

TECHNICAL DATA SHEET

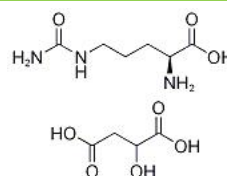
L-Citrulline DL-Malate 1:1

Chemical Properties

Chemical Formula: $C_{10}H_{19}N_3O_8$

Molecular Weight: 309.27

CAS: 54940-97-5



Description

L-Citrulline DL-Malate 1:1 is an essential component of the urea cycle, helps detoxify ammonia, and metabolizes to form Arginine, which is very important for nitric oxide production for endothelial and cardiovascular support.

Solubility

It is soluble in water.

Specification

Item	Specification	Test Method
Appearance	White powder	Organoleptic
Identification	In accordance with standard retention time	HPLC
Assay	Min 98.5%	HPLC
L-Citrulline	55.5%-57.5%	HPLC
DL-Malate	42.5%-44.5%	HPLC
Specific rotation $[\alpha]_{D20}$	+13.0°~+15.0°	CHP2015
Loss on drying	Max 0.30%	CHP2015
Residue on ignition	Max 0.10%	CHP2015
Sulfate	Max 0.02%	CHP2015
Chloride	Max 0.05%	CHP2015
Iron	Max 10ppm	CHP2015
Heavy metals	Max 10ppm	CHP2015
Lead(Pb)	Max 3ppm	GB/T5009.15-2003 I
Arsenic(As)	Max 1ppm	CHP2015
Cadmium(Cd)	Max 1ppm	GB/T5009.15-2003 I
Mercury(Hg)	Max 0.1ppm	GB/T5009.15-2003 I
Total plate count	Max 1000 CFU/g	CHP2015
Total yeast & mold	Max 100 CFU/g	CHP2015
Coliforms	Max 100 CFU/g	CHP2015
<i>E. Coli</i>	Negative	CHP2015
<i>Salmonella</i>	Negative	CHP2015
<i>Staphylococcus Aureus</i>	Negative	CHP2015

Ingredients

Pure L-Citrulline DL-Malate 1:1.

Labeling

In the United States and the European Union: L-Citrulline DL-Malate

Safety

This product is safe for the intended use. Avoid ingestion, inhalation of dust or direct contact by applying suitable protective measures and personal hygiene. See Material Safety Data Sheet for full safety information.

Handling recommendations

Wash thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

Packaging, Storage & Shelf Life

Package	25kg/drum; or according to customers' requirements.
Storage	Store in cool and dry place. It should be protected from heat, light, oxygen and moisture. Keep the container tightly closed. Once opened, use out quickly.
Shelf Life	2 years if sealed and stored properly.