

Chapter Three Overview of glycine in China

III-4.1 Brief introduction of chloroacetic acid ammonolysis process

Table III-4.1.1 Raw material consumption of chloroacetic acid ammonolysis process in China, Feb. 2009

No.	Raw materials	Purity, %	Unit consumption, t/t	Price, USD/t	Unit cost, USD/t
1	Chloroacetic acid	99.99	0.0001	10000	1000
2	Liquid ammonia	Tech-grade	0.0001	10000	1000
3	Urotropine	99.99	0.0001	10000	1000
4	Methanol	99.99	0.0001	10000	1000
	Total				

Table III-4.4.1 Raw material consumption of natural gas route in China, Feb. 2009

No.	Raw materials	Purity, %	Unit consumption, t/t	Price, USD/t	Unit cost, USD/t
1	Natural gas				
2	Liquid ammonia				
3	Carbon dioxide				
4	Formaldehyde	37			
	Total				

III-6 Industry players

Table III-6.2 Production situation of Chinese glycine companies, 2009

[illegible]

16						2,000				
17						1,500				
18						1,500				
19						3,600				
20						500				
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										
32										
33										
34										
35										
36						500				
	Total									

Chapter Four Market summary and assumptions

IV-1.1 Price

Table IV-1.1.1 Price change of tech-grade glycine, 2006-Jan.2010

No.	Stage	Price	Reasons
1	Jan. 2006 - Oct. 2006	Decreased from USD2,001/t in Jan. 2006 to USD1,764/t in Oct. 2006, down 1.39%.	
2	Nov. 2006 - Sep. 2007		
3	Dec. 2007 - Feb. 2008		
4	Mar. 2008 - Apr. 2008		
5	May 2008 - Jun. 2008		
6	Jul. 2008 - Nov. 2009		
7	Nov. 2009 - Jan. 2010		

IV-1.2 Export

Table IV-1.2.6 Glycine exports of Chinese major producers, 2009

No.	Manufacturers	Feed-grade		Food-grade		Pharmaceutical-grade		Total	
		Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg	Quantity, tonne	Price, USD/kg
1	Hebei Donghua								
2									
3									
4									
5									
6									
7									
8									
9									
10									
11				66.200	1.89	0	0		
12									
13									
14									
15									
Total									

IV-3 Market challenges

Chinese glycine industry will face many challenges such as the financial crisis across the world and oversupply of glycine in the future, so China will accelerate integration of Chinese glycine industry.

Major challenges for Chinese glycine industry are showed as follows.

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Table IV-3.1 Strengths and weaknesses of Chinese glycine industry

No.	Strengths	Weaknesses
1		
2		
3		

Chapter Five Industry structure and competitive analysis

Table V-2.1.1 Major glyphosate producers adopting AEA pathway in China, 2009

No.	Company	Abbreviation	Status 2010	Capacity 2009, t/a	Output 2008, tonne	Output 2009, tonne
1	Zhejiang Wynca Chemical Group Co., Ltd.	Zhejiang Wynca	active	80,000	■	■
2	■	■	active	■	■	■
3	Nantong Jiangshan Agrochemical & Chemical Co., Ltd.*	Nantong Jiangshan	active	■	■	■
4	■	■	active	■	■	■
5	■	■	active	■	■	■
6	■	■	active	■	■	■
7	■	■	active	■	■	■
8	■	■	active	■	■	■
9	■	■	active	■	■	■
10	■	■	active	10,000	■	■
11	■	■	active	■	■	■
12	■	■	active	■	■	■
13	■	■	active	■	■	■
14	■	■	active	■	■	■
15	■	■	active	■	■	■
16	■	■	active	■	■	■
17	■	■	active	■	■	■
18	■	■	active	■	■	■
19	■	■	active	■	■	■
20	■	■	idle	■	■	■
	Others			■	■	■
	Total			■	■	■

Table V-2.1.3 Main glycine producers and glycine consumers in China, 2009

No.	Glycine producers	Glycine consumers
1	Hebei Donghua	Zhejiang Wynca, ■
2	■	■
3	■	■
4	■	■
5	■	■

V-3 Industry concentration of glycine materials

Table V-3.1.1 Main urotropine producers in China, 2009

No.	Company	Location	Capacity, t/a
1			
2			
3			
4			
5			20,000
6			
7			
8	Jinan Xiangrui Chemical Co., Ltd.	Shandong	
9		Shandong	
10			
11			
12			
13			
14			
Sub-total			
National total			
Percentage			

V-4 Industry concentration of glycine companies

Table V-4.1 Industrial concentration of glycine in China

No.	Item	Value
1	Top one concentration ratio	
2	Top five concentration ratio	
3	Top ten concentration ratio	
4	HHI	