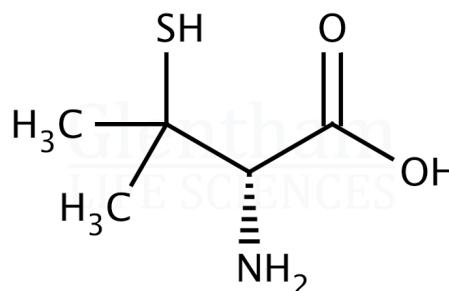


## Certificate of Analysis

Product Name	D-Penicillamine, Ph. Eur. grade
Glentham Code	GA1554
CAS Number	52-67-5
EINECS	200-148-8
MDL Number	MFCD00064302
Batch Number	713ZCD
Molecular Weight	149.21
Molecular Formula	$C_5H_{11}NO_2S$
Storage Temp.	+4°C



Property	Specification	Batch 713ZCD
Physical Description	White or almost white crystalline powder	Conforms
Identification	To pass tests A, B, C, D	Conforms
Solubility (10% in water)	Clear solution	Conforms
Appearance of Solution	To pass test	Conforms
pH (1% in water)	4.5 - 5.5	5.0
Specific Optical Rotation	-61.0 - -65.0 ° (c=5, 1M NaOH)	-62.1 °
UV Absorbing Substances	≤ 0.07	0.001
Impurity A	≤ 1.0%	Conforms
Impurity B	≤ 0.1ppm	Conforms
Mercury (Hg)	≤ 10ppm	Conforms
Loss on Drying	≤ 0.5%	0.0%
Sulphated Ash	≤ 0.1%	0.0%
Any Unspecified Impurity	≤ 0.1%	0.10%
Total Impurities	≤ 1.5%	0.1%
Assay	98.0 - 101.0 % (dried substance)	100.3%
Pharmacopoeia Specification(s)	Ph. Eur.	Conforms to Ph. Eur.

Specification Version	v1.0
Manufacture Date	2018-06-27
Re-Test Date	2023-11-05

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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