

## II Production and Market Info of Lactic Acid in China

### II-1 Current Production Situation of Lactic Acid

#### II-1.1 Summary of Producers

##### - Current producers

Up to march 2007, there are thirteen active lactic acid producers with the total production capacity of 110,500 t/a. One producer is idled but still have the valid production capacity 500 t/a.

Among the active lactic acid factories, there are three producers which production capacity over 10,000 t/a, including.....

Table II-1.1-1 The manufacturers of lactic acid in China in 2006

| No.          | Abbr.            | status    | location     | Ownership           | Launch time | Est.capacity' 07(t/a) | Est.output' 06(t/a) |
|--------------|------------------|-----------|--------------|---------------------|-------------|-----------------------|---------------------|
| V-1-01       |                  |           |              |                     |             |                       |                     |
| V-1-02       |                  |           |              |                     |             |                       |                     |
| V-1-03       |                  |           |              |                     |             |                       |                     |
| V-1-04       |                  |           |              |                     |             |                       |                     |
| V-1-05       |                  |           |              |                     |             |                       |                     |
| V-1-06       |                  |           |              |                     |             |                       |                     |
| V-1-07       |                  |           |              |                     |             |                       |                     |
| V-1-08       |                  |           |              |                     |             |                       |                     |
| V-1-09       |                  |           |              |                     |             |                       |                     |
| V-1-10       |                  |           |              |                     |             |                       |                     |
| V-1-11       |                  |           |              |                     |             |                       |                     |
| V-1-12       |                  |           |              |                     |             |                       |                     |
| V-1-13       |                  |           |              |                     |             |                       |                     |
| V-2-01       | Zhaodong aier    | Potential | Heilongjiang | Privates Enterprise | 2007        | 5,000                 | 0                   |
| V-3-01       | Shanghai shenxia | Idled     | Shanghai     | Privates Enterprise | 2005        | 500                   | 0                   |
| V-4-01       | Shanxi xinyuan   | stopped   | Shanxi       | Privates Enterprise | 2000        | 1,500                 | 0                   |
| V-4-01       | Guangshui minzu  | stopped   | Hubei        | Privates Enterprise | 1996        | 0                     | 0                   |
| <b>Total</b> |                  | -         | -            | -                   | -           |                       |                     |

## II-4 Import and Export analysis

### II-4.1 Export analysis

The total export volume in 2003 was only 6,848.405 tonnes, and this volume reached 11,029.995 tonnes with the increasing rate of 61.06% in 2004. In 2005, the export volume achieved a huge progress with an amazingly increasing rate 70.81% and the total export volume reached 18,840.532 tonnes.

In 2005, [REDACTED] of lactic acid for export came from [REDACTED]  
[REDACTED]

Lactic acid was mainly exported to Europe countries such as Netherlands, Belgium, Poland, Russia, Spain and Brazil, etc. Japan, United States and Taiwan are also the export destination of Chinese lactic acid.

Comparing to the lactic acid in Europe and Japan, Chinese lactic acid has a great advantage in price. The export price in recent years kept a low level about [REDACTED].

#### - About export price

Table II-4.1-1 Export price of lactic acid in 2003~2005

| Month        | 2003             |                    | 2004              |                    | 2005        |                    |
|--------------|------------------|--------------------|-------------------|--------------------|-------------|--------------------|
|              | Quantity(t)      | Unit price(USD/kg) | Quantity(t)       | Unit price(USD/kg) | Quantity(t) | Unit price(USD/kg) |
| Jan          | 229.170          | 0.86               | 643.400           | 0.79               | [REDACTED]  | [REDACTED]         |
| Feb          | 552.925          | 0.79               | 600.600           | 0.75               | [REDACTED]  | [REDACTED]         |
| Mar          | 951.625          | 0.82               | 739.406           | 0.82               | [REDACTED]  | [REDACTED]         |
| Apr          | 515.800          | 0.79               | 873.300           | 0.83               | [REDACTED]  | [REDACTED]         |
| May          | 500.200          | 0.76               | 646.038           | 0.79               | [REDACTED]  | [REDACTED]         |
| Jun          | 515.174          | 0.87               | 737.721           | 0.81               | [REDACTED]  | [REDACTED]         |
| Jul          | 641.100          | 0.83               | 1,242.120         | 0.87               | [REDACTED]  | [REDACTED]         |
| Aug          | 700.060          | 0.80               | 1,220.980         | 0.89               | [REDACTED]  | [REDACTED]         |
| Sep          | 595.250          | 0.83               | 1,009.525         | 0.84               | [REDACTED]  | [REDACTED]         |
| Oct          | 459.811          | 0.83               | 1,068.515         | 0.86               | [REDACTED]  | [REDACTED]         |
| Nov          | 476.900          | 0.82               | 1,007.260         | 0.90               | [REDACTED]  | [REDACTED]         |
| Dec          | 710.390          | 0.89               | 1,241.130         | 0.89               | [REDACTED]  | [REDACTED]         |
| <b>Total</b> | <b>6,848.405</b> | <b>0.82</b>        | <b>11,029.995</b> | <b>0.85</b>        | [REDACTED]  | [REDACTED]         |

## II-5 Consumption Patterns of Lactic Acid

### II-5.1 Consumption situation of lactic acid in China

The output of lactic acid was kept increasing in 2003~2006 with the average annual growth rate of [REDACTED], while the average annual growth rate of apparent consumption was [REDACTED]. From the two data, it can be seen that domestic consumption of lactic acid increased slightly.

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Table II-5.1-1 The apparent consumption of lactic acid in 2003~2006

| Item                 | 2003   | 2004   | [REDACTED] | [REDACTED] |
|----------------------|--------|--------|------------|------------|
| Output               | 39,300 | 45,000 | [REDACTED] | [REDACTED] |
| Import               | 1,426  | 1,691  | [REDACTED] | [REDACTED] |
| Export               | 6,848  | 11,029 | [REDACTED] | [REDACTED] |
| Apparent consumption | 33,878 | 35,662 | [REDACTED] | [REDACTED] |

Note: Export and import volume of lactic acid in 2006 are estimated.

Table II-5.1-2 Consumption pattern of lactic acid in 2006

| Area              | quantity(t) | Percentage |
|-------------------|-------------|------------|
| [REDACTED]        | [REDACTED]  | [REDACTED] |
| [REDACTED]        | [REDACTED]  | [REDACTED] |
| [REDACTED]        | [REDACTED]  | [REDACTED] |
| Cosmetic industry | 1200        | [REDACTED] |
| Others            | 500         | [REDACTED] |
| <b>Total</b>      | [REDACTED]  | [REDACTED] |