

Amino Acids Specifications / Monographs		page	1 / 2
L-Cystine			
Issued Date: Aug. 9, 2017			

L-Cystine¹

C₆H₁₂N₂O₄S₂: 240.30

L-Cystine, when dried, contains not less than 98.5 percent and not more than 101.0 percent of L-Cystine (C₆H₁₂N₂O₄S₂).

Description

White crystals or crystalline powder.

Practically insoluble in water and in ethanol (99.5).

Dissolves in 1mol/L hydrochloric acid.

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	-218 to -224°	AJI TEST 1 [Dried sample, C=2, 1mol/L HCl]
State of solution (Transmittance)	Clear and colorless Not less than 98.0%	AJI TEST 2 [1.0g in 10mL of 2mol/L HCl, spectrophotometer, 430nm, 10mm cell thickness]
Chloride (Cl)	Not more than 0.020%	AJI TEST 3 [0.5g, A-3, ref: 0.28mL of 0.01mol/L HCl]
Ammonium (NH ₄)	Not more than 0.02%	AJI TEST 4 [D-1]
Sulfate (SO ₄)	Not more than 0.020%	AJI TEST 5 [0.85g, (2), ref: 0.35mL of 0.005mol/L H ₂ SO ₄]
Iron (Fe)	Not more than 10ppm	AJI TEST 6 [0.75g, B-2, ref: 0.75mL of Iron Std. (0.01mg/mL)]
Lead (Pb)	Not more than 5ppm	[FCC]
Heavy metals (Pb)	Not more than 10ppm	AJI TEST 7 [1.0g, (4), ref: 1.0mL of Pb Std. (0.01mg/mL)]
Arsenic (As ₂ O ₃)	Not more than 1ppm	AJI TEST 8 [2.0g, (2), ref: 2.0mL of As ₂ O ₃ Std.]
Related substances	Any unspecified impurity Not more than 0.20% Total impurities Not more than 0.50%	AJI TEST 26 ²
Loss on drying	Not more than 0.20%	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°C to 650°C for 3 hours]
Assay	98.5 to 101.0%	AJI TEST 15 [Dried sample, 260mg, B, SeO ₂ 0.2g, digestion for 4 hours, 0.05mol/L H ₂ SO ₄ 1mL=12.02mg C ₆ H ₁₂ N ₂ O ₄ S ₂]

Amino Acids Specifications / Monographs		page	2 / 2
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Specifications (cont'd)

Item	Limit	Test
pH	5.0 to 6.5	AJI TEST 33 [0.02g in 50mL (saturated aqueous solution)]
Endotoxin	Less than 6.0EU/g	AJI TEST 34 [C=1, ultrafiltration, kinetic-turbidimetric technique]

¹ This product, in terms of actual quality, conforms to EP, FCC.

² Disregard limit: 0.05%

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