Batch Number:
20260911-TOCO1CCE

Manufactured:
11.09.2026

TECHNICAL DATA SHEET

Product Information

Product Name: Mixed Tocopherols Concentrate 70 % (natural, vegetable origin), PN AF-TOCO1CCE

Scientific name: *Glycine max*

Parts utilized for extraction: Deodoriser distillate of refined seed oil

Appearance: Reddish-brown to light yellow clear oily liquid; a slight crystalline suspension is permitted

Aroma: Characteristic mild oily odour and taste

Solubility: Insoluble in water; miscible with vegetable oils, fats and lipophilic solvents; soluble in ethanol

Raw Material Specification

Analysis	Result	Method
Total ash	<0.1%	Ph. Eur. (2.4.16)
Pesticides	Complies with Ph. Eur. (2.8.13)	GC/MS, LC-MS/MS
Aflatoxins (G1, G2, B1, B2)	Complies with Ph. Eur. (2.8.18)	AOAC 999.07
Ochratoxin A	Complies with Ph. Eur. (2.8.22)	AOAC 2004.10
Benzo(a)pyrene (PAH)	<2 ppb	GC-MS

Extract Specification

Analysis	Specification	Result	Method
Identity – colour reaction	Positive	Conforms	FCC monograph
Identity – retention time	Conforms to reference	Conforms	HPLC-FLD (FCC monograph)
Tocopherols (% w/w, CAS):			
d-α-Tocopherol (59-02-9)	5.0 – 15.0 %	8.25 %	
d-β-Tocopherol (16698-35-4)	0.5 – 4.0 %	1.16 %	HPLC-FLD (FCC monograph)
d-γ-Tocopherol (54-28-4)	35.0 – 50.0 %	42.14 %	
d-δ-Tocopherol (119-13-1)	15.0 – 28.0 %	20.85 %	
Total tocopherols	**≥ 70.0 %**	**72.40 %**	
d-(β+γ+δ) of total toc.	≥ 80.0 %	88.6 %	HPLC-FLD (FCC monograph)
Acidity (0.1 N NaOH)	≤ 1.0 mL	0.4 mL	Titration (FCC monograph)
Specific rotation [α]D, 25 °C	≥ +20°	+23.5°	Polarimetry (FCC monograph)
Ethanol residue (ppm)	<5000	<100	Headspace GC (in-house method)
Benzo(a)pyrene (PAH)	≤ 2 ppb	N.D.	GC-MS
Arsenic (As)	N.D. (< 1 ppm)	N.D.	
Cadmium (Cd)	N.D. (< 1 ppm)	N.D.	ICP-OES (In-house method)
Lead (Pb)	N.D. (< 1 ppm)	N.D.	
Mercury (Hg)	N.D. (< 0.1 ppm)	N.D.	
Total aerobic count (cfu/g)	<1000	Complies	ISO 4833-1

Mixed tocopherols concentrate 70 % (*Glycine max*), product number AF-TOCO1CCE

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Analysis	Specification	Result	Method
Yeast & mold (cfu/g)	<100	Complies	ISO 21527-2
Escherichia coli	N.D. (in 1 g)	N.D.	ISO 16649-2
Salmonella	N.D. (in 25 g)	N.D.	ISO 6579
Pseudomonas aeruginosa	N.D. (in 1 g)	N.D.	ISO 13720
Staphylococcus aureus	N.D. (in 25 g)	N.D.	ISO 6888-1

Additional Data

Storage conditions: Store in a cool and dry place in tightly closed original containers, protected from intense light, oxygen and high heat. Blanket with nitrogen and reseal immediately after each withdrawal.

Carrier: Refined sunflower oil (*Helianthus annuus*), ≤ 30 % by weight. No other additives, solvents or carriers are present.

Packaging: 1–5 kg/bottle, 20–25 kg/drum (nitrogen-flushed HDPE or lacquered steel).

Shelf life: 24 months in unopened original packaging

Dosage and use: Mixed Tocopherols Concentrate 70 % is a natural, non-synthetic antioxidant and a source of vitamin E activity for edible oils and fats, emulsions, bakery and confectionery fillings, meat and dairy analogues, pet food, nutritional supplements and cosmetic formulations. Typical addition levels are 200–500 ppm on total fat for oxidative stabilisation of refined vegetable oils and 500–1000 ppm for high-PUFA systems such as fish, flax or algal oils; dietary-supplement and cosmetic applications are dosed to the declared tocopherol content. The gamma- and delta-isomers that dominate this profile are the most effective chain-breaking antioxidants in the tocopherol family, so the product performs primarily as a stabiliser rather than as a high-potency vitamin E source. Antioxidant efficacy is synergistic with ascorbyl palmitate and with citric or phosphoric acid as metal chelators. Disperse under gentle agitation into the oil phase at 40–60 °C before emulsification; avoid prolonged exposure to air, copper and iron. Overdosing beyond roughly 1000 ppm can reverse the effect and act pro-oxidatively — confirm the optimum by Rancimat or OSI trial on the finished matrix. Suitable for food use under FCC and Ph. Eur. requirements for mixed tocopherols concentrate. Allergen declaration: the tocopherols are obtained from soya (Glycine max). Soya is a declarable allergen under Annex II of Regulation (EU) No 1169/2011 and must be declared on the label of any food carrying this ingredient.

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