

L-Arginine HF Product Specification

L-Arginine, when dried, contains not less than 99.0 percent and not more than 101.0 percent of L-Arginine (C₆H₁₄N₄O₂).

Description: White crystals or crystalline powder and slightly specific smell.

Identification: Compare the infrared absorption spectrum of the sample with that of the standard by ATR method.

Specifications

Item	Limit	Test
Specific rotation $[\alpha]_D^{20}$	+26.9 to +27.9°	AJI TEST 1 [Dried sample, C=8, 6mol/L HCl]
State of solution (Transmittance)	Clear and colorless Not less than 98.0%	AJI TEST 2 [1.0g in 10mL of H ₂ O, spectrophotometer, 430nm, 10mm cell thickness]
Chloride (Cl)	Not more than 0.020%	AJI TEST 3 [0.5g,A-1, ref: 0.28mL of 0.01mol/L HCl]
Ammonium (NH ₄)	Not more than 0.02%	AJI TEST 4 [A-1]
Sulfate (SO ₄)	Not more than 0.020%	AJI TEST 5 [0.85g, (1), ref: 0.35mL of 0.005mol/L H ₂ SO ₄]
Iron (Fe)	Not more than 10ppm	AJI TEST 6 [3.0g, C-1]
Heavy metals (Pb)	Not more than 10ppm	AJI TEST 7 [1.0g, weakly acidic, (1), ref 1.0mL of Pb Std. (0.01mg/mL)]
Arsenic (As ₂ O ₃)	Not more than 1ppm	AJI TEST 8 [2.0g, B-1, ref: 2.0mL of As ₂ O ₃ Std]
Related substances	Each OAA NMT 0.4%	PR-0904 (LA)
Loss on drying	Not more than 0.50%	AJI TEST 11 [1g, at 105°C for 3 hours]
Residue on ignition (Sulfated)	Not more than 0.10%	AJI TEST 13 [1g, at 550 to 650°C for 3 hours]
Assay	99.0 to 101.0%	AJI TEST 14 [Dried sample, 80mg, (1), 3mL of formic acid, 50mL of acetic acid (100), 0.1mol/L HClO ₄ 1mL=8.710mg C ₆ H ₁₄ N ₄ O ₂]
pH	10.5 to 12.0	AJI TEST 33 [1.0g in 20mL of H ₂ O]