurance to Heating
- Reduce Calorie
- Endurance to Mechanical Shock



大豆膳食纤维

产品型号

型号	用途	功能特性
SF-F	馅料、预拌粉、固体饮料、保健品、高纤食品、调味制品等	乳白色或淡黄色粉末，具有大豆膳食纤维固有的气味和滋味，吸水性好
SF-M	肉制品、干叶豆腐、保健品、固体饮料等	乳白色或淡黄色粉末，具有大豆膳食纤维固有的气味和滋味，粉质细腻，吸水性好，具有很好的热乳化性
SF-D	酸奶、奶渣等乳制品	脱色脱味纤维，颜色乳白，口感绵柔，无豆味，吸水性好



技术指标:

项目	指标
颜色、状态	乳白色或淡黄色粉末
气味、滋味	具有大豆膳食纤维固有的气味和滋味，无异味
总膳食纤维含量 (%)	≥60
可溶性膳食纤维 (%)	≥5
水分 (%)	≤10
灰分 (%)	≤5
铅 (mg/kg)	≤1.0
砷 (mg/kg)	≤0.5
菌落总数 (CFU/g)	≤30000
大肠菌群 (MPN/100g)	≤90
霉菌和酵母菌 (CFU/g)	≤50

保存条件及保质期

通风干燥情况下贮存，保质期24个月

包装形式

标准食品包装袋，20kg/袋

Soy Fiber

Product Series

Type	Application	Function
SF-F	Filings, premixed powder, solid drinks, nutrition products, high fiber products, spicy gluten, etc	Creamy white or slight yellow powder, pure taste of soy fiber, water holding ability
SF-M	Meat products, Qianye tofu, nutrition products, solid drinks, etc.	Creamy white or slight yellow powder, pure taste of soy fiber, powder, and water holding ability
SF-D	Yogurt, quark and other dairy products	Decolorized and deodorized, oyster white powder, no beany flavour, soft taste, good water holding ability



Physical & Chemical Index :

ITEMS	SPECIFICATIONS
Color	White to light yellow
Flavor	Bland
Total Fiber Content(%)	≥60
Soluble Fiber Content(%)	≥5
Moisture(%)	≤10
Ash(%)	≤5
Pb (mg/kg)	≤1.0
As(mg/kg)	≤0.5
Total Plate Count(CFU/g)	≤30000
Coliforms (MPN/100g)	≤90
Mould/Yeast(CFU/g)	≤50

Storage Condition & Shelf Life :

24month stored at the well ventilated and dry place

Package:

20kg net in food grade packing bag