XI'AN LAND NUTRA CO.,LTD
Room 1202, Building 1, Vanke Huizhi Center, No. 56, Xifeng Road, Yanta District, Xi'an City, Shaanxi Province,China

Technical Data Sheet

1. Product and Company Information

Product Name: L-Tyrosine
Product Code: LTY-PWD-99%
Chemical Name: (S)-2-Amino-3-(4-hydroxyphenyl)propionic acid; 3-(4-Hydroxyphenyl)-L-alanine
CAS No.: 60-18-4
Molecular Formula: $C_9H_{11}NO_3$
Molecular Weight: 181.19 g/mol
Recommended Use: Dietary supplement ingredient, Functional food additive, Sports nutrition ingredient, Cognitive support ingredient
Restrictions: Not for diagnostic or therapeutic use.
Manufacturer Details: Xi'an Land Nutra Co., Ltd.
Address: 12th Floor, Vanke Huizhi Center, Yanta District, Xi'an City, Shaanxi, China
Email: sale01@landnutra.com

2. Product Composition

Component	Chemical Name	CAS No.	Content
Active Ingredient	L-Tyrosine	60-18-4	98.5 – 101.5%
Moisture	Water	7732-18-5	≤ 0.5%
Others	--	--	Balance

3. Physical and Chemical Properties

Property	Specification	Test Method
Appearance	White to off-white crystalline powder	Visual
Odor	Odorless	Organoleptic
Taste	Characteristic, tasteless	Organoleptic
Bulk Density	0.4–0.6 g/cm³ (typical)	USP <616>

Property	Specification	Test Method
Particle Size	95% < 180 μm (pass 80 mesh)	Laser diffraction
Melting Point	> 290°C (decomposes)	USP <741>
pH (1% suspension)	5.0–6.5	Potentiometric
Solubility	Slightly soluble in water; soluble in dilute acids and alkalis	Visual
Specific Rotation $[\alpha]^{20}D$	-9.8° to -12.3° (c=5, in 1M HCl)	Polarimetry
Loss on Drying	≤ 0.5%	USP <731>
Residue on Ignition	≤ 0.4%	USP <281>
Water Activity (aw)	≤ 0.25	ISO 21807

4. Technical Performance Data

Performance Parameter	Specification	Test Method
Potency Analysis		
L-Tyrosine Content (Assay)	98.5 – 101.5% (on dried basis)	Titration / HPLC
Heavy Metals		
Total Heavy Metals (as Pb)	≤ 10 ppm	ICP-MS
Lead (Pb)	≤ 2.0 ppm	ICP-MS
Arsenic (As)	≤ 1.0 ppm	ICP-MS
Cadmium (Cd)	≤ 1.0 ppm	ICP-MS
Mercury (Hg)	≤ 0.1 ppm	ICP-MS

Impurity Control		
Chloride (Cl)	≤ 0.04%	Titration
Sulfate (SO_4)	≤ 0.04%	Turbidimetry
Ammonium (NH_4)	≤ 0.05%	Nesslerization
Iron (Fe)	≤ 10 ppm	Colorimetry
Microbiological Control		
Total Plate Count	≤ 1,000 CFU/g	USP <61>
Yeast & Mold	≤ 100 CFU/g	USP <61>
E. coli	Negative	USP <62>
Salmonella	Negative	USP <62>
Stability Data		
6-month stability at 25°C/60% RH	Retention ≥ 98%	Accelerated study
12-month stability at 25°C/60% RH	Retention ≥ 97%	Accelerated study
Physical Performance		
Flowability	Good	USP <1174>
Disintegration time (in tablet)	≤ 30 minutes	USP <701>

5. Application Guidelines

Recommended Applications:
Dietary supplements (capsules, tablets, powders)
Sports nutrition (pre-workout formulations, stress support)
Cognitive health and mood support products
Protein blends and amino acid formulations
Cell culture media components
Product Functions:

Precursor to neurotransmitters dopamine, norepinephrine, and epinephrine
Supports cognitive function under stress
May enhance mental focus and alertness
Supports thyroid hormone synthesis
Aids in athletic performance and recovery

Usage Recommendations:

Parameter	Recommendation
Typical dosage range	500–2000 mg per serving
Suggested daily intake	500–2000 mg daily, typically before stressful activities or exercise
Compatibility	Compatible with most vitamins, minerals, and herbal extracts
Processing conditions	Stable below 80°C; protect from light and moisture
Mixing instructions	Slightly soluble in water; pre-dispersion in acidic or alkaline conditions may enhance solubility; suitable for dry blending

6. Storage and Handling Information

Parameter	Requirement
Storage Temperature	15–25°C (59–77°F); room temperature
Relative Humidity	< 60% RH
Light Protection	Store in opaque containers; protect from light
Container	Keep tightly sealed, dry
Shelf Life	36 months from date of manufacture
Special Precautions	Protect from moisture and light; store in cool, dry place

7. Packaging Specifications

Package Type	Net Weight	Packaging Material
Small package	1 kg	Double-layer polyethylene bag with aluminum foil lining
Standard package	25 kg	Double-layer food-grade PE bag + aluminum foil + fiber drum
Bulk packaging	Customizable	Upon request

8. Remarks & Compliance

Allergen Statement: This product is free from major allergens (gluten, soy, dairy, egg, shellfish, nuts, peanuts).
GMO Status: Non-Genetically Modified (Non-GMO).
Source: Fermentation-derived or synthetic. L-Tyrosine is a naturally occurring, non-essential amino acid.
Quality Standards: Food grade / Supplement grade. Conforms to USP and EP standards.
Certifications: Manufactured in a GMP-compliant facility. ISO 22000, KOSHER, HALAL certifications available upon request. COA provided with each batch.
Regulatory Status:
GRAS (Generally Recognized As Safe) for use in foods and dietary supplements
Approved for use in dietary supplements in the US, EU, China, and other major markets
Product for manufacturing and processing use only
Remark: This product is a high-purity L-Tyrosine with assay range of 98.5%-101.5% (on dried basis). L-Tyrosine is a conditionally essential amino acid that serves as a precursor for important neurotransmitters and hormones. It is widely used in sports nutrition for stress support and cognitive performance, as well as in dietary supplements for mood regulation and thyroid health support.