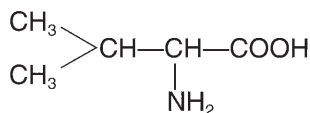


# L-VALINE

CAS NO. 72-18-4

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

## MOLECULAR STRUCTURE AND FORMULA



$\text{C}_5\text{H}_{11}\text{NO}_2$  : 117.15  
N : 11.96%

## DESCRIPTION

White crystals or crystalline powder  
Odorless  
Slightly characteristic taste

## IDENTIFICATION

Compare the infrared absorption spectrum of sample with that of the standard by ATR method.

## SPECIFICATION AND PROCEDURE

State of solution (Transmittance)	Not Less Than 98.0%	Sec.-1 2.5%, H <sub>2</sub> O
pH	5.5 ~ 6.5	Sec.-26, 2.5%
Specific rotation $[\alpha]_D^{20}$ $[\alpha]_D^{25}$	+27.6 ~ +29.0° +26.6 ~ +28.8°	Sec.-2, dry, 8%, 6 mol/l HCl
Ammonium (NH <sub>4</sub> )	Not More Than 0.020%	Sec.-43, 0.20 g 0.02 mol/l HCl
Chloride (Cl)	Not More Than 0.020%	Sec.-4-(1), 0.5 g 0.24 ml of 0.01 mol/l HCl
Sulfate (SO <sub>4</sub> )	Not More Than 0.020%	Sec.-5, 0.6 g 0.25 ml of 0.005 mol/l H <sub>2</sub> SO <sub>4</sub>
Iron (Fe)	Not More Than 10 ppm	Sec.-33
Heavy metals (Pb)**	Not More Than 10 ppm	Sec.-7-(1), 1.0 g 1.0 ml of Standard solution
Arsenic (As <sub>2</sub> O <sub>3</sub> )	Not More Than 1 ppm	Sec.-8-(2), 1.0 g 1.0 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, 1 g
Related substances	Not More Than 0.5%	Sec.-43, 0.20 g 0.02 mol/l HCl
Endotoxin*	Less Than 6.0 EU/g	Sec.-34-(2), 5.0 g/100 ml
Assay (dry basis)	99.0 ~ 101.0%	Sec.-15-(1), dry → 0.12 g 0.1 mol/l HClO <sub>4</sub> 1 ml = 11.72 mg C <sub>5</sub> H <sub>11</sub> NO <sub>2</sub>

\* 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.