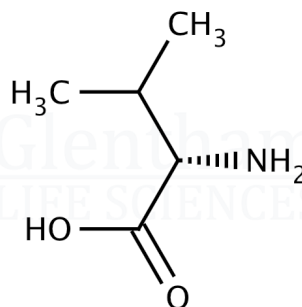


Certificate of Analysis

Product Name	L-Valine
Glenthams Code	GM6473
CAS Number	72-18-4
EINECS	200-773-6
MDL Number	MFCD00064220
PubChem SID	310281625
Batch Number	731WMK
Molecular Weight	117.15
Molecular Formula	C ₅ H ₁₁ NO ₂
Storage Temp.	+20°C



Property	Specification	Batch 731WMK
Physical Description	White crystals or crystalline powder	White crystalline powder
Assay	98.5 - 101.0 %	99.3%
Identification	IR	Conforms to standard
pH	5.5 - 7.0	5.8
Specific Optical Rotation	+26.6 - +28.8 °	+27.9 °
Residue on Ignition	≤ 0.1%	Conforms
Loss on Drying	≤ 0.5%	0.18%
Chloride (Cl)	≤ 500ppm	≤ 200ppm
Iron (Fe)	≤ 30ppm	≤ 10ppm
Sulphate (SO ₄)	≤ 300ppm	Conforms
Ammonium	≤ 200ppm	Conforms
Heavy Metals	≤ 15ppm	≤ 10ppm
Lead (Pb)	≤ 3ppm	Conforms
Arsenic (As)	≤ 1ppm	Conforms
Cadmium (Cd)	≤ 1ppm	Conforms
Mercury (Hg)	≤ 0.1ppm	Conforms
Pharmacopoeia Specification(s)	Conforms to USP	Conforms

Specification Version	v1.0
Manufacture Date	2021-10-09
Re-Test Date	2030-02-15

Glenthams Life Sciences confirm that the above referenced product conformed to the information displayed in this document on the quality release date. Please check www.glenthams.com or contact us using the details above for the current version of this document.

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