

SPECIFICATION

Product Name: L- Arginine USP Grade
Chemical Formula: $C_6H_{14}N_4O_2$
CAS Number: 74-79-3
Molecular Weight: 174.20 g/mol
Appearance: White or almost white crystalline powder
Odor: Odorless

Chemical Composition

Parameter	Unit	Typical Value	Specification (Min./Max.)
Identification	-	Conform	As per USP43
Specific rotation	°	+27.2°	+26.3° to +27.7°
Loss on drying	%	0.2%	NMT 0.5%
Residue on ignition	%	0.03%	NMT 0.3%
Chloride	%	<0.05%	NMT 0.05%
Sulfate	%	<0.03%	NMT 0.03%
Iron	%	<0.003%	NMT 0.003%
Heavy metals	%	<0.0015%	NMT 0.0015%
Total impurities	%	<2%	NMT 2%
Individual impurities	%	<0.5%	NMT 0.5%
Assay	%	99.7%	98.5% to 101.5%
Total plate count	cfu/g	<1000cfu/g	≤1000cfu/g

Yeast & mold	cfu/g	<100cfu/g	≤100cfu/g
E. Coli	Negative/g	Confirm	Negative/g
Salmonella	Negative/g	Confirm	Negative/g
Staphylococcus Aureus	Negative/g	Confirm	Negative/10g

Physical Properties

- Solubility: Soluble in water. Insoluble in ethanol. Insoluble in acetone. Insoluble in ether.

Shelf Life & Storage

- Shelf Life: 5 years from date of manufacture under recommended storage.
 - Storage Conditions: Store in a cool, dry place at 15–30°C. Protect from moisture, excessive heat, and direct sunlight. Keep the container tightly closed in the original, properly labeled container and store in a well-ventilated area to prevent moisture absorption and maintain product quality and stability. Avoid contact with strong oxidizing agents and other incompatible materials.

Applications

- Use: Widely used as a source of L-arginine, a conditionally essential amino acid, in pharmaceutical, nutraceutical, and clinical nutrition formulations. It supports nitric oxide production, healthy blood circulation, cardiovascular health, protein synthesis, immune function, wound healing, and muscle metabolism. It is commonly incorporated into tablets, capsules, powders, oral solutions, sports nutrition products, dietary supplements, and medical nutrition formulations to support exercise performance, recovery, and overall health.
 - Dosage: Depends on the intended use, patient age, clinical condition, and product formulation. It should be used according to product specifications or as directed by a qualified healthcare professional.

Packaging

- Standard Packing: 25 Kgs Fiber Drum or as per customer requirement.
 - Labeling: Product name, batch number, net weight, manufacture date, expiry date, and manufacturer details.

* Specifications are based on the manufacturer's provided specifications.