III-1 Overview

Generally speaking, AP is an important HIS production area in the world. It is estimated that over [redacted]% of global HIS production concentrate in AP countries. Among these countries, China is the biggest production country in AP, whose output reaches over [redacted] tonnes in China in 2010.

Meanwhile, Japan is an important aspartame production country in the world, with output of [redacted] tonnes in 2010, most of which is exported to other countries. Singapore is an important sucralose production country in the world, because the biggest sucralose company, Tate & Lyle has set up its production center there. The output of sucralose in Singapore is about [redacted] tonnes in 2010.

IV-2 China

IV-2.3 Production and producers

As the biggest HIS production country in AP, China's total output volume of HIS reaches over [redacted] tonnes in 2010. Moreover, there are over [redacted] HIS producers in China at present, which are mainly concentrated in Shandong Province and Jiangsu Province.

Table IV-2.3.1 China HIS production situation, 2009-2010

HIS	Capacity'10, t/a	Capacity'09, t/a	Output'10, t/a	Output'09, t
Saccharin	[redacted]	[redacted]	[redacted]	[redacted]
Cyclamate	[redacted]	[redacted]	[redacted]	[redacted]
Acesulfame-K	[redacted]	[redacted]	[redacted]	[redacted]
Stevia sweetener	[redacted]	[redacted]	[redacted]	[redacted]
Aspartame	[redacted]	[redacted]	[redacted]	[redacted]
Sucralose	[redacted]	[redacted]	[redacted]	[redacted]
Glycyrrhizin	[redacted]	[redacted]	[redacted]	[redacted]
Alitame	[redacted]	[redacted]	[redacted]	[redacted]
Neotame	[redacted]	[redacted]	[redacted]	[redacted]
Total	[redacted]	[redacted]	[redacted]	[redacted]

Source: CCM International

IV-2.5 Trade situation

Since China is the most important HIS production country in AP, it imports few HIS products. Therefore, CCM focuses on the export situation of domestic HIS. In 2009, China exported about [redacted] tonnes HIS to different countries, among which the export volume of saccharin and cyclamate are the most, with total export volume of [redacted] tonnes, accounting for about [redacted]% of the total export volume of HIS.

IV-2.5.1 Saccharin

In 2009, the total export volume of China's saccharin was [redacted] tonnes with value of USD[redacted] million. The top three export destinations are Germany, Brazil and India. In Jan.-Oct. 2010, the total export volume of China's saccharin is [redacted] tonnes with value of USD[redacted] million. The top three export destinations are Germany, Brazil and South Korea.

Table IV-2.5.1 Top ten export destinations of saccharin in China, 2009

No.	Country	Volume, t	Value, USD
1	Germany	[redacted]	[redacted]
2	Brazil	[redacted]	[redacted]
3	India	[redacted]	[redacted]
4	South Korea	[redacted]	[redacted]
5	France	[redacted]	[redacted]
6	Thailand	[redacted]	[redacted]
7	the US	[redacted]	[redacted]
8	Spain	[redacted]	[redacted]
9	Argentina	[redacted]	[redacted]
10	Pakistan	[redacted]	[redacted]
Others		[redacted]	[redacted]
Total		[redacted]	[redacted]

Source: CCM International

IV-3 India

IV-3.1 Brief introduction

Currently, there are totally [redacted] kinds of HIS being used in India by the end of Jan. 2011. Among the HIS, the artificial HIS include aspartame, sucralose, acesulfame-K, saccharin, neotame and alitame and the natural HIS include stevia sweetener and glycyrrhizin. Cyclamate is still banned in India.

Moreover, only [redacted] kinds of HIS are being produced in India now, which are saccharin, stevia sweetener, sucralose and glycyrrhizin, with total output of only [redacted] tonnes in 2010. Just like in China, alitame and neotame are also not approved to produce in India, because of the production patent is still protected by foreign companies.

IV-3.3 Production and producers

There are four kinds of HIS (saccharin, sucralose, stevia sweetener and glycyrrhizin) being produced in India in 2009 and 2010. India's total capacity of these four kinds of HIS reaches [redacted] t/a in 2009 and [redacted] t/a in 2010, respectively. Meanwhile, the country's total output of them reaches [redacted] tonnes in 2009 and [redacted] tonnes in 2010.

Among these four kinds of HIS, saccharin has the largest capacity and largest output in India in 2009 and 2010. Indian saccharin output reaches [redacted] tonnes in 2010; glycyrrhizin's capacity and output are the smallest in 2009 and 2010, with only [redacted] tonnes' output in 2010.

Table III-3.3.1 Indian HIS production situation, 2009 and 2010

No.	Product	Capacity'10, t/a	Capacity'09, t/a	Output'10, t	Output'09, t
1	Saccharin	[redacted]	[redacted]	[redacted]	[redacted]
2	Sucralose	[redacted]	[redacted]	[redacted]	[redacted]
3	Stevia sweetener	[redacted]	[redacted]	[redacted]	[redacted]
4	Glycyrrhizin	[redacted]	[redacted]	[redacted]	[redacted]
Total		[redacted]	[redacted]	[redacted]	[redacted]

Source: CCM International

IV-4 Japan

IV-4.4 Demand and end-use segments

Saccharin, acesulfame-K, stevia sweetener, aspartame, sucralose, glycyrrhizin and neotame are used in food, beverage, and pharmaceuticals in Japan. The demand for HIS is increasing up to now because more HIS of new type are approved by the Government of Japan and Japanese consciousness for sugar-free and claorie-free concepts increases. More and more food products increased their product types with using HIS as ingredients as more HIS are combined with other sweeteners, like sugar alcohol.

The annual demand volume of HIS was [redacted] tonnes in 2009, among which, aspartame took a dominant HIS market share in Japan. This is mainly attributed to that Japanese focus on the taste of foods more, not only cares about low-calorie, unlike Euro-American countries. Thus, affected by this factor, aspartame with similar sweet taste with sucrose is more popular and widely used in beverage in Japan, taking about [redacted] in total HIS consumption in 2009. Food and beverage industries are the most important consumption fields for aspartame.

Table IV-4.4.2 Different HIS consumption volume in Japan, 2009

HIS	Market size, t	Market value, USD
Saccharin	[redacted]	[redacted]
Acesulfame-K	[redacted]	[redacted]
Stevia sweetener	[redacted]	[redacted]
Aspartame	[redacted]	[redacted]
Sucralose	[redacted]	[redacted]
Glycyrrhizin	[redacted]	[redacted]
Total	[redacted]	[redacted]

Source: CCM International

IV-5 Indonesia

IV-5.3 Production and producers

Indonesia is an important production country of HIS in AP, and saccharin and cyclamate are the only two species of HIS produced there. The total output of HIS in Indonesia is [redacted] tonnes in 2010, increasing by [redacted]% compared to that in 2009. The total capacity of cyclamate in 2010 is [redacted]t/a in Indonesia. Cyclamate takes a large share in HIS output volume, about [redacted]% of total HIS production volume. Indonesia is the second largest production country of cyclamate only next to China in 2010.