

Alpha-Lipoic Acid Specification Sheet

Public technical specification for buyer documentation review

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Field	Specification / note
Ingredient name	Alpha-lipoic acid — supplied as racemic DL-alpha-lipoic acid, and as R-(+)-alpha-lipoic acid
Synonyms	ALA; α -lipoic acid; thiocctic acid; DL- α -lipoic acid; R-ALA; 5-(1,2-dithiolan-3-yl)pentanoic acid; 6,8-thioctic acid
CAS number	1077-28-7 (racemic DL-alpha-lipoic acid) · 1200-22-2 (R-(+)-alpha-lipoic acid)
Molecular formula	C 8 H 14 O 2 S 2 (both isomeric forms)
Molecular weight	206.33 g/mol (both isomeric forms)
Assay / purity	99% minimum by HPLC or titration. The assay method and the isomeric form are stated on the Certificate of Analysis for each lot.
Isomeric forms	Racemic DL-alpha-lipoic acid (CAS 1077-28-7) is the standard commercial grade. R-(+)-alpha-lipoic acid (CAS 1200-22-2), the single enantiomer, is supplied as a separate grade; specify the required form at enquiry, as the two are not interchangeable on label or on cost.
Production route	Organic synthesis. The racemic and the R-(+)-single-enantiomer routes are supplied as distinct grades, and the grade is stated on the specification sheet.
Appearance	Pale yellow crystalline powder with a characteristic sulfurous odour
Solubility	Practically insoluble in water; soluble in ethanol and in alkaline aqueous solutions.
Handling	Light- and heat-sensitive, and it can soften or clump above roughly 45 deg C. Store cool, dry and protected from light; consider coating or granulation for tablet and stick-pack lines.
Typical applications	Capsules, tablets, granulations and powder blends for B2B nutraceutical manufacturing; commonly formulated alongside berberine, chromium and carnitine
Documentation	Certificate of Analysis, specification sheet, heavy metals, microbiological testing, residual solvents, allergen statement, GMO statement and stability data
Quality system	ISO 22000:2018, FSSC 22000, HACCP and GMP (certificates provided on request)
Supplier	Nutrition BioTech, 1601 W. Mission Blvd, Suite 103 (DL#29), Pomona, CA 91766, United States

Public disclosure note: This public sheet is prepared from the current NaturalBestBio product-page specification block. It is not a batch-specific Certificate of Analysis. Lot-specific COA and supporting records are available for qualified buyer review when appropriate.

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