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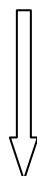
Web : www.whuhoyo.com

## FLOW CHART

**PRODUCT NAME:** L-Cysteine HCL Mono

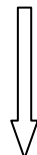
**CAS No.:** 7048-4-6

D,L-2-amino- $\Delta^2$ -thiazoline-4-carboxylic acid (ATC)



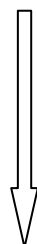
Dissolved in aqueous buffer near neutral pH

L-CYSTEINE (Solution)



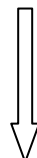
Oxidation by air  
Precipitation  
Filtration

L-CYSTINE (Crude)



Dissolved in diluted HCl  
Decolored by active carbon  
Filtration  
Add ammonia to neutralize  
Precipitation & centrifugation

L-CYSTINE (wet)



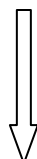
Drying & Packing  
Passing inspection

L-CYSTINE



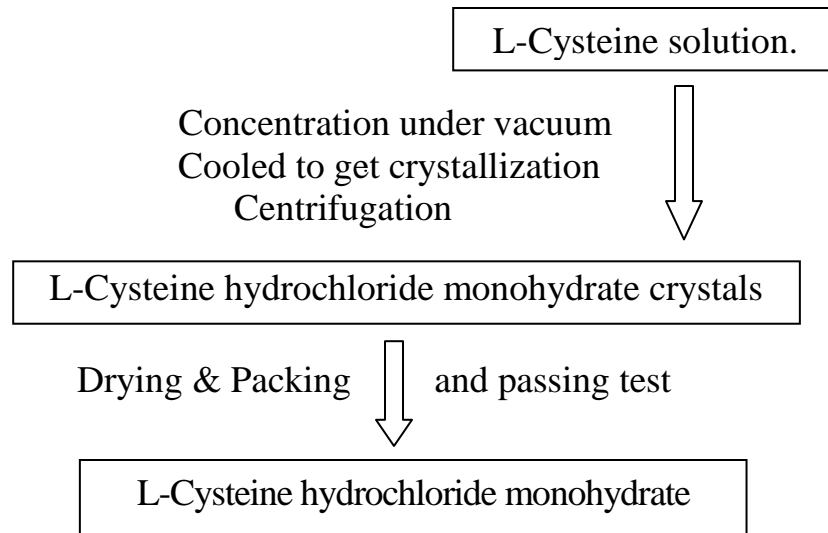
Dissolved in diluted HCl

L-cystine  
electrolyte



Electrolyze

Decolored by Active Carbon and  
Filtering through cloth then through the  
ultrafiltration membrane



Main raw material list:

- 1) D,L-2-amino- $\Delta^2$ -thiazoline-4-carboxylic acid (ATC)
- 2) Hydrochloric Acid
- 3) Active carbon
- 4) Ammonia
- 5) Pure water