



CERTIFICATE OF ANALYSIS

Product Name	ALPHA LIPOIC ACID
Batch Number	ALA.2409041
Manufacturing Date	04/09/2024
Expiry Date	03/09/2028

Physical & Chemical Characteristics

Analysis Item	Specification	Result
Appearance	Yellow crystalline powder	Complies
Identification	IR-Spectroscopy	Conforms
Identification	Liquid chromatography	Conforms
Melting Point	60.0~62.0°C	61.8°C
Specific Rotation	-1.0° to +1.0°	0°
Particle Size Loose	100% through 40 mesh	Conforms
Bulk Density Assay	Report only	0.42 g/ml
Assay (dried basis)	99.0% ~101.0%	99.1%

Heavy Metals

Analysis Item	Specification	Result
Heavy Metals	Not more than 10ppm	Complies
Lead	Not more than 3ppm	<3 ppm
Arsenic	Not more than 1ppm	<1 ppm
Cadmium	Not more than 1ppm	<1 ppm
Mercury	Not more than 0,1ppm	<0.1 ppm

Impurities

Analysis Item	Specification	Result
Loss on Drying	Not more than 0.20%	0.08%
Residue on Ignition	Not more than 0.10%	0.02%
Individual Impurities	0.10% max	0.02%
Total Impurities	2.0% max	0.04%
Chromatographic Purity	Conforms	Conforms

Residual Solvents

Analysis Item	Specification	Result
Cyclohexane	3880 ppm max	1510 ppm
Ethyl Acetate	500 ppm max	110 ppm
Toluene	20 ppm max	10 ppm

Microbiological Tests

Analysis Item	Specification	Result
Total Plate Count	≤1000 CFU/g	<10 CFU/g
Yeast & Mold	≤100 CFU/g	<10 CFU/g
E. Coli	Absence/g	Not Detected
Staphylococcus aureus	Absence/g	Not Detected
Salmonella	Absence/g	Not Detected