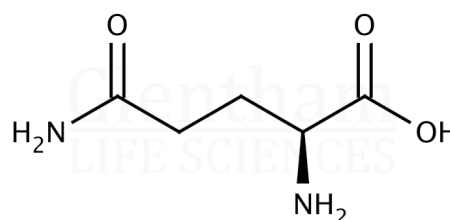


Certificate of Analysis

Product Name	L-Glutamine, GlenCell™, suitable for cell culture
Glentham Code	GM8887
CAS Number	56-85-9
EINECS	200-292-1
MDL-Nummer	MFCD00008044
Batch Number	712DNB

Molecular Weight	146.15
Molecular Formula	$C_5H_{10}N_2O_3$
Storage Temp.	+20°C



Property	Specification	Batch 712DNB
Physical Description	White crystals or crystalline powder	White crystalline powder
Identification	To pass test	Entspricht
Solubility	Freely soluble in formic acid, soluble in water, practically insoluble in ethanol	Entspricht
Solubility (2.5% in water)	Clear, colourless solution	Entspricht
Transmittance	≥ 98.0%	99.2%
Specific Optical Rotation	+6.3 - +7.3 °	+6.3°
pH	4.5 - 6.0	5.4
Iron (Fe)	≤ 10ppm	Entspricht
Heavy Metals (as Pb)	≤ 5ppm	Entspricht
Arsenic (As2O3)	≤ 1ppm	≤ 0.1ppm
Related Substances	≤ 0.5%	Entspricht
Loss on Drying	≤ 0.2%	0.03%
Sulphated Ash	≤ 0.1%	0.02%
Chloride (Cl)	≤ 0.02%	Entspricht
Sulphate (SO4)	≤ 0.02%	Entspricht
Endotoxins	≤ 50EU/g	≤ 40Eu/g
Assay	99.0 - 101.0 % (dried basis)	100.0%
Origin	Non-animal origin	Entspricht
Pharmacopoeia Specification(s)	EP, USP	Entspricht

Specification Version	v1.0
Manufacture Date	2021-10-29
Re-Test Date	2029-01-14

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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