

I-3 Supply of Alpha/Beta Pinene in China

From the various sources as of January 2006, XIMEI found that 21 manufacturers were producing pinene, from commercial production point of view. Among the 21 active manufacturers of pinene,

- 9 of them also produce gum rosin and gum turpentine;
- 12 of them are the downstream enterprises of gum turpentine, which purchase gum turpentine outside to produce pinene;

Among the 21 active manufacturers of pinene,

- 4 of them only produce α -pinene;
- 17 of them produce both α -pinene and β -pinene. But some of the 17 producers just sell α -pinene, and they consume β -pinene themselves.

Details information of the active producers has been compiled in this report, in separate part: Pinene Manufacturer Profiles

Table I-3-1 Summary of active Pinene producers (Unit: capacity & output MTs; price: RMB/MT)

No.	Abbreviation	Location	Status	α -pinene			β -pinene		
				Capacity'06	Output'05	Price	Capacity'06	Output'05	Price
II-01		Guangxi	Active						
II-02		Fujian	Active						
II-03		Guangdong	Active						
II-04		Jiangxi	Active						
II-05		Jiangxi	Active						
II-06		Yunnan	Active						
II-07		Guangdong	Active						
II-08			Active						
II-09			Active						
II-10			Active						
II-11			Active						
II-12			Active						
II-13			Active						
II-14			Active						
II-15			Active						
II-16			Active						
II-17			Active						
II-18			Active						
II-19			Active						
II-20			Active						
II-21			Active						
Total									

I-4 Import & Export Analysis of Alpha/Beta Pinene in 2002~1H 2005

There is not any imported alpha/beta Pinene in China. The following tables are about export situation.

I-4.1 About alpha-pinene

- In 2002

Table I-4.1-1 Average export price of alpha-pinene in 2002 in China

Month	Quantity (kg)	Unit price (USD/kg)
Jan-02	██████████	0.69
Feb-02	██████████	0.68
Mar-02	██████████	0.62
Apr-02	██████████	0.77
Jul-02	██████████	0.60
Aug-02	██████████	0.65
Sep-02	██████████	0.56
Oct-02	██████████	0.65
Nov-02	██████████	0.55
Dec-02	██████████	0.59
Total	██████████	0.60

I-5 Consumption Pattern of Alpha/Beta Pinene in China

I-5.1 Alpha Pinene

I-5.1.1 Market size and market share of alpha pinene

In 2005, the output of alpha pinene was ████████MTs.

In the first year of 2005, the export volume of alpha pinene was 6,516MTs. Normally, the export volume of the second half year is larger than that of the first half year, so XIMEI estimates export volume of 2005 is about 16,000MTs.

Thus, the apparent consumption of alpha pinene was 11,320MTs in 2005. The consumption pattern of alpha pinene is analyzed on the basis of the consumption datum of 2005.

As the main component of gum turpentine, the application fields of alpha pinene are quite similar to the application fields of gum turpentine. Alpha pinene is mainly applied in synthetic camphor, synthetic borneol, and all kinds of synthetic perfume.

Table I-5.1.1 Market size and market share of alpha pinene in different application fields

Fields	Market size		Market share	
	By volume (MTs)	By value (RMB, million)	By volume, %	By value, %
Camphor	██████	██████	██████	██████
Borneol	██████	██████	██████	██████
Synthetic perfume	██████	██████	17.67	17.80
Others	██████	██████	2.83	2.82
Total	██████	██████	100.00	100.00

I-6 Brief Introduction to Raw Material Supply of Alpha/Beta Pinene

Turpentine is the exclusive raw material of alpha pinene and beta pinene. There are two kinds of turpentine in China, including gum turpentine and crude sulphate turpentine. Thereof, gum turpentine is the major kind. Gum turpentine is the side product during the production of gum rosin, and the production of gum turpentine goes along with the gum rosin. When 100 MTs gum rosin is produced, about 13MTs-14MTs gum turpentine is produced.

Table I-6-1 Output of gum turpentine in China in 1997-2004

Year	Output of gum turpentine (MTs)	Output of gum rosin (MTs)	Ratio (rosin: turpentine)
1997	██████	██████	100:13.73
1998	██████	██████	100:14.25
1999	██████	██████	100:13.33
2000	██████	██████	100:13.61
2001	██████	██████	100:13.60
2002	██████	██████	100:13.97
2003	██████	██████	100:13.96
2004	██████	██████	100:13.82