

SPECIFICATION

Product Name: L- Arginine Hydrochloride
Chemical Formula: $C_6H_{14}N_4O_2 \cdot HCl$
CAS Number: 1119-34-2
Molecular Weight: 210.66 g/mol
Appearance: White or almost white crystalline powder
Odor: Odorless

Chemical Composition

Parameter	Unit	Typical Value	Specification (Min./Max.)
Infrared abs spectrophotometry	-	Passes test	Confirm to USP, EP, STD
Ninhydrine test	-	Passes test	Blue – purple colour
Chloride test	-	Passes test	Passes test
Assay	%	100.14	99.0% - 101.0%
State of solution (transmittance)	%	99.54	NLT 98.0%
pH (10% solution)	-	5.64	4.7 – 6.2
Bulk density	g/ml	0.68	--g/ml
Specific rotation	°	+22.41	20°C: +22.1° - +22.9°
Loss in drying	%	0.15	NMT 0.2%
Residue of ignition	%	0.094	NMT 0.1%
Chloride	%	16.66	16.6% - 17.0%
Sulfate	%	Passes test	NMT 0.02%

Ammonium	%	Passes test	NMT 0.02%
Heavy metals	PPM	Passes test	NMT 5.0 PPM
Lead	PPM	Passes test	NMT 0.5 PPM
Arsenic	PPM	Passes test	NMT 1.0 PPM
Cadmium	PPM	Passes test	NMT 0.5 PPM
Mercury	PPM	Passes test	NMT 0.1 PPM
Iron	PPM	Passes test	NMT 10.0 PPM
Individual impurities	%	Passes test	NMT 0.2%
Total impurities	%	Passes test	NMT 0.5%
Organic volatile	-	Passes test	Meets the requirement
Microbiological			
Total plate count	cfu/g	10.00	NMT 100 cfu/g
Yeast & mold	Negative/g	Negative	Negative/g
Coliform	Negative/g	Negative	Negative/g
E. coli	Negative/g	Negative	Negative/g
Bacillus cereus	Negative/g	Negative	Negative/g
Salmonella spp.	Negative/g	Negative	Negative/25g
Staphylococcus aureus	Negative/g	Negative	Negative/g
Clostridium perfringens	Negative/g	Negative	Negative/g
Clostridium botulinum	Negative/g	Negative	Negative/g

Enterobacteriaceae	Negative/g	Negative	Negative/g
Listeria monocytogenes	Negative/g	Negative	Negative/25g

Physical Properties

- Solubility: Soluble in water. Soluble 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 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 flow, cardiovascular function, protein synthesis, wound healing, immune function, and muscle metabolism. It is commonly incorporated into tablets, capsules, powders, oral liquids, sports nutrition products, 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.

Packaging

- Standard Packing: 20 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.