



L-VALINE

DESCRIPTION

L-valine is an essential amino acid obtained through fermentation. It has twice the physiological effects of D-valine. It may accelerate wound healing, treat liver failure and improve blood sugar levels and growth hormone levels. A deficiency can cause neurological disorders, development issues, weight loss and anemia. As a nutritional supplement it configures to common amino acid infusion and comprehensive amino acid preparation with other essential amino acids.

COMPOSITION

L-valine $\geq 97\%$; other main ingredients: L-isoleucine, L-alanine and L-leucine $\leq 2.5\%$ of total by HPLC.

SPECIFICATIONS

| | |
|-----------------------------|---|
| Description | White crystals or crystalline powder (through crystallization, not grinding), slightly bitter taste |
| Specific rotation | $+26.6^{\circ} \sim +28.8^{\circ}$ |
| Assay | $98.5\% \sim 101.5\%$ |
| pH | $5.5 \sim 7.0$ |
| Weight loss on drying | $\leq 0.30\%$ |
| Residue on ignition | $\leq 0.10\%$ |
| Chloride (Cl) | $\leq 0.05\%$ |
| Sulfate | $\leq 0.03\%$ |
| Iron (Fe) | ≤ 30 ppm |
| Arsenic (As) | ≤ 1.5 ppm |
| Heavy metals (Pb) | ≤ 15 ppm |
| Aerobic plate count | ≤ 1000 CFU/g |
| Yeast & molds | ≤ 100 CFU/g |
| Coliforms | Negative |
| E. coli | Negative |
| Organic volatile impurities | Conforms to USP24 |

DURATION OF GUARANTEE

36 Months from date of manufacture. Keep in original, unopened packaging and store in a cool, dry place away from light.

PHYSICAL AND CHEMICAL PROPERTIES*

Particle size

| | |
|---------------------|---------------|
| Density | 0.45-0.7 g/ml |
| Solubility in water | ≤ 80 g/L |

*These data which result from careful tests on representative samples, are provided for information purposes only and do not in any way constitute a guarantee.

PACKAGING

25 kilograms per drum.

STORAGE

Airtight container, protected from light, dried.

METHOD OF ANALYSIS

Analytical method used for routine control of product conformity: according to USP24.

SAFETY

The product Material Safety Data Sheet (MSDS) is available at www.hq-biosciences.com. This product is compliant with FAMI-QS, ISO 9001, HACCP, FSSC 22000 and PAS 222 (Halal, Kosher, non-GMO).