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L-Arginine (C grade)		
Issued Date: Jun. 13, 2012		

L-Arginine (C grade)¹

C₆H₁₄N₄O₂: 174.20

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.

Identification

Compare the infrared absorption spectrum of the sample with that of the standard by potassium bromide disc method.

Specifications

Item	Limit	Test
Specific rotation [α] _D ²⁰	+26.9 to +27.9°	AJI TEST 1 [Dried sample, C=8, 6mol/L HCl] ²
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 [0.75g, B-1, ref: 0.75mL of Iron Std. (0.01mg/mL)]
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, (1), ref: 2.0mL of As ₂ O ₃ Std.]
Related substances	Conforms	AJI TEST 9 [Test sample: 50μg, S-6-a, control; L-Arg 0.25μg]
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]

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Specifications (cont'd)

Item	Limit	Test
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] ³

¹ For The Japanese Standards of Quasi-Drug Ingredients(JSQI)

² Temperature coefficient of $[\alpha]_D^{25}$: -0.04°

³ Care should be taken during measurement against atmospheric carbon dioxide.

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