III-2.3 Theoretical model of raw materials

Based on the information from the literature, CCM can calculate the theoretical unit consumption of the raw materials on the basis of the 1,000kg of paracetamol.

CCM has made a model calculation for the raw material costs for the production of paracetamol in the following tables based on the above model. According to the literature, the overall yield of paracetamol production, from PAP, by using glacial acetic acid as acetylation reagent is 90%.

The costs for the raw materials are based on prices in Chinese domestic market in August 2000, March 2003 and June 2006, respectively, and are expressed in RMB.

Table III-2.3-1 Theoretical estimation on raw material costs of paracetamol (glacial acetic acid as starting material)

Materials	Unit consumption (kg/kg Para)	June-06		March-03		August-01	
		Price (RMB/kg)	Unit cost (RMB/kg)	Price (RMB/kg)	Unit cost (RMB/kg)	Price (RMB/kg)	Unit cost (RMB/kg)
p-Aminophenol *	[redacted]	18	[redacted]	18.05	[redacted]	17.53	[redacted]
Glacial acetic acid	[redacted]	5.5	[redacted]	4.43	[redacted]	5.5	[redacted]
Activated carbon	[redacted]	4	[redacted]	4.8	[redacted]	7	[redacted]
Sodium metabisulfite	[redacted]	2	[redacted]	1.8	[redacted]	1.75	[redacted]
Isopropanol**	[redacted]	10	[redacted]	6.19	[redacted]	6	[redacted]
Water	[redacted]	0.015	[redacted]	0.2	[redacted]	0.2	[redacted]
Total			[redacted]		[redacted]		[redacted]

IV-1 In PAP enterprises

IV-1.1 Verification

In order to estimate the cost and profit level of PAP as accurate as possible, CCM visited two enterprises and modified the theoretical model of raw materials CCM made previously, furthermore, CCM succeeded in obtaining other data that is useful for the cost estimation.

- **Situation in Nanjing Jianglong**

Summary of site visit report June 2006 – Nanjing Jianglong

CCM visited its production line and had a deep talk with GM Mr. Li Jinlong on June 19, 2006.

Nanjing Jianglong started to produce PAP in iron reduction method in 2001 and now it has a capacity of 3,000t/a.

The quotation of PAP in Nanjing Jianglong varies from RMB18,200/t to RMB22,500/t on the basis of different package materials including plastic woven bag and paper drum.

Table IV-1.1-1 Main equipment in Nanjing Jianglong

Name of equipment	Number	Unit capacity (Liter)	Total capacity (Liter)
[redacted]	2	3,000	6,000
[redacted]	3	12,500	37,500
[redacted]	1	3,000	3,000
[redacted]	19	3,000	57,000
[redacted]	2	4,000(L/h)	8,000 (L/h)
[redacted]	1	30,000	30,000

IV-1.3 Estimation on manufacturing cost

CCM usually calculates the manufacturing cost by integrating costs of raw materials, utilities, labor, packaging, depreciation and maintenance of equipments. In CCM's research, CCM regards depreciation of equipment as a part of amortisation of fixed assets which is reckoned in management cost. So manufacturing cost in this report does not include cost of depreciation of equipments.

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Table IV-1.3-1 Estimation on manufacturing costs of PAP production in Nanjing Jianglong

No	Item	Unit Cost (RMB / kg of paracetamol)
1	Raw Materials	[redacted]
2	Utilities (1)	[redacted]
3	Labor (2)	[redacted]
4	Package (3)	[redacted]
5	Maintenance (4)	[redacted]
	Total	[redacted]

IV-1.5 Estimation on total production cost

In this report, the total production cost is the summation of manufacturing costs and management costs.

Table IV-1.5-1 Estimation on total production costs in two enterprises (Unit: RMB/kg PAP)

Item	Nanjing Jianglong	Taixing Yangzi
Manufacturing costs	[redacted]	[redacted]
Management Costs	[redacted]	[redacted]
Total production cost	[redacted]	[redacted]

IV-1.6.2 Profit estimation of Nanjing Jianglong and Taixing Yangzi

- Nanjing Jianglong

Special views on Nanjing Jianglong:
Nanjing Jianglong is a local welfare enterprise as 50% of its employees are the handicapped. As a result, this factory does not need to pay corporate income tax (profit tax) and only has to pay 50% of value added tax (VAT).

Table IV-1.6.2-1 Estimation on profit of Nanjing Jianglong

Item	RMB / kg paracetamol	Remark
1. Total income	[redacted]	Price + Return of VAT + Income for selling wastes
Price	[redacted]	FOB Shanghai in June 2006
Return of VAT	[redacted]	This is not an export price, so no return of VAT.
Other income after tax	[redacted]	From selling iron mud to steel factory
2. Expense	[redacted]	Total production costs + VAT+ EAT & CT + House tax+ Land holding tax + Others tax
Total production costs	[redacted]	
VAT	[redacted]	
EAT & CT	[redacted]	
House tax	[redacted]	
Land holding tax	[redacted]	Land area x Land holding tax
Others tax (Pollutant discharge fee, stamp tax and tax on vehicles and vessels use)	[redacted]	
3. Gross Profit	[redacted]	Income - Expense
4. Profit tax	[redacted]	Gross profit×0%
5. Profit after tax	[redacted]	Gross Profit - Profits Tax