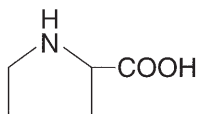


L-PROLINE

CAS NO. 147-85-3

Specification meets or exceeds the current USP EP and FCC.

MOLECULAR STRUCTURE AND FORMULA



$C_5H_9NO_2$: 115.13
N : 12.17%

DESCRIPTION

White crystals or crystalline powder
Odorless or slightly characteristic odor
Slightly sweet taste

IDENTIFICATION

Compare the infrared absorption spectrum of sample (dry, 1-2 mg) with that of the standard by diffuse reflection method.

SPECIFICATION AND PROCEDURE

State of solution (Transmittance)	Not Less Than 98.0%	Sec.-1 10%, H ₂ O
pH	5.9 ~ 6.9	Sec.-26, 10%
Specific rotation $[\alpha]_D^{20}$ $[\alpha]_D^{25}$	-84.5 ~ -86.0° -84.3 ~ -86.3°	Sec.-2, dry, 4%, H ₂ O
Ammonium (NH ₄)	Not More Than 0.020%	Sec.-3-(3), 0.5 g
Chloride (Cl)	Not More Than 0.020%	Sec.-4-(1), 0.5 g 0.24 ml of 0.01 mol/l HCl
Sulfate (SO ₄)	Not More Than 0.020%	Sec.-5, 0.6 g 0.25 ml of 0.005 mol/l H ₂ SO ₄
Iron (Fe)	Not More Than 10 ppm	Sec.-6-(2), 1.0 g Incineration 1.0 ml of Standard solution
Heavy metals (Pb)**	Not More Than 10 ppm	Sec.-7-(1), 2.0 g 2.0 ml of Standard solution
Arsenic (As ₂ O ₃)	Not More Than 1 ppm	Sec.-8-(1), 2.0 g 2.0 ml of Standard solution
Loss on drying	Not More Than 0.25%	Sec.-9-(1) 105°C, 3hr
Residue on ignition	Not More Than 0.10%	Sec.-10, 2 g
Foreign amino acids	Not Detected (TLC, 30 µg)	Sec.-13, Solvent L Nin A
Endotoxin*	Less Than 6.0 EU/g	Sec.-34-(2), 1.0 g/100 ml
Assay (dry basis)	99.0 ~ 101.0%	Sec.-15-(1), dry → 0.12 g 0.1 mol/l HClO ₄ 1 ml = 11.513 mg C ₅ H ₉ NO ₂

* The endotoxin-certified grade will be supplied on request.

** FCC grade (Lead : Not More Than 5 mg/kg) will be supplied on request.

STORAGE

Controlled room temperature in tight container

This product meets requirements of residual solvents listed in the current JP, USP and EP.