

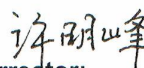


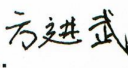
Certificate of Analysis

|                      |                     |                   |             |
|----------------------|---------------------|-------------------|-------------|
| Product Name:        | N-ACETYL-L-CYSTEINE | Batch Number:     | 20230118    |
| Date of Manufacture: | 2023.01.18          | Date of Analysis: | 2023. 01.19 |
| Expiry Date          | 2025.01.17          | CAS No.           | 616-91-1    |
| QUANTITY             | 1000kg              | Formula           | C5H9NO3S    |

| Items of Analysis           | Standard of Analysis                            | Test Result |
|-----------------------------|---|-------------|
| Appearance                  | White crystals or crystalline powder            | conforms    |
| Identification (IR)         | concordant with the reference spectrum          | conforms    |
| assay                       | 98.5-101.0%                                     | 99.6%       |
| Specific rotation[ ]D20     | +21.3°~+27.0°                                   | +24.1°      |
| State of solution           | ≥98.0%  | 98.8%       |
| PH                          | 2.0~2.8   | 2.1         |
| Chloride(Cl)                | ≤0.04%  | <0.04%      |
| Sulfate(SO4)                | ≤0.02%  | <0.02%      |
| Ammonium(NH4)               | ≤0.02%  | <0.02%      |
| Other amino acids           | Chromatogrphically Not detectable               | Qualified   |
| Loss on drying              | ≤0.5%   | 0.32%       |
| Organic volatile impurities | ≤0.1%   | 0.11%       |
| Iron(Fe)                    | ≤0.001%   | <0.001%     |
| Heavy metals(Pb)            | ≤0.001%   | <0.001%     |
| Arsenic(As)                 | ≤0.0001%  | <0.0001%    |
| Conclusion:                 | Passed test according to the Standard of AJI92. |             |

  
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