



WuHan HuaSweet Co., Ltd



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COMPANY LOGOTYPE INSERT



1. Profile of Wuhan Huasweet



**2. Huasweet product
neotame and sweet solution**

3. Quality Assurance

4. Marketing Strategy





1. Profile of Wuhan HuaSweet



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Profile

- Wuhan huasweet Co., Ltd is located in Hubei Gedian national economic development zone, it is the largest professional manufacturer of Neotame and the leader of sweet solutions in China, with production capacity of 1000 tons a year; It is the main drafter of the national standard of neotame; the sole owner of the production process invention patent for Neotame in China; the first enterprise which was granted production license for producing Neotame in China.
- At present, the company has passed quality management system certifications of ISO9001, ISO14001, OHSAS18001 and ISO22000, and was awarded KOSHER and HALAL certificates. Besides it has acquired the qualifications as a supplier for many international well-known food companies.
- Huasweet company cooperated with Xiamen university and East China University of Science and Technology in a strategic partnership, established a high-end sweetener researching and manufacturing base in China, to provide the safest sweetener, neotame and the integral sweet solution for customer.



Wuhan huasweet Co., Ltd

3,3-dimethyl
-butyraldehyde

The biggest upper raw material manufacturer
of neotame in China
(The sole supplier of US Natrusweet in China)

neotame

Neotame annual capacity 1000t.

sweet solution

The Leader of Sweet Solution In China

Decade of Huasweet

The 2015 annual meeting of function sugar and sweeteners professional committee of China was held by Huasweet company

In 2004: Established the first Chinese sweetness solution company in Shenzhen

In 2011: Engaged in drafting of neotame national standard

In 2005: Co-operate with Xiamen University for neotame research

In 2012: Establish the Wuhan huasweet company at Hubei Gedian national economic development zone, as the biggest neotame manufacturing base in the world

In 2006: Become the leader in sweetness solution in China

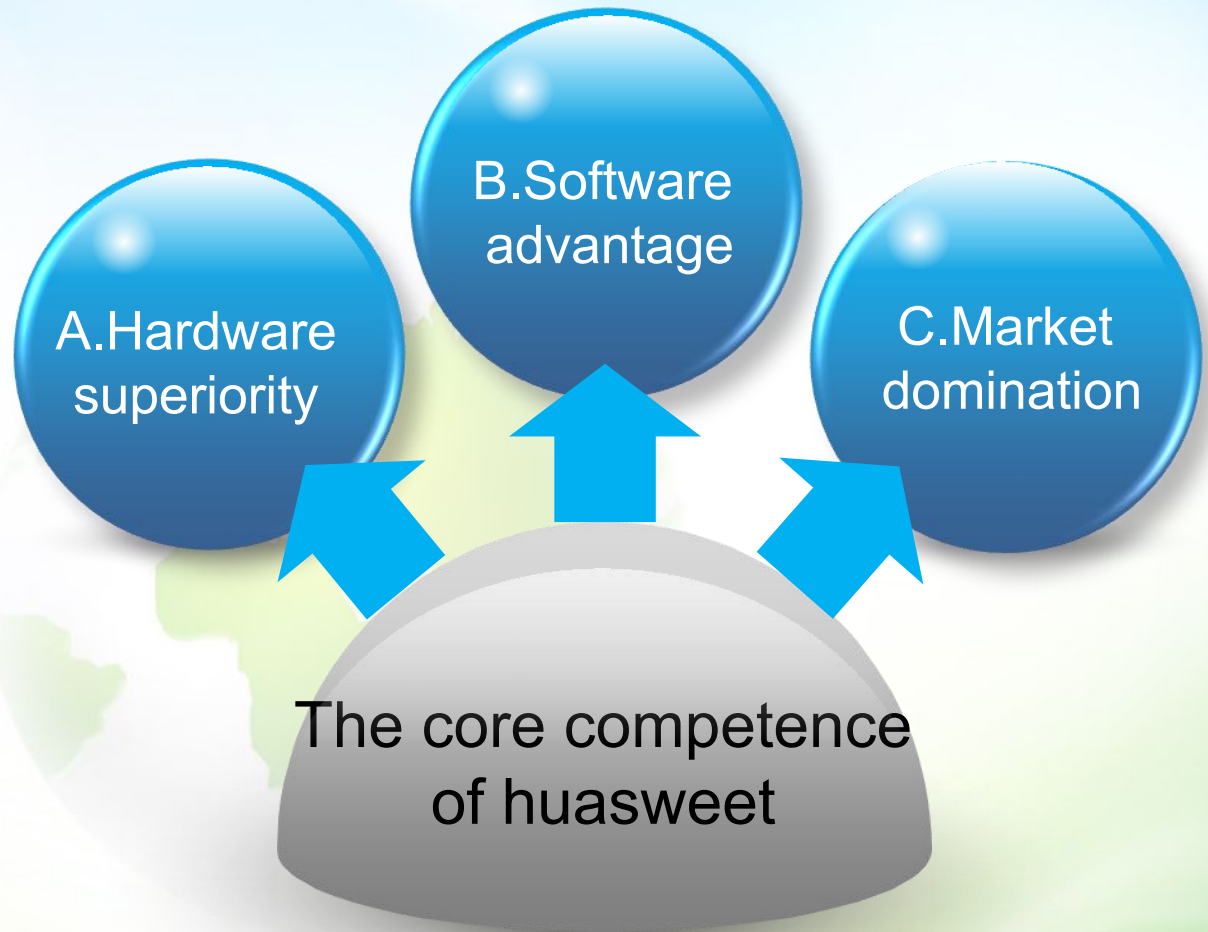
In 2013: Establish strategic cooperative relations with east China university of science and technology, set up the high-end sweetener research base in China

In 2008: Applied for two production process invention patents of neotame

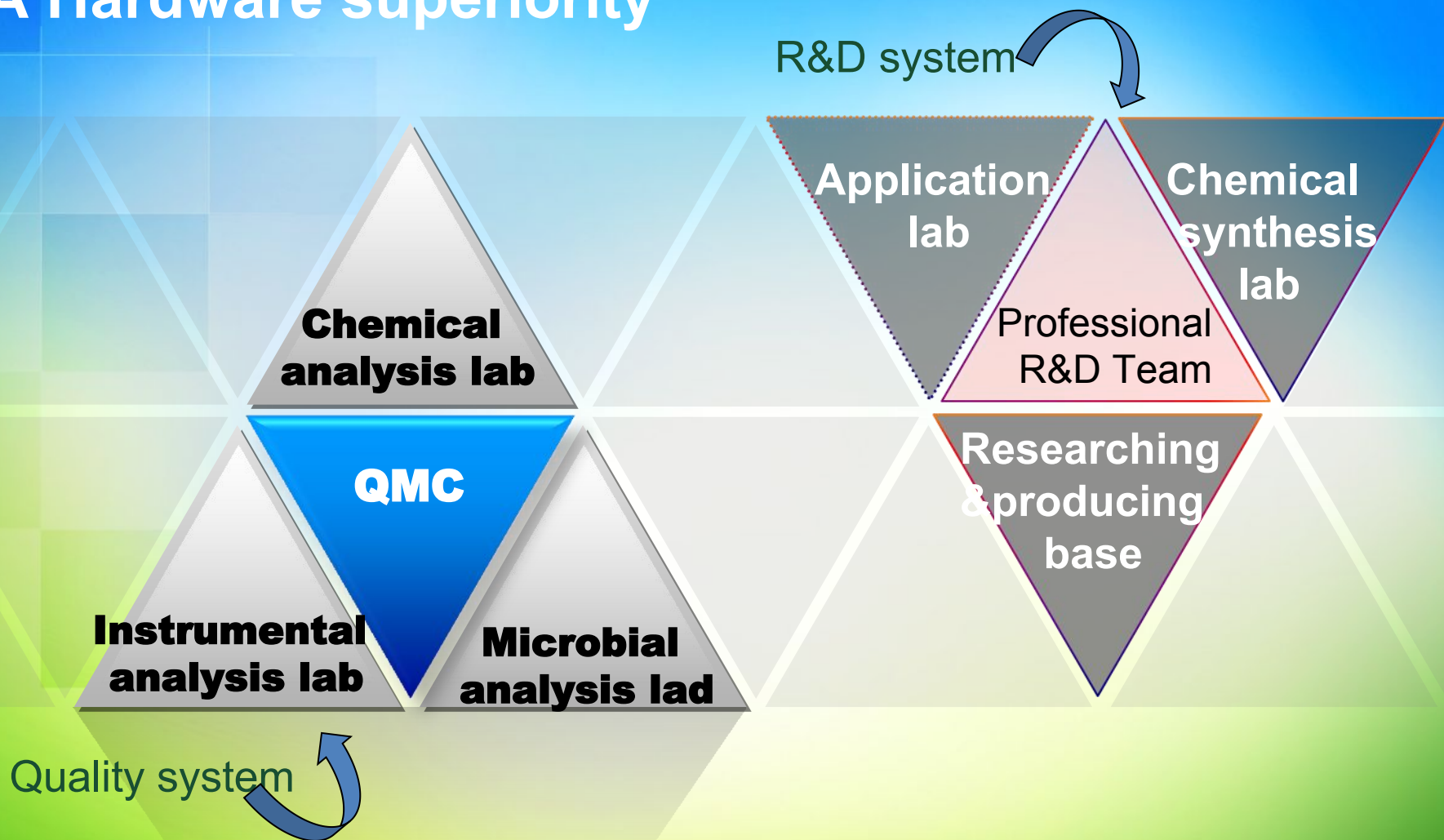
In 2014: The first enterprise obtained the production license of Neotame in China



The product of huasweet has obtained the core competence when it enters the global market, that includes the hardware superiority, the software advantage and the market domination. The trine strength have builded a solid foundation for huasweet company in the sweeteners field.



A Hardware superiority



Independent producing
and R&D system

- We have independent producing and R&D system, advanced equipment.
- Produce according to the ISO9001 and ISO22000 QMS strictly.



Professional technology R&D lab

B. Software advantage



Wuhan huasweet Co.,Ltd is the first enterprise who obtains the production process invention patent for neotame in China, not only owns 4 patents of neotame's producing, but also the main drafter of the national standard of neotame. It's the first neotame manufacturer who has gotten the QS accreditation.

Patent No.:
ZL200810070990.0

Patent No.:
201310514004.7

Patent No.:
201310513770.1

Patent No.:
201310513981.5

R&D Independently
by Huasweet



HuaSweet®

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Neotame producing process patent

The neotame material formula patent applied by US Natrusweet in China is No.9 31144620 (applied on 11/12/1993, expired on 12/25/2013)

The neotame material formula patent applied by US Natrusweet in America is No.5480668, extend expiration to 8/7/2015 in USA.

Compare the producing process patent No.200810070990.0 of Huasweet company's to US Natrusweet's main producing process patents No.5510508 and 5728 862, the synthetic routine is different, it doesn't conflict with them in the producing process.

Currently the producing process patent of US Natrusweet has not expired, whereas Huasweet has owned its exclusive producing process patent, so Huasweet has become the second legal production enterprise in the world.



Comparison of neotame patent

NEOTAME PATENT COMPARISON SUMMARY

PATEN	3,3DMB	APM	MeOH	H2O	HCOOH	CH3COOH	H2	NaCN Borate*	Pd	Pt	HCl	EtOH	RxTemp	Evap Cryst
China Patent ZL 200810070990.0														
Filed:04/30/2008	√	√	√	×	√	×	×	×	×	×	×	√	35-65°C	√
Granted:12/08/2010														
Expires:04/30/2028														
US Patent 5480668														
Filed:11/09/1993														
Granted:01/02/1996	√	√	√	×	×	×	√	√	×	×	√	√	Rm Temp	√
Expired:11/09/2010														
Extention granted														
Expires:08/07/2015														
US Patent 5510508														
Filed:05/08/1995	√	√	√	√	×	√	√	×	√	√	×	×	Rm Temp	√
Granted:04/23/1996														
Expires:05/08/2015														
US Patent 5728862														
Filed:01/29/1997	√	√	√	√	×	×	√	×	√	√	×	×	20-30°C	√
Granted:03/17/1998														
Expires:01/29/2017														

*Sodium cyanoborohydride √=Claimed ×=Not claimed

US Patent 5480668 is a new novel compound claim [neotame molecular structure and physical properties]

US Patent 5510508 is a process claim patent

US Patent 5728862 is a process claim patent

KOSHER



HALAL



ISO 9001

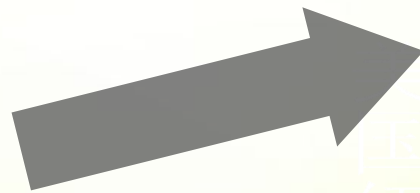
ISO 22000



C Productivity advantage

Huasweet invests 200 millions to make the annual capacity to reach 1000t.

In order to meet the rapid growth of demands at all over the world, huasweet company invested 200 million to make its annual capacity to reach 1000T. This action provided matched productivity for the global market growth of neotame.




美国纽特

美国纽特

武汉华甜

Development vision



**The biggest producing base of neotame
's raw material intermediate (3,3-dimeth
yl-butyraldehyde) in the world**



**The biggest producing base of
neotame in the world**



**The biggest application base of neotame in the
world (The biggest OEM base in the world)**





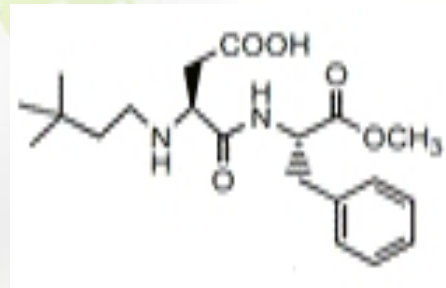
2. Huasweet neotame and sweet solution



Brief introduction:

Neotame is a new kind of non-nutritional calorie-free intensive sweetener, it is the fastest growing sweetener currently, it has been approved to be used in more than 1000 types of products in more than 100 countries in the world. Appearance is white crystalline powder or particle, 7000-13000 times sweeter than sucrose, 30-60 times sweeter than aspartame, it is also the closest one in taste to sucrose among all the sweeteners.

- Product name: neotame
- Chemical Name: N-[N-(3,3-Dimethylbutyl)-L- α -aspartyl]-L-phenylalanine 1-methyl ester
- English name: Neotame
- Chemical formula: $C_{20}H_{30}N_2O_5$
- Appearance: white crystalline powder
- C.A.S No: 165450-17-9
- C N S: 19.019
- I N S: E961
- Structural formula:

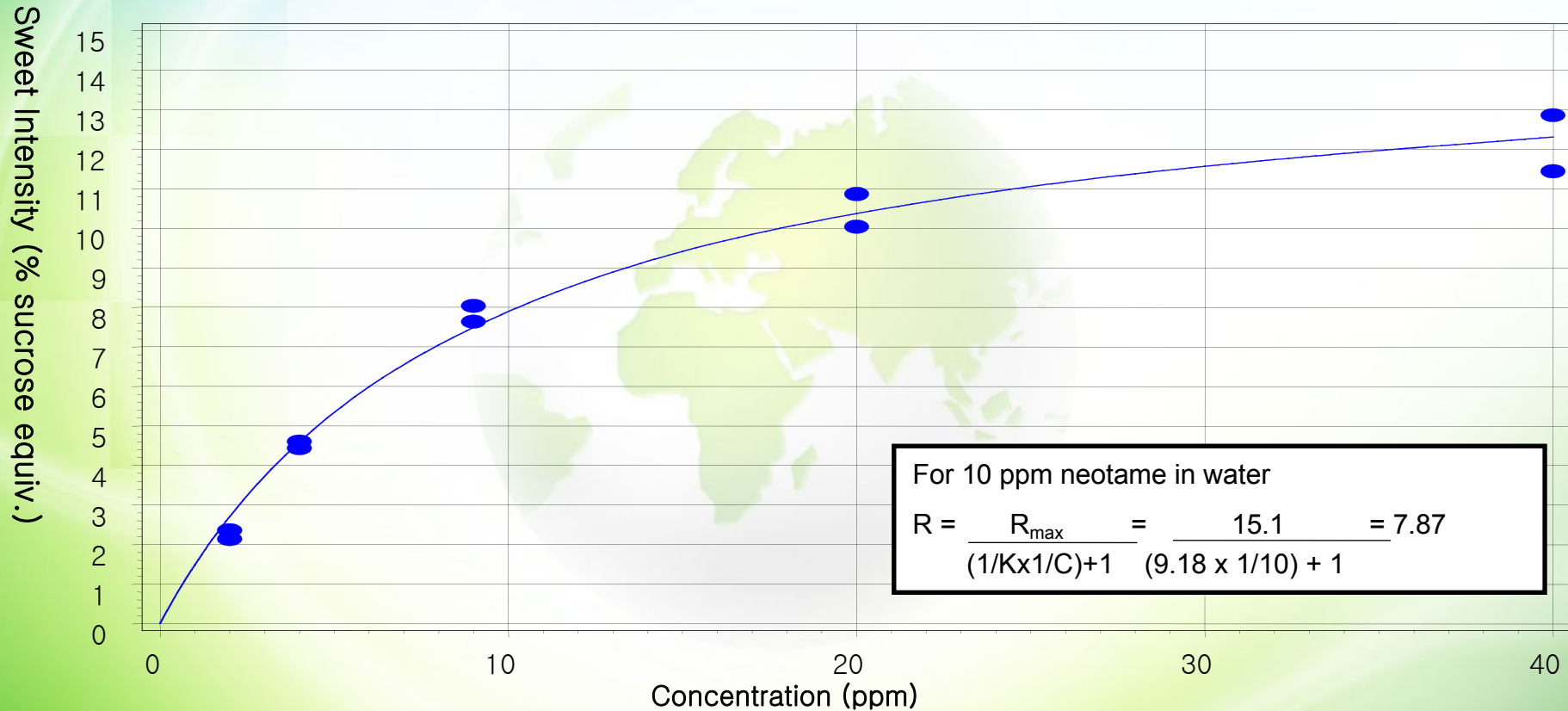


Neotame represents the culmination of the currently high potency sweeteners research, it has a prosperous prospect.

The sweetness curve and concentration curve of neotame

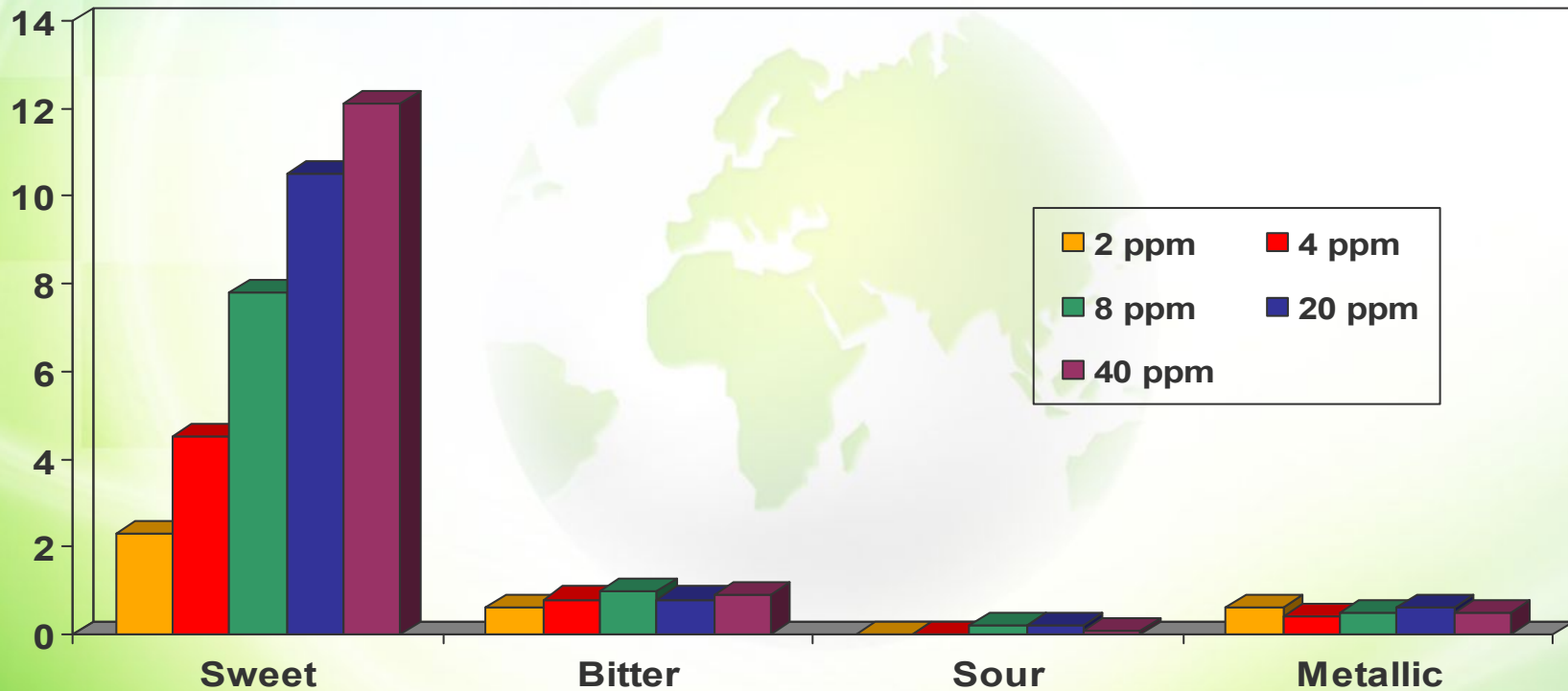
The sweetness curve of neotame is similar to other high intensity sweeteners, the higher of the concentration, the lower of the sweetness factor, the sweetness factor of neotame is approximately 7000 to 13000 times greater than that of sucrose.

- Predicted
- Observed



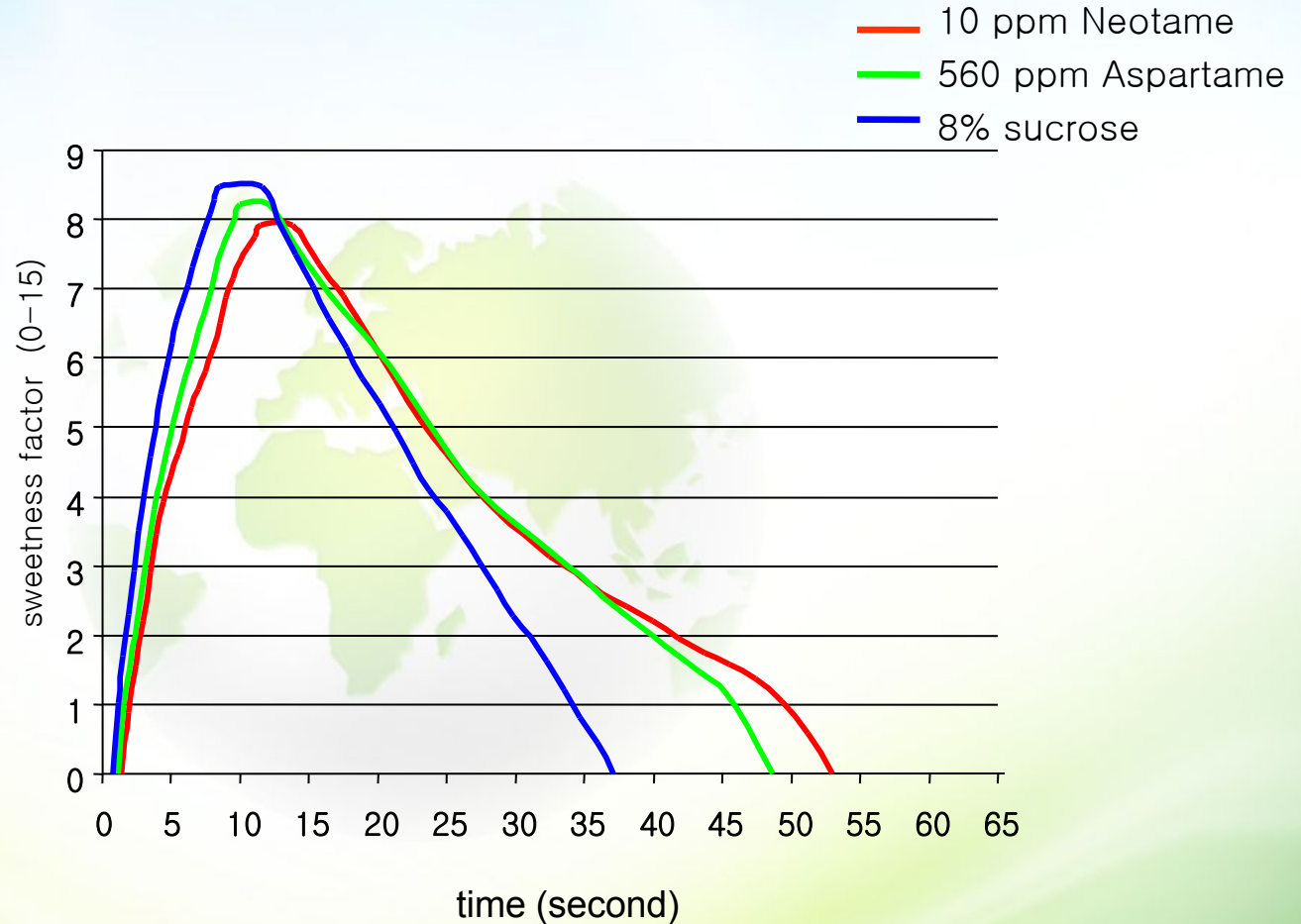
The nature of neotame (taste description)

- Neotame has clean sweetness, no bitter and metallic flavour
- As the concentration increasing, only the sweetness will increase



The taste characteristics of neotame

Compare to sucrose, neotame has relatively slow initial sweetness, the sweetness characteristic is similar to aspartame.

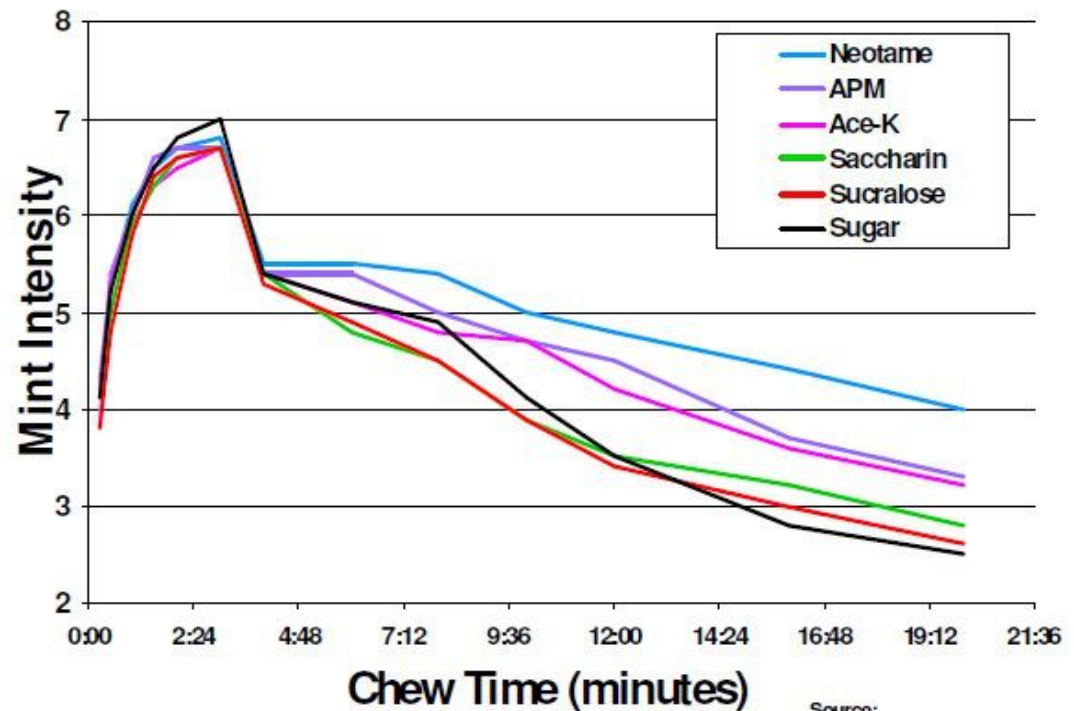


The flavor enhancing function of neotame

In the specific application and flavor system, neotame can significantly extend or enhance taste and aroma of product.

Refer to the right graph:

(After chewing mint gum for 20 minutes, the gum with neotame has more obvious sweetness and mint flavor.)



Source:
Mt. Prospect trained Panel, n=8
Samples evaluated in duplicate
October/November, 1999
(SS#3444)

Application of neotame

According to the statistics at home and abroad:

Neotame is mainly used in food and beverage, animal feed, cigarettes, betel nut, baking, wine and daily chemical product.

Black Bear (Nov. '03)



(HFCS, neotame)

Albertson's (Jan. '04)



(HFCS, neotame)

Cawy Bottling, Fruiti Cola (Jul 03)



(HFCS, neotame)

A-Treat (Nov. '03)



(HFCS, neotame)

Neotame application-beverage (New Zealand)

Beverage-New Zealand



Reduce cost:

- By 2002, more than 90% beverage on the supermarket shelves has added 20% to 30% neotame
- Includes
 - Budget – Foodstuffs Group
 - Pams – Foodstuffs Group
 - Basics – Woolworth Progressive
 - Select – The Warehouse Group
- all the product has passed the triangulation, there is no difference from full sugar product

Neotame application-beverage (Cadbury)

Cadburys Schweppes Beverage



Australian Cadburys

- Tarax
 - substituted 20%
 - Sucrose, neotame
- Cottee's
 - Sucrose, neotame
 - 5% Juice,
 - substituted 20%

neotame application-alcoholic beverage (Alcoholic Beverage)



- New Zealand : Independent Liquor
 - Sucrose, neotame
 - The first brand of New Zealand
 - Woodstock Bourbon & Cola (Coke)
 - Komodo cocktail range (cocktail)
- Australia CUB Fosters,
 - Sucrose, neotame
 - Australian first brand
 - Karlov Vodka, Lime & Soda (Vodka lemon soda)
 - Bounty Premium Rum & Cola (Rum-and-Coke)
- Australia Diageo,
 - Sucrose, neotame
 - The first brand in the world
 - Real McCoy Bourbon & Cola (Coke)



Application cases of neotame compound



coca-cola philippines (sucrose, neotame, ACE-K)

- Pop Cola, Jazz Cola, Cheers Orange & Lemon, Sarsi (Sarsaparilla)
- 1 billion case



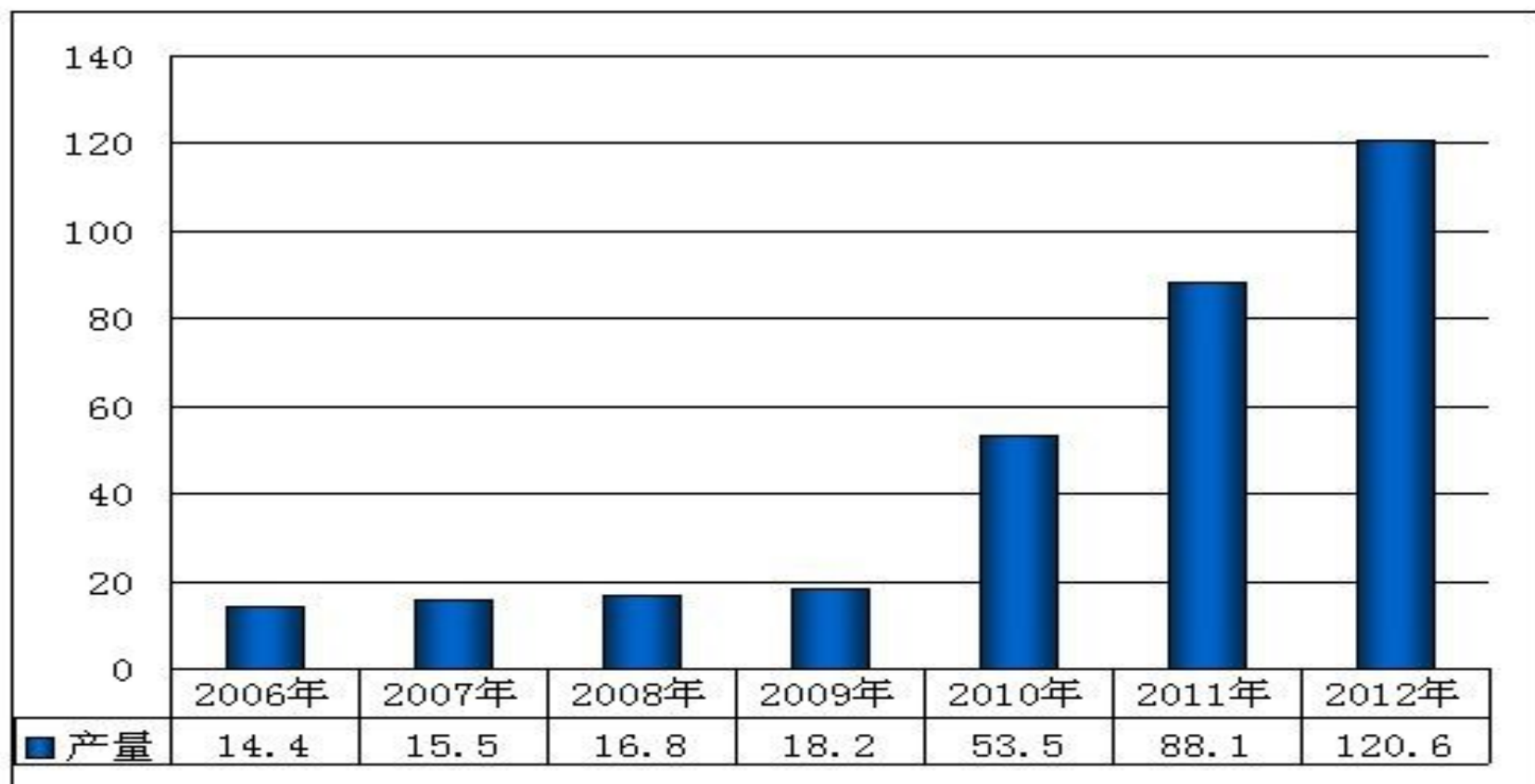
- **coca-cola (Australia New zealand) (sucrose, neotame)**
- Australia Fruitopia
- New zealand Schweppes
- 12.5% Juice, substituted 40%
- 2008 summer entered market

The development history of neotame in China

- The American Natrusweet has obtained the substance patent of neotame in 1993, and it has expired in 12/2013.
- FDA approved the usage of neotame in food and beverage in 7/2002.
- In 2003 FAO/WHO, neotame was approved to be used in dairy, beverage and so on, more than 15 categories and 80 types of food.
- In 4/2003, Chinese health department approved neotame to be used in all kinds of food, according to the need of producing.
- In 2005, Huasweet company collaborated with Xiamen university to research and develop neotame.
- In 10/2014, Wuhan Huasweet became the first enterprise which has passed the QS accreditation in China

2006-2012 年国内纽甜年产量供给分析

单位：吨



数据来源：中国市场调查研究中心



As the above chart indicated, with the development of the high potency sweeteners, the consumption of neotame is increasing steadily. The market of huasweet neotame has extended to every corner around the world. In 2014, the output and sales volume of huasweet neotame is 180t. It is expected to be 280T in 2015. Huasweet neotame has occupied 70% of domestic market shares, and 30% of the global market shares.

Our partners:

Yili、WAHAHA、Xiaoyangren、Jianlibao

Beverage

Chendu Dadi、Shanghai Menon、Fujian Mailun、Guangzhou Leda

Feed sweetener

Hubao International、Bairun joint-stock、China essence and flavor (Shenzheng Bodun)

Cigarette

Binzhilang Kouweiwang Sinovon

Betel nut

Niulanshan Erguotou、Laocunzhang、Jiangjin Laobaigan、Jinxing Beer

Wine

Laiyifen、Huaweiheng、Miss Yao、Cai Zhi Zhai、LiuLiu orchard

Candied succades

Dali park、Lay's

Baking

P&G、Unilever

Daily chemical

Hayao Pharm、BY-HEALTH、Pangaoshou

Pharmaceutical health care products



➤ *sodium Saccharin*

Sodium saccharin is 500 times sweeter than sugar. China is only sodium saccharin production and exporter at present and 80% saccharin was exported every year.

There are only 5 saccharin manufacturers in China currently.

➤ *sodium cyclamate*

The production capacity is 80000T/year in Global. Including 75000T sodium cyclamate manufactured by China, and nearly 65% cyclamate was export.

Sodium cyclamate had been approved to use more than 80 countries.

➤ *Acesulfame K*

Acesulfame K is 200 times sweeter than sugar. and it had been approved to use more than 100 countries. The global demands quantity is nearly 40000T/year at present.



➤ *Aspartame*

Aspartame is 200 times sweeter than sugar.



➤ *Sucralose*

Sucralose is 600 times sweeter than sugar. It's a best ideal high intensity sweetener to instead of sugar at present. but the price is not competitive. So how to save the production cost is the good research topic.



➤ *Stevia*

Stevia is a natural sweetener, and the production is nearly 2000T/year in China. The main market is Japan, Korea etc.

Sweet solution (knowing the client requirements)



Based on the limitation requirements of the usage for the sweetener is much more strict at home and abroad. According to my comprehensive study to summarize that our food industry has a five basic requirements on sweetener. It as follows:

- 1、 High safety: All sweeteners ingredient on scope of use and dosage are conforming to the GB 2760 standard.
- 2、 High health: Low calories, adapt to all kinds of people to eating, such as diabetes, obesity patients and old people.
- 3、 High stable: Acid, alkali resistant, high temperature both resistance. And apply to kinds of produce process, such as high temperature sterilization, spray drying, baking, and extrusion
- 4、 Good taste: The taste of our mix sweetener is nearly the same with sugar.
- 5、 Low cost: High cost-effective



All kinds of sweeteners has different advantage and disadvantage on GB2760.No matter what kinds of sweeteners cannot satisfy the basic five requirements, such as safety,health,stable,taste and cost. Sugar is very safety but the cost is too high; However, the cost of sodium saccharin is low, but the taste is bitter and unsafety; Under the environment of high temperature, aspartame is not very stable; The taste of sucralose is very good, but the cost is also very high and AK sugar has a metal taste.So comparing with the different characters of each sweetener to satisfy the market requirements, the blend sweetener was born.

Choosing the suitable compound sweetener, it can have the following effect:

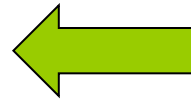
- 1 、 synergistic effect between sweeteners, reducing the bad taste and adding flavor;
- 2 、 improving stability;
- 3 、 improving safety;
- 4 、 saving cost, and more easier to use.



WuHan HuaSweet Co., Ltd



Supply full sweetener solution



- Cigarette sweetener
- Drinks sweetener
- Pickles sweetener
- Preserve sweetener
- Roasted sweetener
- Feed sweetener
- Compound wine sweetener
- Special food sweetener



Neotame is very suitable to use with a blend of other sweeteners.

1. Neotame can replace the nutritive sweeteners and does not add more calories, neither volume.

Upon specific application, Neotame can improve or does not significantly change the original characters of the product.

2. Neotame can alternate non-nutritive sweeteners.

When used with a blend of AK, saccharin, cyclamate, neotame can improve the taste characteristics, mask the bitter taste, metallic taste and other foreign taste. It can enhance the flavor of the product. It can reduce the cost of total sweetness when used with a blend of spartame, sucralose.



3. With a variety of reducing carbonyl compounds.

Such as glucose, fructose, high fructose corn syrup, lactose, maltose, etc., used together without generating the Maillard reaction; with a variety of aldehyde-containing flavoring or flavoring substance, such as vanillin, ethyl vanillin, cinnamic aldehyde, acid, citral, etc., used together without the Schiff Alkali reaction.

4. Neotame can blend with glucose.

Because of neotame sweetness is very high, it will have a error during production, so blending neotame with glucose it can reduce the sweetness of neotame and much more easier to use.

The advantage of raw materials



Our raw material supplier, as it follows:





Quality Assurance





We are promoting the quality management system, which is in accordance with the ISO9001:2008 standard requirements established, documented, implemented, maintained and continuously improve quality management system. 公司推进质量管理体系，是依照ISO9001:2008标准的要求建立，形成文件，实施，保持和持续改进质量管理体系。

Define and measure its quality and food safety objectives in accordance with the quality and food safety policy and the requirements of this document. 按照质量和食品安全政策以及此文件的要求来规定和测量产品质量和食品安全目标。

The quality system documents 质量体系文件

The quality manual 质量手册

Program file 程序文件

Standing Operation Process 操作标准书

Related records form 相关记录表格

Our company from raw materials to products and after-sales service of the whole link, in the quality manual as a general guideline, combined with the actual situation, at the same time under the condition of meet customer requirements and related laws and regulations, making the quality management system can be suitable for effective running. 我们公司从原料到产品出厂及售后服务整个环节，都是以质量手册作为总的指导，结合实际情况，同时也在满足顾客要求与法律法规的条件下，使质量管理体系能够进行适宜的有效的运行。

Raw material

Before purchaing the raw materials, we need to review of s
uppliers, to ensure that suppliers provide raw material are in conf
ormity with the revelent requirements.采购原辅料前，需要对供应
商进行评审，以确保供应商提供原辅料是符合相关要求的。

Evaluation of suppliers is based on a documented procedur
e to operate, formation and vendor audit and record. 对供应商的
评审是依据以形成文件的程序进行操作的，并形成与供应商评审
的记录。

Raw material into the factory 原辅料进厂

By review of qualified suppliers to supply us the raw materials, and after the raw materials into the factory, our QC department will have a sampling inspection of raw materials, and form a record. After putting the raw materials in the warehouse, we also to protection of raw materials and make it to a indentifying. The whole process should record to prove that these processes are conducted. 由评审合格的供应商提供的原辅料进厂后，会由公司质检部对原辅料进行抽检，并形成记录。将原辅料置于仓库，要对原辅料进行防护，也要对其进行标识。该过程都要形成记录，以证明这些过程都是在进行的。

Production

The process of production control is based on the formation of the documents, which will strengthen control in the process of production under the key control points, to ensure that the production process of mistakes as little as possible. 生产过程的控制也是依据形成的文件进行控制，对于生产过程中的关键控制点会加强控制，以保证生产过程的失误尽可能少的出现。

We will inspection of the finished products, to determine that the product conforms to the standard. After our product into the warehousing, we also should protect our finished products and identity. What's more, the delivery of cargo from storage products should be detailed records. 对于生产出的成品，要对其进行检验，确定产品符合标准。产品入库后，要对产品进行防护，标识。并且产品的出库也都要进行详细的记录。

Pest Control 害虫防治

We ensure a documented pest control program is in place to effectively prevent activity in the facility and/or surrounding area.
我司确保有一套有文件记录的虫害控制程序，预防在设施内部或周边区域的虫害活动。

Sales and after-sales service 销售及售后

All customer orders are to review, to ensure that our quality can satisfy client's requirements and safety arrival to clients. 销售产品时，客户订单均要进行评审，以确保到达客户处的产品不出现问题。

We are also very focused on after-sales service after products were selling. We will pay more attention about the sold products, understand customer's view of the products and make a reasonable and effective solution for the customer questions. According to the requirements of customers, continuously make improvement, to better meet customer requirements. 产品销售出去后，公司也很注重产品的售后服务。我们会对售出的产品进行回访，了解顾客对产品的看法，同时对客户提出的问题均会做出合理有效的解决方法。依据客户的要求看法，不断做出改进，能更好的满足客户要求。

Marketing Strategy



2. Exhibit Booth
Promotion

3. Brand effect
“HuaSweet”

1. network marketing

Thanks !

武汉市华甜生物科技有限公司
WWW.HUASWEET.COM

