



JIANGSU KHONOR CHEMICALS CO.,LIMITED

CERTIFICATION OF ANALYSIS

NAME	L-Valine	QUANTITY	1000kg
MFG. DATE	Aug. 02, 2024	BATCH NO.	241202100
EXP. DATE	Aug. 01, 2026	Standard	USP43

Index		Specification	Test result
Description		White crystals or crystalline powder	White crystalline powder
Assay (dry basis)	%	98.5-101.5	99.4
Specific optical rotation $[\alpha]_D^{20}$		+26.6°~+28.8°	+27.8°
Loss on drying	≤%	0.30	0.05
Residue on ignition	≤%	0.1	0.03
Chloride (Cl)	≤%	0.05	< 0.05
Sulfate (SO ₄)	≤%	0.03	< 0.03
Iron(Fe)	≤%	0.003	< 0.003
pH value		5.0-7.0	6.0
Heavy metals(Pb)	≤%	0.0015	< 0.0015
Individual impurities	≤	0.5	Conforms
Total impurities	≤	2.0	Conforms

Analyst: Bing Liu

Approver: Kai Zhang