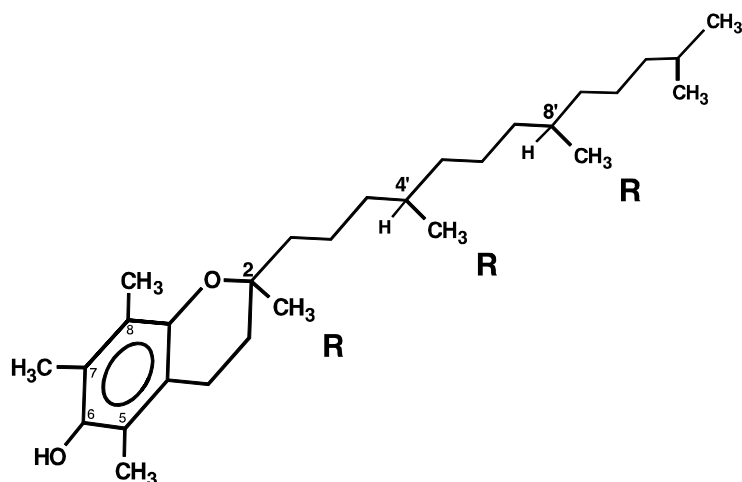


Further Product Name

d-alpha-Tocopherol Concentrate

Product Description

Copherol F-1300 is a clear, dark amber viscous oil with mild taste and odor. It is derived from natural sources, i.e. from edible vegetable oils, and is produced by suitable physical and chemical means. Copherol F-1300 is intended for use as vitamin E in the dietary supplement and food industry.



Empirical formula: $C_{29}H_{50}O_2$

Molecular weight: 430.69

The active substance in Copherol F-1300 is d-alpha-tocopherol. It is also named RRR-alpha-tocopherol, the only stereoisomer of alpha-tocopherol found in nature. Natural-source vitamin E, d-alpha-tocopherol, has the highest biopotency of all the isomeric forms of vitamin E.

Names

2R,4'R,8'R-alpha-tocopherol
vitamin E
d-alpha-tocopherol
d-a-tocopherol
5,7,8-trimethyltolcol
RRR-a-tocopherol

CAS 59-02-9

Assay

One gram of Copherol F-1300 contains not less than 872 mg of d-alpha-tocopherol, equivalent to 872 mg alpha-Tocopherol Equivalents (mg alpha-TE) and to 1300 USP-Units or 1300 International Units (I.U.).

Biological activity and equivalencies:

1 mg d-alpha-tocopherol = 1.49 I.U. = 1.0 mg alpha-TE.

Standards

Copherol F-1300 meets the monograph requirements of the current USP (Vitamin E preparation) and FCC (RRR-alpha-tocopherol concentrate). Certified "Circle U" Kosher, and Halal. Produced under ISO 9001 Certification and current food GMP.

This product is PCR negative.

Solubility

Insoluble in water; sparingly soluble in ethanol, miscible with organic solvents, vegetable oils and fats.

Stability

The shelf life in sealed, original containers under normal storage conditions is at least 36 months after the date of manufacture.

Unstable when exposed to oxygen and light, particularly in the presence of oxidising agents or in alkaline media. The product darkens slowly on exposure to air and light.

Ingredients

d-alpha-Tocopherol*	min. 87.2% weight/weight
Soy bean oil	max. 12.8% weight/weight

* Mainly derived from soy beans
Due to the natural raw material and the manufacturing process applied, small amounts of non-alpha-tocopherols and/or other vegetable oil constituents may be present.

Specifications

Assay (IU/g)	min. 1300	Cognis Method Hj01
Assay (mg/g alpha-tocopherol)	min. 872	Cognis Method Hj01
Acidity* (ml)	max. 1.0	USP
Identification (USP method C)	pass	USP
Heavy Metals* (as Pb, mg/kg)	max. 10	USP <231> Method II
Organic Volatile Impurities *	pass	USP <467> Method IV
Specific Rotation* [alpha]D25	min +24°	USP

* analysed on random audit sample basis

Typical Values

Specific Gravity	0.94-0.95 g/cm ³	
Total Aerobic Microbial Count	< 3000/g	USP <61>
Yeasts and moulds	< 300/g	USP <61>
E.coli	Negative	USP <61>
Staphylococci	Negative	USP <61>
Salmonella	Negative	USP <61>
Coliforms	< 10/g	USP <61>

Storage Conditions

Store in tightly closed containers, cool and dry (15°- 30° C, 60°- 85° F, do not refrigerate). Protect from heat, light and oxygen.

Packaging

Copherol F-1300 is available in 10 kg plastic pails or 190 kg metal drums blanketed with inert gas.

Application & Properties

Copherol F-1300 is intended for use as source of vitamin E in dietary supplements (e.g. soft gelatin capsules) and foods.

d-alpha-Tocopherol, the active ingredient in Copherol F-1300, has been approved under several food regulations within the European Community and can be used as a source for vitamin E. National regulations must be observed.

Nutritional Information

for 100g product

Energy	262 kJ / 64 kcal	USA/EU*
Calories from Fat (kcal)	64	USA
Calories from Saturated Fat (kcal)	10	USA
Total Fat (% , g)	7.1	USA/EU
Saturated Fatty Acids** (% , g)	1.2	USA/EU
Monounsaturated Fatty Acids** (% , g)	1.9	EU
Polyunsaturated Fatty Acids** (% , g)	4.0	EU
Trans Fat (% , g)	< 0.1	USA
Total Carbohydrates (% , g)	0	USA/EU
Dietary Fiber (g)	0	USA/EU
Sugar (g)	0	USA/EU
Polyols (g)	0	EU
Starch (g)	0	EU
Protein by Kjeldahl (% , g)	0	USA/EU
Moisture, Vacuum Oven (70°C/16h), (% , g)	1.1	USA
Ash (% , g)	0.0	USA
Vitamin C (mg)	< 1.0	USA
Cholesterol by GC (mg)	< 1.0	USA/EU
Sodium (mg)	0.7	USA/EU
Potassium (mg)	< 0.1	USA
Vitamin E (mg alpha-TE)	87 200	EU

* Requirements according to different regions,

EU : European Union

** Calculated as triglyceride

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N&H

2.2 - 0-01.2003 Effective February 21, 2003

