

### CERTIFICATE OF ANALYSIS

Product Name: L-Isoleucine  
 CAS NO.: 73-32-5  
 Batch No.: 17/MFM/1984  
 Molecular Weight: 131.18  
 Expiry Date: March 2023  
 Storage Temp: + 20°C

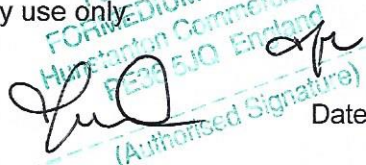
TESTS	SPECS	RESULTS
Assay (titration)	> 98.5% - 101.0% (dried basis)	99.6%
Appearance	White crystals, or crystalline powder	Conforms
pH (1% in water)	5.5 – 7.0	5.62
Specific optical rotation	+38.9° to +41.8°	+39.2°
Residue on ignition	<= 0.3%	0.16%
Loss on Drying	<= 0.3%	0.08%
Chloride (Cl)	<= 500ppm	Conforms
Ammonium (NH4)	<= 200ppm	Conforms
Iron (Fe)	<= 30ppm	Conforms
Lead (Pb)	<= 3ppm	Conforms
Sulphate (SO4)	<= 300ppm	Conforms
Heavy metals	<= 10ppm	Conforms
Cadmium (Cd)	<= 1ppm	Conforms
Mercury (Hg)	<= 0.1ppm	Conforms
Arsenic (As2O3)	<= 1ppm	Conforms
Pharmacopoeia specification(s)	USP	Conforms to USP

\* This material is supplied for laboratory use only

Supplier: Formedium Ltd

Approved by:

For and on behalf of  
 FORMEDIUM Ltd, Unit 1B  
 Hunstanton Commercial Park  
 PE30 6JQ, England  
 (Authorised Signature)



Date: 28 SEP 2017