

BaseBulk

CERTIFICATE OF ANALYSIS

Product Name	L-Glutathione Reduced
Batch No	019-24010200
Manufacturing Date	Jan 02, 2024
Expiry Date	Jan 01, 2027
Specification	98.0%~101.0%
Shelf life	3 years when properly stored.

Physical & Chemical Tests

Test	Specification	Result	Standard Referenced
Appearance	White or white crystalline powder	Complies	Visual
Loss on drying	≤0.5%	0.10%	2g/105°C/5hrs
Residue on ignition	≤0.1%	0.09%	2g/800°C/5hrs
Bulk density	0.20–0.70 g/ml	0.30 g/ml	W/V
Tapped density	0.40–0.90 g/ml	0.65 g/ml	W/V
Particle size	≥90% pass 60 mesh	Complies	Sieve

Identification

Test	Specification	Result	Standard Referenced
Identification	Positive	Complies	Enterprise Standards
Clarity and color of solution	Clear and Colourless	Complies	Enterprise Standards
Identification IR	Similar with the reference spectrum	Complies	Enterprise Standards
Optical Rotation	-15.5 ~ -17.5	-16.5	Enterprise Standards

Heavy Metals

Test	Specification	Result	Standard Referenced
Heavy metals	≤10 ppm	Complies	Colorimetric method
Arsenic (As)	≤1 ppm	Complies	AFS
Lead (Pb)	≤2 ppm	Complies	AFS
Cadmium (Cd)	≤0.3 ppm	Complies	AFS
Mercury (Hg)	≤0.2 ppm	Complies	AFS

Additional Chemical Parameters

Test	Specification	Result	Standard Referenced
Ammonium	≤200 ppm	Complies	GC
Sulphates	≤300 ppm	Complies	GC
Chlorides	≤200 ppm	Complies	GC

Impurities & Assay

Test	Specification	Result	Standard Referenced
Total impurities	≤2.0%	0.66%	Enterprise Standards
GSSG	≤1.5%	0.42%	Enterprise Standards
L-Glutathione Reduced	98.0% ~ 102.0%	99.5%	Enterprise Standards

Microbiological Tests

Test	Specification	Result	Standard Referenced
Total Plate Count	≤1000 CFU/g	<10 CFU/g	GB 4789.2
Mould & Yeast	≤100 CFU/g	<10 CFU/g	GB 4789.15
Coliforms	≤0.92 MPN/g	Negative	GB 4789.3 MPN counting method
Salmonella	Negative	Negative	GB 4789.4
Staphylococcus Aureus	Negative	Negative	GB 4789.10