

## CERTIFICATE OF ANALYSIS

<b>Product Name</b>	L-Glutathione		
<b>CAS No.</b>	70-18-8		
<b>Batch Number</b>	20240428	<b>Manufacture Date</b>	20240428
<b>Report Date</b>	20240428	<b>Expiry Date</b>	20260427

Test Items	Specifications	Results	Test Methods
Appearance	White or almost white crystalline powder	White crystalline	Visual
Identification IR	Conforms to the Reference Spectrum	Conforms to the Reference Spectrum	USP41
Optical rotation	-15.5° to -17.5°	-16.15°	USP41
Appearance of solution	Freely soluble in water, very slightly soluble in ethanol and in methylene chloride	Complied	Visual
Chlorides	Not more than 200 ppm	Complied	USP41
Sulfates	Not more than 300 ppm	Complied	USP41
Ammonium	Not more than 200 ppm	Complied	USP41
Iron	Not more than 10 ppm	Complied	USP41
Arsenic	Not more than 1 ppm	Complied	USP41
Heavy metals	Not more than 10 ppm	Complied	USP41
Cadmium (Cd)	Not more than 1 ppm	Complied	USP41
Lead (Pb)	Not more than 3 ppm	Complied	USP41
Mercury (Hg)	Not more than 1 ppm	Complied	USP41
Sulfated ash	Not more than 0.1%	0.062%	USP41
Loss on drying	Not more than 0.5%	0.418%	USP41
Bulk density	Not less than 0.2g/ml	0.5578g/ml	USP41
Tapped density	Not less than 0.4g/ml	0.7822g/ml	USP41
Total plate count	< 1000cfu/g	Complied	USP41
Yeast and mold count	< 100cfu/g	Complied	USP41
Salmonella	Negative	Complied	USP41
Related Substances			
Total	Maximum 2.0%	1.66%	USP41
GSSG	Maximum 1.5%	0.53%	
Assay	98.0% to 101.0%	98.06%	

**Storage:** Store in tight, light-resistant containers, avoid exposure to direct sunlight, moisture and excessive heat.

**Shelf Life:** 24 months if store under the conditions above and stay in original packaging.

