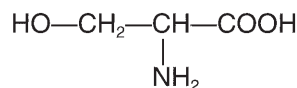


L-SERINE

CAS NO. 56-45-1

Specification meets or exceeds the current JP USP EP and FCC.

MOLECULAR STRUCTURE AND FORMULA



$\text{C}_3\text{H}_7\text{NO}_3$: 105.09
N : 13.33%

DESCRIPTION

White crystals or crystalline powder
Odorless
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 5%, H ₂ O
pH	5.2 ~ 6.2	Sec.-26, 10%
Specific rotation $[\alpha]_{\text{D}}^{20}$ $[\alpha]_{\text{D}}^{25}$	+14.4 ~ +15.5° +14.0 ~ +15.6°	Sec.-2, dry, 10%, 2 mol/l HCl
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 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 0.20%	Sec.-9-(1) 105°C, 3hr
Residue on ignition	Not More Than 0.10%	Sec.-10, 2 g
Related substances	Not More Than 0.2%	Sec.-43, 0.20 g 0.02 mol/l HCl
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 → 0.11 g 0.1 mol/l HClO ₄ 1 ml = 10.509 mg C ₃ H ₇ NO ₃

* 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.