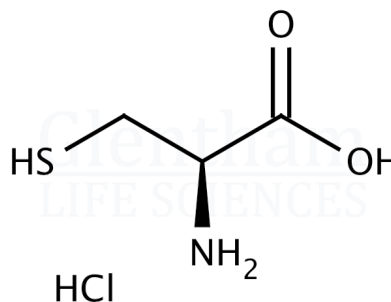


Certificate of Analysis

Product Name	L-Cysteine hydrochloride, anhydrous, 99%
Glentham Code	GM9033
CAS Number	52-89-1
EINECS	200-157-7
MDL Number	MFCD00064553
Additional CAS	345909-32-2 ($\cdot xH_2O$)
Batch Number	095IAF
Molecular Weight	157.62
Molecular Formula	$C_3H_7NO_2S \cdot HCl$
Storage Temp.	+20°C



Property	Specification	Batch 095IAF
Physical Description	White crystalline powder or colourless crystals	White crystalline powder
Solubility (10% in water)	Clear, colourless solution	Conforms
pH (10% in water)	1.5 - 2.5	1.68
Specific Optical Rotation ($[\alpha]_{20/D}$)	+6.0 - +6.8 ° (c=5, 5M HCl)	+6.0°
Heavy Metals	≤ 10ppm	≤ 10ppm
Assay (Titration)	99.0 - 101.0 % (dried basis)	100.5%

Specification Version	v1.0
Manufacture Date	2019-03-13
Re-Test Date	2027-06-22

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 or contact us using the details above for the current version of this document.

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