

Trigonelline Specification Sheet

Public technical specification for buyer documentation review

Source page: <https://www.naturalbestbio.com/trigonellinetrivitatone.html>

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Field	Specification / note
Ingredient name	Trigonelline 98% — TriVitaTone™. Two grades supplied: free betaine and hydrochloride.
Synonyms	Trigonelline; N-methylnicotinate; 1-methylpyridin-1-ium-3-carboxylate; N-methylnicotinic acid betaine; caffenine; coffearine
CAS number	535-83-1 (free betaine); 6138-41-6 (trigonelline hydrochloride)
Machine-readable identifiers	CAS 535-83-1 — InChIKey WWNNZCOKKKDOPX-UHFFFAOYSA-N · PubChem CID 5570 CAS 6138-41-6 — InChIKey TZSYLWAXZMNUJB-UHFFFAOYSA-N · PubChem CID 134606
Molecular formula	C 7 H 7 NO 2 (free betaine); C 7 H 7 NO 2 · HCl (hydrochloride)
Molecular weight	137.14 g/mol (free betaine); 173.60 g/mol (hydrochloride)
Assay / purity	98% minimum by HPLC for both grades, each reported together with its salt form and assay basis on the Certificate of Analysis for each lot.
Salt form and dosing basis	Both grades are supplied as separate specifications and the form is fixed per order. On a stoichiometric basis one gram of the hydrochloride corresponds to approximately 0.79 g of trigonelline base, so at the same 98% assay the two forms are not interchangeable at equal weight. Fix the form before label claims, overage and cost-in-use are calculated.
Source / production route	Produced by chemical synthesis from nicotinic acid by methylation. Trigonelline also occurs naturally in coffee (Coffea spp.) green beans and in fenugreek (Trigonella foenum-graecum) seed; where botanical-derived material is requested, the route and its documentation are specified per order.
Appearance	White to off-white crystalline powder
Solubility	Water-soluble. Moisture pickup should be controlled during handling and storage; water content is reported per lot on the Certificate of Analysis.
Typical applications	Capsules, tablets, sachets, stick packs and powder blends for B2B nutraceutical manufacturing; commonly formulated alongside NAD precursors and cellular-energy actives
Regulatory note	Ingredient status and labelling requirements for trigonelline differ by jurisdiction and can differ between synthetic and botanical-derived material. Buyers are responsible for confirming permitted status in their intended markets.
Documentation	Certificate of Analysis, specification sheet, identity, heavy metals, microbiological testing, residual solvents, water content, allergen statement, GMO statement, particle size data 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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