

II Supply & Demand of Inositol

II-1 Supply of Inositol

II-1.1 Summary of Inositol Producers

Currently there are 11 active producers of inositol in China, and most of them are distributed in North China. Zhucheng Haotian and Shandong Xianju are the top two player of inositol in China with the capacity of 1500t/a and 1,000t/a respectively.

Zhucheng Haotian has strong support of phytin supply because its parent company is one cornstarch producer. Its commercial fame is good in China. Shandong Xianju is based on the former Zhejiang Chengjiu who was once famous for its smart business style, and it has matured sales network.

Table II-1.1-1 Active producers of inositol in China (tonnes)

Company	Ownership	GMP	Products	For pharmaceutical	For feed	For food	Capa. 06'	Output 05'
██████████	Private	█	██████████	√	√	√	████	██
██████████	Private	██	██████████	√	√	√	████	██
██████████	Private	██	██████████	√	√	√	██	██
██████████	Private	██	██████████		√	√	████	██
██████████	Private	██	██████████	√			██	██
██████████	Private	█	██████████	√	√	√	██	██
██████████	Private	██	██████████		√	√	██	█
██████████	Private	█	██████████	√			██	██
██████████	Private	█	██████████	√			██	██
██████████	State owned	█	██████████	√	√	√	██	██
██████████	Joint venture	█	██████████	√			██	██

Almost all producers of inositol are private enterprises. Usually inositol production is not considered as a major and supporting business in most factories so it is carried out by some private enterprises.

As an expedient solution, many original producers in Zhejiang cooperated with the companies in North China, purchased the old inositol factories in North China, or simply set up a new factory to go on with inositol production.

II-2 Raw Materials Supply Status for Inositol Production

Phytin is the major raw material for the production of inositol in China, and phytin has no other application except inositol production.

As most inositol producers are located in Shandong Province, Hebei Province, Henan Province and Liaoning Province and so on, and these regions are all large agricultural provinces, thus the supply of merging liquid of corn and phytin is abundant.

Generally speaking phytin is produced in cornstarch companies with merging liquid of corn, while some pint-sized cornstarch companies don't produce phytin by themselves. Merging liquid of corn is rented to private persons most of whom are from Xianju Country, and they process merging liquid of corn into phytin in the workshop of cornstarch companies. Thus in China a large number of phytin is grasped by private persons.

- Properties of Phytin

The active component in phytin is calcium phytate (with a little amount of Magnesium ion). The formula of phytate is $C_6H_6O_{24}P_6Mg_{3.4}Ca_{2.1}Me_2 \cdot 5H_2O$, where Me stands for alkali earth metal cationic particles, such as K^+ , Na^+ , NH_4^+ , etc. It is a kind of compound salt formed from phytate acid and metal cations of Calcium and Magnesium.

II-4 Inositol Historic Import and Export Analysis

China is a large producing country of inositol in the world, about 80% of whose output was exported to overseas market. Thus overseas demand of inositol has an important impact on Chinese inositol industry.



Export price of inositol increased year by year. The price of inositol in 2005 increased drastically, which was about USD1.44/kg higher than that in 2004 and USD1.73/kg higher than that in 2003. It is estimated that the price will keep increasing steadily.

There were 44 export destinations of inositol in 2005. USA was the leading export destination in the past three years whose export volume was 508,375 kg in 2005 accounting for 25.8% of total export volume, and some other major export destinations included Germany, Japan, Indonesia, and Thailand and so on.

Most inositol is exported to overseas market via Shanghai Port and Qingdao Port. In 2005 1,577 tonnes of inositol was exported via Shanghai Port accounting for 80% of total export

volume, and 314 tonnes of inositol was exported via Qingdao Port accounting for 16.0% of total export volume.

Only a small amount of inositol is imported accounting for less than 4% of total consumption volume in China. While the import volume and proportion increased year by year.

Table II-4-1 Import & export of inositol in the past few years (tonnes, USD/kg)

Year	Export volume	Export price	Import volume	Import price
1993	1135.000	8.99	N/A	N/A
1994	1193.000	16.24	N/A	N/A
1995	1257.000	21.61	N/A	N/A
1996	1100.000	N/A	N/A	N/A
1997	955.876	9.96	2.240	2.23
1998	1042.400	8.53	7.850	5.71
1999	1303.360	7.01	1.500	22.99
2000	████████	██	████████	██
2001	████████	██	████████	██
2002	████████	██	████████	██
2003	████████	██	████████	██
2004	████████	██	████████	██
2005	████████	██	████████	██