



青 岛 润 昌 化 工 有 限 公 司
QINGDAO SAMIN CHEMICAL CO.,LTD.

SPECIFICATION

Product Name	L-Citrulline DL Malate 2:1
CAS №	70796-17-7
Molecular Formular	$C_{10}H_{19}N_3O_8$
Specification Version	In house
Shelf Life	24months
Package	25kg / drum

ITEM	SPECIFICATION
Appearance	White powder
Identification	In accordance with standard retention time
Optical rotation	$+16.5 \pm 18.5^\circ$
Assay	$\geq 98.5\%$
	L-Citrulline 62.5~74.2%
	DL-Malate 25.8~37.5%
Solubility	Clear
Loss on drying	$\leq 0.30\%$
Residue on ignition	$\leq 0.10\%$
Chloride	$\leq 0.02\%$
Sulfate	$\leq 0.02\%$
Ammonium	$\leq 0.02\%$
Heavy metals	$\leq 10\text{ppm}$
Lead	$\leq 1\text{ppm}$
Total mercury	$\leq 0.1\text{ppm}$
Cadmium	$\leq 1\text{ppm}$
Arsenic	$\leq 1\text{ppm}$
Iron	$\leq 10\text{ppm}$
Mesh size	100% through 60mesh

Microbiology Control

Total plate count	$\leq 1000\text{cfu/g}$
Yeasts & Molds	$\leq 100\text{cfu/g}$
E.coli	Absence
Salmonella (cfu/g)	Absence
Staphylococcus aureus	Absence
Black foreign matter	Absence

Storage: Store in cool and dry place, in a well-close container, keep away from strong light and heat.

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