

Newsletter

Issue one 18 May 2007

China Food Ingredients News Contents

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■ Technology Innovation/Launches/Trials

Yantai Andery starts to extract pectin from waste pomace

Yantai Andery has begun to extract pectin from waste pomace since the beginning of 2007. It is the largest pectin production base in Asia, with the annual production capacity of 4,000 tonnes. It mainly produces apple pectin and other kinds of pectin.

Adopting the most advanced processing techniques in the world, Yantai Andery produces pectin with the best pomace provided by Yantai Andery Fruit Juice Corporation, the world's largest fruitade supplier.

Yantai Andery Fruit Juice Corporation can process 800~1,000 tonnes of fresh fruit per day now, and 4,000 tonnes of waste pomace are produced after the extraction every year. Through scientific research, Yantai Andery developed a new technique of extracting pectin from pomace, and this new technology has met the standard of the National Project of High and New Technology.

There are three types of pectin, namely, pectin of high ester, pectin of low ester and amidate pectin. As pectin is produced from plant extracts, it is completely innocuous, and it has good jellification, inspissation, stabilization, emulsification and suspension. Pectin has been widely used in the processing of jam and jelly, fruit products, candy, bread, cheese, ade, yoghurt beverage, yoghurt and dairy products and so on.

Mr. Yan, in charge of Product Development Department of Yantai Andery, says that in the past, the pectin in the domestic market was mainly imported, but now Yantai Andery has established the largest pectin production base in Asia.

With the total investment of RMB50 million in the first phase, the production capacity of standard pectin reaches 1,500 tonnes per year. The output can not only meet the domestic demand, but can also be exported to countries in Europe, America, South Africa, Japan and so on.

Yan also reveals that they mainly produce pectin of high ester at present, and their pectin of low ester will be also be produced from June this year.

Shuangwen Bamboo develops natural bactericidal food antiseptic

Based on the research fruit of Zhejiang Tech University and other higher education institutes, Shuangwen Bamboo Scientific and Technological Corporation (Shuangwen Bamboo) of Anji County, successfully extracts natural bactericidal antiseptic from bamboo.

The production technology is developed by Shuangwen Bamboo itself and is a breakthrough in the production of native natural bactericidal food antiseptic in China.

The development of natural bactericidal antiseptic is one of the State Funded Technology Innovation Programs for Middle and Small High Tech Enterprises. This product is the research fruit of Shuangwen Bamboo Scientific and Technological Corporation of Anji County and Zhejiang Tech University after five years of research on bamboo biochemistry science and technology. This product is the new scientific and technical product of Zhejiang Province.

Mr. Cheng, manager of Shuangwen Bamboo, introduces that it is a new natural food additive, having the functions of bacteriostasis, sterilization and antioxidation. Its component is the bamboo extract (bamboo antioxidant). It is mainly used in sterilization and preservation of marine (food) products, meat and vegetables. It also has strong sterilizing and bacteriostatic effect for germs, colon bacillus, staphylococcus aureus, and salmonella and so on.

He also says, 'In the past, we mainly used sodium hypochlorite or alcohol in the sterilization and preservation of native marine products, but the chlorine released by sodium hypochlorite is very likely to cause problems on food safety, while alcohol is easy to lose effectiveness when meeting water. But this new product not only can sterilize the products and keep them fresh, but also it is a natural, innocuous and harmless product.' +

Cheng predicts that the output of the first year will be 700 tonnes or so in 2007, but the domestic demand is more than that, so the market for natural bactericidal antiseptic in Shuangwen Bamboo is very large. Although they only produce food additive now, they will go on to develop chemicals for daily use and medicine products in the future, and then expand their business into overseas markets gradually.

■ Supply and Demand

Consumption of domestic antiseptic will double in 2007

'The consumption of the sorbic acid antiseptic in China was more than 8,000 tons last year, and the consumption will double in this year.' says Yan Wanxiang, manager of Ningbo Wanglong Group, the biggest sorbic acid and sylvite producer in China.

Wang Zhenwen, director of China food additive production & application industry association introduces, , it is necessary to add food additives in food, because the fresh food will go moldy and become rotten after some period of time. If fresh food is to be preserved for a long time, adding antiseptic and antioxidant is the best method. Antiseptic can not only prevent food from becoming rotten but also can reduce food poisoning, because the antiseptic can not only restrain the putrefying bacteria but can also restrain the growth of the flavacol and some other bacteria.

Some consumers are allergic the antiseptic and some other food additives, because the antiseptic dosage often exceeds the standard, and sometimes, non-food additives are used instead of the right food additive.

Mr. Wang introduces, 'Sometimes, the problems may lie in the usage process, but not in the antiseptic

itself. There is an ADI index in GB2760 for antiseptic and the antiseptic around the ADI range are edible, and the intaking antiseptic can be excreted too.

The antiseptic is developing toward complex type and some manufacturers are developing the complex antiseptic of chemical and natural, and make an effort to use least additive to reach the best effect.

At the same time, the natural antiseptic is attracting more attention of the industry, the natural food antiseptic and antioxidant not only has no harm to people, but also has the function that the chemical antiseptic hasn't.

■ Market Spotlight

China food additive industry has a bright prospect

Development Report of Chinese bioindustry 2006 predicts that in 2010 China's demand for food additive will reach 4,800,000 tonnes, and Chinese food additive industry has a bright prospect.

This newly-published *Development Report of Chinese bioindustry 2006*, by the High Technology Industry Bureau of the State Development & Reform Commission and the Biological & Engineering Society of China, points out that with the rapid development of food industry and catering, the food additive has become a necessary part in many kinds of food. The food additive industry is faced with good development opportunities and environment.

In the past few years, foreign food additive market has expanded rapidly, and the market size of global food additive is about 20 billion dollars, including about USD5 billion seasoning agent, about USD2 billion sweetener, about USD1.5 billion thickening agent, and about USD1 billion emulsifying agent. The annual growth rate of global food additive industry is 2.5% to 4%.

The development of China's food industry has brought about various requirements on food additives and China's food additive industry also gains rapid development. So far, there are over 1,500 native Chinese food additive manufacturers producing 1,600 kinds of products, and many of the manufacturers play an important role in the international market with the annual production capacity of about 4,000 kilotons, the annual output about of 3,250 kilotons, and the production value of about RMB35 billion.

Five years from now on, the annual growth rate of the international food additive sale is about 2.5% to 4%, among which the thickening agent will increase at a rate of 5% annually, the annual demand for xanthan gum will go up to 27,000-40,000 tonnes, at the rate of 5% to 7%, and antiseptic will increase stably, while sorbic acid will grow at a rate of 4% to 5%, phenyl formic acid at a rate of 2% to 3%, antioxidant at a rate of 4%.

■ Plan and Trend

Shrinking application fields of sodium benzoate

As reports about poisoning related to sodium benzoate keep on coming out, there is dispute on whether sodium benzoate should continue to be used. Though it is still used in many countries, its application fields are shrinking. For instance, it has been subjected to severe limitations in food import, even partly forbidden in Japan and production enterprises have been shut down.

However, because of its low price, sodium benzoate is still used as a major antiseptic, and its overall output is about 45,000 tonnes in 2000, while the figure is 11,000 tonnes in the U.S.A., where sodium benzoate is mainly applied in carbonated beverage and syrup.

In contrast, another usual antiseptic, potassium sorbate, which is more antimicrobial and less toxic, is becoming more and more popular. People have realized that potassium sorbate can be decomposed and absorbed during the normal metabolism inside the body and it will be absorbed by the body to produce carbon dioxide and water. So it can be regarded as one of the components of the food. It is harmless to human health, but its price is relatively high.

Because the toxicity of phenyl formic acid is stronger than that of the sorbic acid, it has been gradually replaced by sorbic acid in many countries.

But domestic experts also point out that the government should set strict limits on the application of sodium benzoate and potassium sorbate and other antiseptics. Customers need not be panic about them, if they are applied properly, according to the national safety standards on the use of antiseptic.

Functional dairy food becomes main trend

The development of world dairy food industry shows that traditional milk industry only includes products of fresh milk, skim milk and lowfat milk, whose milk components are similar. Different needs of the consumers can't be met by having such milk categories. As people's standard of living improves gradually, people put up many requirement on the function of the milk they drink. So in the future, the consumption of traditional dairy food will stay stable, while functional dairy food will become the main trend of the development of dairy food.

This project of CLA synthesis mechanism research undertaken by the Special Key Project team of National Science & Technology, Stockbreeding Laboratory of Chinese Academy of Agriculture, and Chuanxi (Beijing) milk industry, is to increase the content of CLA in milk to over 50mg-100mg, which is 6-10 times as much as that of ordinary milk, and the project is carried out through building the 'CLA Science & Technology Park of Milk'. This project has successfully passed the inspection and authentication of the State Agricultural Department.

As a new product with advanced level in the world, it is the first functional and the most valuable milk in China, a breakthrough in China's functional dairy food. The development of this milk is national support project in 2006. Its launching in the market has attracted much attention from the world and the product

has brought much influence to the milk market in the world.

According to experts, the secret of the CLA functional dairy food is that: the CLA functional dairy food =special cows + special fodder + special feed + advanced management. The 'special' cows will be chosen strictly, 'special' fodder refers to fodder produced with raw materials growing in areas where the water quality and soil have been detected to make sure to they can produce excellent feedstuff; 'special' feed refers to feed produced by adopting the patent technology of Stockbreeding Laboratory of Chinese Academy of Agriculture; and 'advanced management' refers to management adopting the HACCP system to control the process of CLA functional dairy food to avoid or eliminate the harm or reduce the harm to the degree that can be accepted.

Mr. Liu, Director-General of Chinese Milk Association says on the national conference of Important Scientific& Technical Payoffs, 'At present, in our milk industry there are many problems such as the unstable and low quality. The application and research of CLA functional dairy food can help improve the current situation of our milk industry, and has made a breakthrough in functional dairy food. '

■ Policy and Legislation

Beijing to monitor food additives

Beijing will establish a comprehensive recording system monitoring the circulation of additive products in the market.

Food additives abuse is one of the key issues found during the supervision of food safety. Among the disqualified foods, sulfur dioxide, limocitrin and other additives are often the causes of the problems. Beijing working conference on food safety discloses that close inspection will be carried out on the excessive use of food additives, or even the use of non-food additives to replace food additives in food manufacturers. A comprehensive recording system will be established for the monitoring of additive products circulation this year.

Beijing food safety guidelines of this year are: in the monitoring and spot inspection on food safety, the products passing the inspection should account for over 95% percent of the 65 main categories of foods, among which, the passing rate for pork, vegetables, rice, semolina, edible oil and bean products should be over 96%.The data centre on food safety will cover, inquire, analyze, evaluate, and track all the information on various foods.

Meanwhile, they will take measure to raise the admittance threshold of catering industry from the aspect of sanitation and implement food sanitation control system based on HACCP (harm analysis and key reference point) a system covering star grade hotels, Olympic reception units, restaurants over 2,000m², restaurants and dining halls accommodating over 300 people.

As to the supervision of food additive, the management of the certification and recording on food additive manufacturers will be strengthened this year to ensure that eligible food additive manufacturers can all

get the certification, and the products and the circulation of the products be comprehensively recorded. What's more, an analysis reporting system for food additive will be established.

At the same time, the use of additive in food manufacturers is recorded and monitored to check whether the manufacturers use excessive food additives or non-food additives to take place of food additives. As to the use of nonfood raw materials and the abuse of food additives, the government will forbid the production and circulation of such products, to punish these lawbreakers.

The working conference on food safety also discloses that the public data center on food safety will be established in Beijing this year. At the same time, Olympic reception units, restaurants over 2000 m² should all implement a food sanitation control system based on HACCP (harm analysis and key reference point).

China to add beneficial bacterium in food

Following iodine in salt, iron in soy sauce, Vitamin A in edible oil and Vitamin B1 in flour, as the public nutrition improving item, from April.1st, 2007, beneficial bacterium will be added in China in various kinds of food such as dairy products, infant foodstuff, beverage, candy, baked food and leisure food.

Director Yu Xiaodong, Public Nutrition & Development Center of National Development and Reform Committee, introduces, malnutrition, especially excessive nourishment, and antibiotics abuse are increasingly threatening the public health. Prebiotics can activate the proliferation of the beneficial bacterium, restrain baneful bacterium, balance micro-zoology and help to improve people's immunity system. And they can play a role in strengthening people's health.

According to statistics, about 75% people in China are having the sub-healthy symptoms such as hyperlipemia, hyperglycemia, immunological deficiency, constipation, insomnia, dizzy, etc. One of the main reasons is lack of beneficial bacterium in the food.

According to experts, rice, flour and carrot and other food all contain beneficial bacterium, but beneficial bacterium often drains away after these products are processed. So, the sanitation department has established rules about beneficial bacterium. From April.1st this year, beneficial bacterium should be added in various kinds of food gradually.

■ Company Dynamics

Wujiang preserved szechuan pickle takes the lead in zero preservative addition

Through independent researches and increasing technology innovations, Chongqing Puling Preserved Szechuan Pickle Corporation has improved its production equipment, technology and products. It has developed into a modern enterprise with leading technology, advanced management and equipment from a small workshop in the past several years.

And its output value, profit and tax, has realized a continuous increase of over 25% in 2005. And 65,000 tonnes of various preserved szechuan pickle products were sold in 2005, almost 14,000 tonnes more than that of last year, increasing by 28%. Its sale income reached RMB0.35 billion, growing by 35.5%, and its profit and tax reached RMB50 million that year.

In order to preserve their traditional preserved Sichuan pickle products, a great deal of antiseptic is always added, which will cause harm to the people's health.

Since 1999, the company has been investing in the research of reducing or even eliminating the use of antiseptic. It adopted many techniques and successfully develop a new process, which makes the salt content drop from 9%~11% to the current 6-7%, and the quality was improved a lot compared with the former and the old production line has been reformed technically since 2000..

In 2001,'Wujiang' brand preserved szechuan pickle took the lead in applying no antiseptic. This urged other enterprises to make technology innovations, thus the processing level of those enterprises has been improved.

As the traditional production needs many labors, the production efficiency is low. Besides the quality of the products completely depends on workers' experience, the quality of products fluctuates a lot. The company, by cooperating with Institutions of Higher Learning and equipment manufacturers, developed new techniques and equipment and improved its test facility. Thus the labors needed in the production are reduced and the production efficiency and the product quality are greatly improved.

Since 2002, Chongqing Puling Preserved Szechuan Pickle Corporation has been carrying out research on assistant emulsified agents processing technology. At present, its production line of assistant emulsified agents has started mass production, and its output for preserved szechuan pickle reaches 2,500 tonnes in 2005. Now the Wujiang brand is very famous and is the No. 1 in the industry. And it has made great contributions to the development of this industry.

Visit to Huixiangyuan Biotechnology Corporation

Huixiangyuan is one of the earliest enterprises to set foot in salty seasoning field. Through independent researches, it has developed some popular salty seasoning production technologies, and now it is concerned primarily about the improvement and innovation of food seasonings.

At present, the salty seasoning ingredients products account for 80% of food seasonings. They are widely applied in every field such as instant noodles, seasoning manufactured meat, puffed food, candy & biscuit, solid beverage and other food service industries. Huixiangyuan is keeping strategic partnership with many famous professional enterprises in the related fields.

Generally speaking, traditional food seasoning enterprises mainly change the smell of foods, while Huixiangyuan's goal is to change the integrative taste of foods. Smell is only one part, they emphasize

more about the multiple tastes.

At present, Huixiangyuan's products are mainly sold in domestic market, and a small part are exported to Southeast Asia, Hong Kong and so on.

The general manager of Huixiangyuan thinks that for the past few years' Chinese raw-food material, especially the import of primary-stage processed products increases every year. There are few deep-processed products of high added value. Domestic food enterprises should increase investment in technology, pay much attention to the research on deep processing, increase the added value of products, and boost their competitiveness in the international market with their advantage in resources and cost advantage. They have entered the high-end product field and have improved their profitability and increased the market share.

China's food additive industry is facing a good development opportunity. For a couple of years, Chinese food is increasingly attractive to foreign customers, especially the fast food and traditional processed food with Chinese characteristics. The explosion and increasing maturity of Chinese food service industry will bring along great opportunities for food additive enterprises.

Food additive is an important component and a key driving force for technology progress and innovation of modern food industry. It plays an important and irreplaceable role in improving the comprehensive quality of foods. There is great room for food additive industry to improve and a more complete and applicable standard for food additive should be drawn up later.

Though technology and service are very important, developing popular products is more important. Now there are 30 people in Huixiangyuan dedicated to research on development of new products, as well as technology innovation and so on. Most of them have bachelor or master degrees of top bromatology Universities. They constantly provide information of products and support in techniques and equipment. Huixiangyuan advocates that all the staff have the consciousness of sale, development and innovation.

Huixiangyuan's marketing strategy mainly centers on two principles: First, it must be a powerful and honest brand and gain consumers' confidence; second, it must commit itself to benefiting consumers.

In 2006, it has achieved its goal in profit, finished the shareholding reform and optimized its product structure. And in 2007, there will be a new breakthrough in its sale, with the growth rate reaching over 30%. It will continue to optimize its product structure for diversification, and to make a good beginning for the realization of its Three-Year Plan.