

CERTIFICATE OF ANALYSIS

Name: **L-Citrulline DL-Malate 2:1**

Quantity: **900kg**

Batch No.: **CP1821092401**

Production Date: **24th September, 2021**

Analysis Date: **26th September, 2021**

Re-Test Date: **23rd September, 2023**

Country of Origin: **China**

Item	Specification Results	Test Method
Description	White crystalline powder White crystalline powder	Organoleptic
Identification	In accordance with standard retention time Conforms	HPLC
Optical Rotation	+16.5° - +18.5° +17.5°	ChP2015
Solubility	Clear Clear	ChP2015
Loss on drying	NMT 0.3% 0.20%	ChP2015
Residue on ignition	NMT 0.1% 0.07%	ChP2015
Chloride	NMT 0.02% LT 0.05%	ChP2015
Sulfate	NMT 0.02% LT 0.02%	ChP2015
Ammonium	NMT 0.02% LT 0.02%	ChP2015
Heavy Metals	NMT 15ppm LT 15ppm	ChP2015
Lead	NMT 0.1ppm LT 0.1ppm	GB 5009.12-2017 I
Total mercury	NMT 0.1ppm LT 0.1ppm	GB 5009.12-2014 I
Cadmium	NMT 1ppm LT 1ppm	GB 5009.15-2014
Arsenic	NMT 1ppm LT 1ppm	ChP2015
Iron	NMT 10ppm LT 10ppm	ChP2015
Assay	NLT 98.5% 99.79%	HPLC
L-Citrulline	62.5% - 74.2% 65.11%	HPLC
DL-Malate	25.8% - 37.5% 34.68%	HPLC
Total plate count	NMT 1000 cfu/g LT 1000 cfu/g	ChP2015
Yeast and Mould	NMT 100 cfu/g LT 100 cfu/g	ChP2015
Coliforms	NMT 100 cfu/g LT 100 cfu/g	ChP2015

E.coli	Absence/g Conforms	ChP2015
Salmonella	Absence/g Conforms	ChP2015

Staph. Aureus	Absence/g Conforms	ChP2015
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Conclusion: Conforms to enterprise standard.