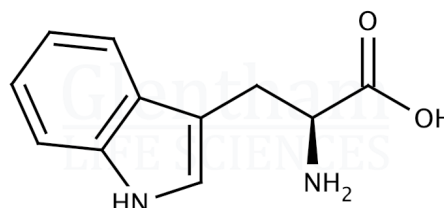


Certificate of Analysis

Product Name	L-Tryptophan
Glentham Code	GM0674
CAS Number	73-22-3
EINECS	200-795-6
MDL Number	MFCD00064340
PubChem SID	310281481
Batch Number	982EZF
Molecular Weight	204.23
Molecular Formula	C ₁₁ H ₁₂ N ₂ O ₂
Storage Temp.	+20°C



Property	Specification	Batch 982EZF
Physical Description	White to off-white powder	White powder
Identification (IR)	To conform to standard	Conforms
pH (1% in water)	5.5 - 7.0	5.96
Specific Optical Rotation ([α] _D ²⁵)	-29.4 - -32.8 ° (10mg/ml, water)	-30.9°
Loss on Drying	≤ 0.3% (105°C, 3h)	0.05%
Residue on Ignition	≤ 0.1%	0.05%
Lead (Pb)	≤ 3ppm	Conforms
Arsenic (As)	≤ 1ppm	Conforms
Cadmium (Cd)	≤ 1ppm	Conforms
Mercury (Hg)	≤ 0.1ppm	Conforms
Chloride	≤ 0.05%	≤ 0.02%
Sulphate	≤ 0.03%	≤ 0.03%
Iron (Fe)	≤ 30ppm	≤ 30ppm
Heavy Metals	≤ 15ppm	Conforms
Organic Impurities	≤ 0.01% of total impurities prior to peak and ≤ 0.03% of total impurities after peak	Conforms
Related Compound A	To pass test	Conforms
Assay	98.5 - 101.5 % (dried basis)	99.23%
Pharmacopoeia Specification(s)	USP	Conforms

Specification Version	v1.2
Manufacture Date	2022-02-23
Re-Test Date	2030-07-05

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

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