



Certificate of Analysis

Product name	R-(+)-Alpha Lipoic Acid Sodium	CAS No.:	176110-81-9
Package:	25kg/Drum	Quantity:	100kg
MFG Date:	2025/02/19	EXP Date:	2027/02/18
Batch No.:	RALAS25021901	Standard:	In house

Items	Standards	Results
Appearance	A pale yellowish powder	Conform
Identification	IR	Conform
Bulk Density	$\geq 0.20\text{g/ml}$	0.42g/ml
Tapped Density	$\geq 0.30\text{g/ml}$	0.63g/ml
Particle size	100% pass through 40 mesh	Conform
Optical rotation	$+70.0^\circ$ to $+90.0^\circ$	$+90.0^\circ$
Heavy Metals (as Pb)	$\leq 5\text{ppm}$	$\leq 5\text{ppm}$
Lead (Pb)	$\leq 0.5\text{ppm}$	Not detected
Cadmium (Cd)	$\leq 1\text{ppm}$	Not detected
Mercury (Hg)	$\leq 0.1\text{ppm}$	Not detected
Arsenic (As)	$\leq 1\text{ppm}$	0.0192ppm
Cyclohexane	$\leq 10\text{ppm}$	0.8ppm
Toluene	$\leq 1\text{ppm}$	Not detected
Ethyl Acetate	$\leq 500\text{ppm}$	47ppm
Ethanol	$\leq 5000\text{ppm}$	3047ppm
Total aerobic count	$\leq 1000\text{cfu/g}$	$<10\text{cfu/g}$
Molds and yeasts	$\leq 100\text{cfu/g}$	$<10\text{cfu/g}$
Total Coliforms	$\leq 100\text{cfu/g}$	$<10\text{cfu/g}$
Escherichia Coli	$<10\text{cfu/g}$	$<10\text{cfu/g}$
Salmonella	Absent in 25g	Conform
Staphylococcus aureus	Absent in 25g	Conform
Loss on drying	$\leq 1.0\%$	0.68%
Free R-ALA	$\geq 85.0\%$	85.2%
Assay of R-ALA (HPLC)	$\geq 87.0\%$	90.2%
Assay of R-ALA Sodium Salt	$\geq 99.0\%$ HPLC	100.0%
Conclusion	Conform to the standard of in house	

