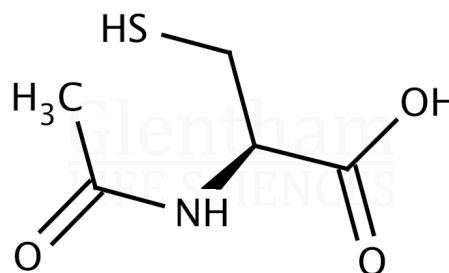


## Certificate of Analysis

Product Name N-Acetyl-L-cysteine  
Glentham Code GM8803  
CAS Number 616-91-1  
EINECS 210-498-3  
MDL-Nummer MFCD00004880  
PubChem SID 310265502  
Batch Number 652GOQ

Molecular Weight 163.20  
Molecular Formula  $C_5H_9NO_3S$   
Storage Temp. +20°C



| Property                       | Specification                                   | Batch 652GOQ              |
|--------------------------------|-------------------------------------------------|---------------------------|
| Physical Description           | White crystalline powder or colourless crystals | Yellow crystalline powder |
| Identification                 | According to EP                                 | Entspricht                |
| Solubility (5% in water)       | Clear, colourless solution                      | Entspricht                |
| Specific Optical Rotation      | +21.0 - +27.0 °                                 | +22.9°                    |
| pH                             | 2.0 - 2.8                                       | 2.2                       |
| Related Substances             | Any Specified Impurity: ≤ 0.5%                  | ≤ 0.1%                    |
|                                | Total Impurities: ≤ 0.5%                        | 0.1%                      |
| Heavy Metals                   | ≤ 10ppm                                         | Entspricht                |
| Zinc (Zn)                      | ≤ 10ppm                                         | Entspricht                |
| Loss on Drying                 | ≤ 1.0%                                          | ≤ 0.1%                    |
| Sulphated Ash                  | ≤ 0.2%                                          | ≤ 0.1%                    |
| Lead (Pb)                      | ≤ 3ppm                                          | Entspricht                |
| Arsenic (As)                   | ≤ 1ppm                                          | Entspricht                |
| Mercury (Hg)                   | ≤ 0.1ppm                                        | Entspricht                |
| Cadmium (Cd)                   | ≤ 1ppm                                          | Entspricht                |
| Assay                          | 99.0 - 101.0 % (dried basis)                    | 100.3%                    |
| Pharmacopoeia Specification(s) | EP                                              | Entspricht                |

Specification Version v1.1  
Manufacture Date 2022-06-23  
Re-Test Date 2033-04-08

Glentham Life Sciences confirm that the above referenced product conformed to the information displayed in this document on the quality release date. Please check [www.glentham.com](http://www.glentham.com) or contact us using the details above for the current version of this document.

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