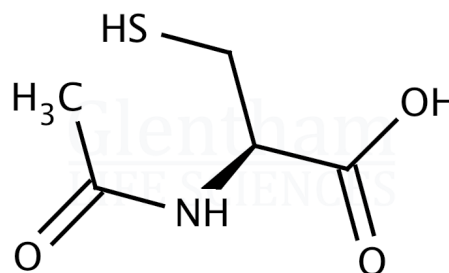


## Certificate of Analysis

Product Name N-Acetyl-L-cysteine  
Glentham Code GM8803  
CAS Number 616-91-1  
EINECS 210-498-3  
MDL Number 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	Conforms
Solubility (5% in water)	Clear, colourless solution	Conforms
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	Conforms
Zinc (Zn)	≤ 10ppm	Conforms
Loss on Drying	≤ 1.0%	≤ 0.1%
Sulphated Ash	≤ 0.2%	≤ 0.1%
Lead (Pb)	≤ 3ppm	Conforms
Arsenic (As)	≤ 1ppm	Conforms
Mercury (Hg)	≤ 0.1ppm	Conforms
Cadmium (Cd)	≤ 1ppm	Conforms
Assay	99.0 - 101.0 % (dried basis)	100.3%
Pharmacopoeia Specification(s)	EP	Conforms

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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