

MIXED TOCOPHEROLS



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TOCOMIX 70 IP Product Data Sheet

Product Code: 10020170

DESCRIPTION

TOCOMIX 70 IP is a clear brownish red viscous oil with mild odor and taste characteristic of vegetable oil. It contains natural mixed tocopherols which are obtained from edible vegetable oils.

INGREDIENTS

Natural mixed tocopherols (*Obtained from NON GMO sources, primarily soybean DOD, with IP certification*)

Sunflower oil

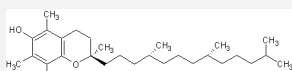
ASSAY

TOCOMIX 70 IP contains not less than 700 mg/g of total tocopherols of which not less than 80% are non-alpha tocopherols.

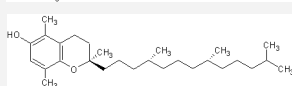
CHEMICAL COMPOSITION (Typical Values)

d- α -Tocopherol (%)	6 - 14
d- β -Tocopherol (%)	1 - 2
d- γ -Tocopherol (%)	40 - 43
d- δ -Tocopherol (%)	15 - 19

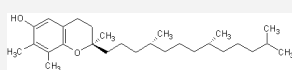
Slight variations of typical composition due to variability of vegetable oil feedstocks from tocopherols origin can occur.



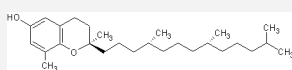
d- α -Tocopherol $C_{29}H_{50}O_2$
Molecular Weight 430.69



d- β -Tocopherol $C_{28}H_{48}O_2$
Molecular Weight 416.66



d- γ -Tocopherol $C_{28}H_{48}O_2$
Molecular Weight 416.66



d- δ -Tocopherol $C_{27}H_{46}O_2$
Molecular Weight 402.64

CURRENT EU LEGISLATION COMPLIANCE

1: EC REG. EU 835/2011	6: EC REG. EU 1259/2011
2: EC REG. EU 1881/2006	7: EC REG. EU 1169/2011
3: EC REG. EU 231/2012	8: EC REG. EU 834/2007
4: EC REG. EU 396/2005	9: EC REG. EU 889/2008
5: EC REG. EU 2073/2005	

PRODUCT SPECIFICATIONS

Quality Control Data (Measured on each Lot)

Total Tocopherols (%)	Min. 70
Non-alpha Tocopherols (%)	Min. 56
Acidity (ml 0.1N NaOH7g)	Max. 0.7

Additional Technical Data (Determined Regularly)

Viscosity (cP @60°C)	120-210
Specific Rotation ³	Min. +20
Relative Density (20/20°C)	0.92 - 0.96
Gardner Colour	Max. 14
Benzo (a) pyrene (ppb) ¹	Max. 2.0
PAH4 (ppb) ¹	Max. 10.0

Contaminants

Oganic Volatile Impurities	Pass USP 32, Method IV
Heavy Metals as Pb (mg/Kg)	Max. 10
Arsenic (mg/Kg) ^{2,3}	Max. 0.2
Lead (mg/Kg) ^{2,3}	Max. 0.1
Mercury (mg/Kg) ^{2,3}	Max. 0.1
Cadmium (mg/Kg) ^{2,3}	Max. 0.2
Pesticide Residues (ppm) ⁴	Max. 0.01
Sulphated Ash (%) ³	Max. 0.1

Dioxins

Sum of dioxins (WHO-PCDD/F-TEQ) (ppt) ^{2,6}	Max.0.75
Sum of dioxins and dioxin like PCBS (WHO-PCDD/F-PCB-TEQ) (ppt) ^{2,6}	Max. 1.25
Sum of PCB28, PCB52, PCB101, PCB153 & PCB180 (ICES-6) (ppb) ^{2,6}	Max. 40.0

Microbiology

Total plate count (CFU/g) ⁵	Max. 100
Yeast (CFU/g) ⁵	Max. 25
Moulds (CFU/g) ⁵	Max. 25
Coliforms (CFU/G) ⁵	Max. 10
Salmonella (/10g) ⁵	Negative
Escherichia coli (/10g) ⁵	Negative
Staphylococcus aureus (/10g) ⁵	Negative
Mycotoxins (Aflatoxin B1) ⁵	Negative

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STANDARDS

TOCOMIX 70 IP meets the Monograph requirements of the current National Formulary (NF, Tocopherol Excipient) and FCC (RRR-Tocopherols, concentrate, mixed, low alpha type); as of those of the European Community (E 306, Tocopherol rich extract).

Produced according GMP, Codex Alimentarius. Non GMO. Certified Kosher and Halal.

The U.S. FDA has recognized tocopherols as safe (GRAS) as a nutrient and as preservative (21 CFR, Part 182.8890 & 182.3890); and are GRAS exempt for the requirement for pre-market approval (21 CFR, Part 170.36) for certain food categories.

TOCOMIX 70 IP is TSE & BSE free; does not contain any meat or animal derived products, Gluten, Lactose, nor Alcohol, and has not been irradiated. It does not contain allergens⁷, and does not require labelling declaration as being potential allergen. The product is suitable for use to Organic Farming^{8,9}.

SOLUBILITY

Soluble in oils and fats. Insoluble in water. Sparingly soluble in ethanol, miscible with organic solvents

STORAGE CONDITIONS

TOCOMIX 70 IP must be stored in sealed containers, at room temperature and dry conditions, given that product is unstable when exposed to light, oxygen, alkaline environment or high temperatures.

SHELF LIFE

36 Months from manufacturing date from in unopened package.

PACKAGING

TOCOMIX 70 IP is available in 18 Kg plastic drums, 190 Kg metal drums or 950 Kg Plastic IBC.

DISCLAIMER

This Product Data Sheet contains information based on our laboratory analysis. Advanced Organic Materials S.A. assumes no responsibility with regards to the suitability of the products for any specific purposes intended by the user. Recommendations for use and application of the product are given for information purposes. These suggestions do not release customers for conducting the necessary tests as suitability of the product is dependent on the characteristics of the intended process. The user of the product is solely responsible for compliance with all laws and regulations applied to the use of the product, including intellectual property rights of third parties.

The information represent typical values, analytical methods are available at customers request.

NUTRITIONAL INFORMATION

Calories (kcal/100g)	45
Total Carbohydrate (%)	0
Protein (%)	0
Total fat (%)	5
Dietary Fiber (%)	0
Humidity (%)	0.5
Ashes (%)	0
<u>Fatty Acids</u>	
Saturated (%)	0.8
Monounsaturated (%)	1.2
Polyunsaturated (%)	3.1
Trans Fat (%)	0
Sodium (mg/100g)	0.7
Potassium (mg/100g)	<0.5
Calcium (mg/100g)	0
Lead (mg/100g)	0
Sugars / Added Sugars	0 / 0
Starch	0
Cholesterol (mg/100g)	0
Vitamin A	0
Vitamin C	0
Vitamin D	0
Vitamin E (mg/100g)	Min. 6000
Other, Tocopherols (%)	Min. 70

APPLICATIONS

Used as a natural antioxidant in food, feed and cosmetic industries, and personal care. The product is completely soluble in oils and fats.

Dosage will depend on each particular application, being most recommended concentration 100 ppm to 600 ppm of tocopherols on oil or fat content.

We suggest to carry tests at different concentrations to determine most appropriate level for each specific case.