

## SPECIFICATION DL-Alpha-Tocopherol 96 % (E307) (for food use)

### Description

Synonym	DL-alpha-Tocopherol, Tocopherol, Alpha-Tocopherol
Formula	$C_{29}H_{50}O_2$
Product code	YYES04
CAS No	10191-41-0
EC No	233-466-0

### Properties

Shelf life	24 months after production date, in unopened original packaging
Aspect	Clear, colourless or yellowish-brown, viscous, oily liquid
Assay	≤ 96 % to ≥ 102 % (JECFA)
Solubility	Practically insoluble in water, freely soluble in acetone, in anhydrous ethanol
Specific absorption in ethanol	$E^{1\%}_{1cm}$ (292 nm): 71,0 - 76,0 (JECFA)
Optical rotation (20 °C)	$0 \pm 0.05^\circ$ (10 % solution in chloroform)
Refractive index (20 °C)	$[n]_D^{20}$ 1,503 – 1,507 (JECFA)
Acid value	Max. 1,0 ml of 0,10 N sodium hydroxide
Sulphated ash	Max. 0,1 % (JECFA)
Heavy metals	Max. 10 mg/kg
Arsenic (As)	Max. 1 mg/kg
Lead (Pb)	Max. 2 mg/kg

### Handling

**Stability** DL-alpha-Tocopherol oxidizes and darkens in air and on exposure to light

### Storage

Protect with a blanket of an inert gas  
If the container is opened and not used immediately, it is recommended to flush the containers with an inert gas and to use up their contents as quickly as possible

Classified as **hazardous** as per EU regulation!

The product meets the latest editions of JECFA and EU Regulation No. 231/2012 of 9. March 2012.

**NHU EUROPE GmbH**

## **SPECIFICATION DL-Alpha-Tocopherol 96 % (for cosmetic use)**

### **Ingredients**

Synonym	DL-alpha-Tocopherol, Tocopherol, Alpha-Tocopherol
Formula	$C_{29}H_{50}O_2$
Product code	YYES04
CAS No	10191-41-0
EC No	233-466-0

### **Properties**

Shelf life	24 months after production date, in unopened original packaging
Aspect	clear, colourless or yellowish-brown, viscous, oily liquid (EP)
Assay	96 % - 102 % (EP/USP)
Solubility	practically insoluble in water, freely soluble in acetone, in anhydrous ethanol
Specific absorption in ethanol	$E^{1\%}_{1cm}$ (292 nm): 71,0 - 76,0 (EP/ USP)
Identification A, B, C	A: Optical rotation: $-0.01^\circ$ to $+0.01^\circ$ B: Infrared absorption spectrophotometry: Both spectra in the product and the Reference Spectrum exhibit similar intensities of absorption at the same wave numbers. (EP) C: Chromatography: The retention time of the major peak for alpha-tocopherol of the Sample solution corresponds to that of the standard solution, as obtained in the assay. (USP) TLC: The principal spot in the chromatogram obtained with the test solution is similar in position and size to the principal spot in the chromatogram obtained with the reference solution. (EP)
Acid value	Max. 1,0 ml of 0,10 N sodium hydroxide (USP)
Related substances (EP)	
Impurity A	Max 0,5 %
Impurity B	Max 1,5 %
Sum of impurity C + D	Max 1,0 %
Any other impurities	Max 0,25 %
Total impurities	Max 2,5 %



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**Handling  
Stability**

DL-alpha-Tocopherol becomes darker in colour as soon as it is exposed to air and light

**Storage**

Protect with a blanket of an inert gas.  
If the container is opened and not used immediately, it is recommended to flush the containers with an inert gas and to use up their contents as quickly as possible

Classified as **hazardous** as per EU regulation!

The product meets the latest editions of USP and EP.

**NHU EUROPE GmbH**

## SPECIFICATION DL-Alpha-Tocopherol 96 % (1b307) (for feed use)

### Description

Synonym	DL-alpha-Tocopherol, Tocopherol, Alpha-Tocopherol
Formula	$C_{29}H_{50}O_2$
Product code	YYES04
CAS No	10191-41-0
EC No	233-466-0

### Properties

Aspect	Clear, colourless or yellowish-brown, viscous, oily liquid
Shelf life	24 months after production date, in unopened original packaging
Stability	DL-alpha-Tocopherol oxidizes and darkens in air and on exposure to light

Assay	not less than 96 % and not more than 102 %
Solubility	Practically insoluble in water, freely soluble in acetone, in anhydrous ethanol
Specific absorption in ethanol	$E_{1\text{cm}}^{1\%}$ (292 nm): 71,0 - 76,0 (JECFA)
Optical rotation (20 °C)	$0 \pm 0.05^\circ$ (10 % solution in chloroform)
Refractive index (20 °C)	$[n]_D^{20}$ 1,503 – 1,507
Acid value	Max. 1,0 ml of 0,10 N sodium hydroxide
Sulphated ash	Max. 0,1 %

Heavy metals	Max. 10 mg/kg
Arsenic (As)	Max. 1 mg/kg
Lead (Pb)	Max. 2 mg/kg

### Handling

**Usage** Product can be used as feed additive, which consists of alpha-tocopherol.

### Storage

Protect with a blanket of an inert gas  
If the container is opened and not used immediately, it is recommended to flush the containers with an inert gas and to use up their contents as quickly as possible

Classified as **hazardous** as per EU regulation!

The product meets the latest editions of JECFA and EU Regulation No. 231/2012 of 9. March 2012.

**NHU EUROPE GmbH**

DL-Alpha-Tocopherol/YYES04/ia und fgg: 250920/av