

CERTIFICATE OF ANALYSIS

PRODUCT NAME: L-Glutamic acid
 CAS NO. 56-86-0
 BATCH NO. 19/MFM/2269
 EXPIRY DATE: June 2024
 MOLECULAR FORMULA: C5H9NO4
 MOLECULAR WEIGHT: 147.13
 STORAGE TEMP: + 20°C

TESTS	SPECS	RESULTS
Physical Description	White to off-white crystalline powder	Conforms
Assay	Min. 99%	99.5%
Specific optical rotation	+31.5 – +32.5°	+31.76°
Transmittance	>=98.0%	99.0%
Loss on drying	Max 0.1%	0.05%
Residue on ignition	<= 0.10%	0.07%
pH	3.0 – 3.5	3.1
Ammonium (NH4)	<= 0.02%	Conforms
Arsenic (As)	<= 1ppm	Conforms
Iron (Fe)	<= 10ppm	Conforms
Sulphate (SO4)	<= 0.02%	Conforms
Chloride (Cl)	<= 0.02%	Conforms
Lead (Pb)	<= 3 ppm	Conforms
Cadmium (Cd)	<= 3 ppm	Conforms
Mercury (Hg)	<= 0.1 ppm	Conforms
Pharmacopoeia Specification(s)	Conforms to USP AJ1	Conforms to USP25 / AJ197

* This material is supplied for laboratory use only.

Supplier: Formedium Ltd

Approved by:

Date: 11 FEB 2019