

CERTIFICATE OF ANALYSIS

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

Quantity: **900kg**

Batch No.: **210325**

Production Date: **2021.03.25**

Analysis Date: **2021.03.25**

Re-Test Date: **2023.03.24**

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°	+16.8°	ChP2015
Solubility	Clear	Clear	ChP2015
Loss on drying	NMT 0.3%	0.11%	ChP2015
Residue on ignition	NMT 0.1%	0.01%	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%	99.52%	HPLC
L-Citrulline	62.5% - 74.2%	64.12%	HPLC
DL-Malate	25.8% - 37.5%	35.4%	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

Conclusion: Conforms to enterprise standard.