

Product Specification

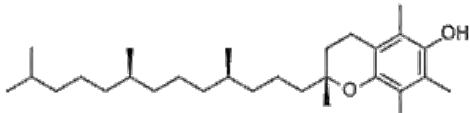
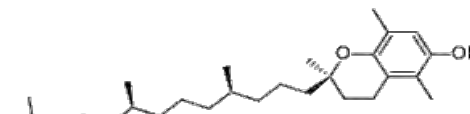
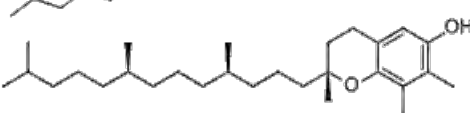
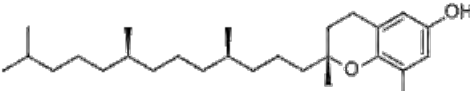
Product Name

Natural Mixed Tocopherols
Natural Vitamin E

General Description

Mixed tocopherols is a pale yellow to brownish red, clear oily liquid, nearly odorless, and is composed of d-alpha tocopherol, d-beta tocopherol, d-gamma tocopherol and d-delta tocopherol, and derived from natural sources, i.e. from edible vegetable oil. It can be used as antioxidant and nutrient in foods, cosmetics, and personal care products, also can be used in feed.

Chemical Structure & CAS No.

Chemical structure	Name	Chemical Formula	Molecular Weight	CAS No.
	D-alpha Tocopherol	C ₂₉ H ₅₀ O ₂	430.71	59-02-9
	D-beta Tocopherol	C ₂₈ H ₄₈ O ₂	416.68	16698-35-4
	D-gamma Tocopherol	C ₂₈ H ₄₈ O ₂	416.68	54-28-4
	D-delta Tocopherol	C ₂₇ H ₄₆ O ₂	402.65	119-13-1

Specifications

Physical & Chemical Data:

Appearance: Pale yellow to brownish red, clear oily liquid

Odor: Nearly odorless.

Identification

A: Chemical reaction with HNO₃ Positive

B: Main peak in GC The retention time of the principal peak in the test solution conforms to which in the reference solution

Analytical Quality:

Assay: Total tocopherols 50%, 70%, 90%, 95%

The percentage of d-(beta+gamma+delta) tocopherols in total tocopherols ≥80%

Natural Mixed Tocopherols

Optical rotation $[\alpha]_D^{25}$: $\geq +20^\circ$

Acidity: $\leq 1.0\text{ml}$

Contaminant:

Heavy metals: ≤ 10 ppm

Benzo(a) pyrene: ≤ 2 ppb

PAH₄: ≤ 10 ppb

Residual solvents:

Ethanol: ≤ 5000 ppm

Microbiological:

Total bacterial count: ≤ 1000 cfu/g

Yeast & Moulds: ≤ 100 cfu/g

Enterobacteria: ≤ 10 cfu/g

Application

Function	No.	Food (usable range)	Dosage (α -TE ^a)
Antioxidant	01.01.03	Modified milk	Max 0.2g/kg
	02.01	Fat and oil	Appropriate amount
	04.05.02.01	Cooked nuts and seeds (deep-fry)	Max 0.2g/kg
	06.03.02.05	Fried wheat products	Max 0.2g/kg
	06.06	Ready-to-eat cereals, include oatmeal	Max 0.085g/kg
	06.07	Convenient rice and flour product	Max 0.2g/kg
	12.10	Compound seasoning	Appropriate amount
	14.02.03	Fruit and vegetable juice beverage	Max 0.2g/kg
	14.03	Protein beverage	Max 0.2g/kg
	14.04.02	Carbonated beverage	Max 0.2g/kg
	14.05	Tea, Coffee, Plant beverage	Max 0.2g/kg
	14.06.02	Protein solid beverage	Max 0.2g/kg
	14.07	Special usage beverage	Max 0.2g/kg
	14.08	Flavor drinks	Max 0.2g/kg
16.06	Puffed food	Max 0.2g/kg	

Natural Mixed Tocopherols

Function	No.	Food (usable range)	Dosage (α -TE ^a)
Nutrient Supplements	01.01.03	Modified milk	12mg/kg~50mg/kg
	01.03.02	Modified milk powder (ordinary)	100mg/kg~310mg/kg
		Modified milk powder (children)	10mg/kg~60mg/kg
		Modified milk powder (pregnant woman)	32mg/kg~156mg/kg
	02.01.01.01	Vegetable oil	100mg/kg~180mg/kg
	02.02.01.02	Oleomargarine and its similar products	100mg/kg~180mg/kg
	04.04.01.07	Bean flour, soybean milk powder	30mg/kg~70mg/kg
	04.04.01.08	Soybean milk	5mg/kg~15mg/kg
	05.02.01	Chewing gum	1050mg/kg~1450mg/kg
	06.06	Ready-to-eat cereals, include oatmeal	50mg/kg~125mg/kg
	14.0	Beverage (besides 14.01, 14.06)	10mg/kg~40mg/kg
	14.06	Solid beverage	76mg/kg~180mg/kg
	16.01	Jelly	10mg/kg~70mg/kg

^a 1mg α -TE=1mg D-alpha Tocopherol=1mg VE.

Refer to GB 2760 & GB 14880.

Standards

Produced under ISO9001, ISO22000 and IP (NON-GMO) System.

Mixed Tocopherols are certified Kosher and Halal.

Storage

The product may be stored for 24 months in the unopened original container. It shall be stored at ambient temperature, under dry conditions, protected from heat, light, moisture and oxygen, and in tightly closed containers.

Package

20KG & 190KG steel drums (Food grade).