L–Cysteine Hydrochloride Anhydrous

L–Cys·HCl

CAS NO. 52-89-1

$C_3H_7NO_2S \cdot HCl$: 157.62
Nitrogen : 8.89%

L-Cysteine Hydrochloride Anhydrous, when dried, contains not less than 98.0 percent and not more than 102.0 percent of L-Cysteine Hydrochloride Anhydrous($C_3H_7NO_2S \cdot HCl$).

Description: White crystals or crystalline powder; strongly acid taste.
Solubility (H_2O, g/100g): about 102 (20℃)

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

Specifications:

Item	Limit	Test Method
Specific rotation $[\alpha]^{20}_D$	+5.6 to +8.9°	NP TEST 1 [dried sample, C=8, 1mol/L HCl]
State of solution (Transmittance)	clear and colorless not less than 98.0%	NP TEST 2 [0.5g in 10mL of H_2O, spectrophoto-meter,430nm, 10mm cell thickness]
Heavy metals (Pb)	not more than 10ppm	NP TEST 7 [1.0g, (4), ref: 1.0mL of Pb Std. (0.01mg/mL)]
Arsenic (As_2O_3)	not more than 1ppm	NP TEST8 [2.0g, (1), ref: 2.0mL of As_2O_3 Std.]
Related substances	conforms	NP TEST 9 [test sample: 50μg, B-1-a, Control; L-Cys·HCl 0.25μg]*1
Loss on drying	not more than 1.00%	NP TEST 11 [1g, in vacuum, P_2O_5, at room temperature for 20 hours]
Residue on ignition (sulfated)	not more than 0.10%	NP TEST 13 [1g, at 550℃ to 650℃ for 3 hours]
Assay	98.0 to 102.0%	NP TEST 16 [dried sample, 250mg, 0.05mol/L I_2 1mL = 15.76mg $C_3H_7NO_2S \cdot HCl$]
pH	1.5 to 2.0	NP TEST 33 [1.0g in 100mL of H_2O]

＊1 : Test Solution: Dissolve 100mg of the sample in N-ethylmaleimide solution (1→50) to make 10mL and stand for 30 minutes.
Standard Solution: Dilute 2mL of Test Solution with water to 100mL. Dilute 5mL of this solution with water to 20mL.
Proceed as directed for procedure under AJI TEST9 (Thin-layer chromatography).