

# Naturally sourced Vitamin E The Protector

# Why Naturally sourced Vitamin E in Cosmetics ?



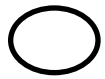
**Evergreen** – the most well-known active since 25 years



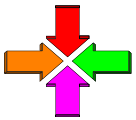
**Examined well** – numerous literature available



**Erythema inhibition** - proven in own studies



**Electron scavenger** > therefore anti-oxidant effect



**Effective** against skin aging and formulation for protection



**Essential for every cosmetic formulation**

...and corresponding to the current **Ecoethics** trend !

# Vitamin E in Cosmetics – new launches 2006



# Facts of Vitamin E in the Personal Care Industry

- >13,000 launches with tocopherol in 2000-2007 worldwide
- about 25,000 launches with tocopheryl acetate or palmitate
- about 10,000 new launches only 07/2006 - 07/2007
- present in all segments and subsegments
- used either for efficacy claiming or labelling
- used as active ingredient or for the protection of reactive components

Source: GNPD database

# Effects of Vitamin E

## Cosmetic benefits

- Protection against skin damage caused by UV-light - anti-aging
- Retardation of skin aging
- Improvement of the microcirculation
- Influence on the skin's moisture content
- Influence on the skin roughness
- Prophylaxis in hair cosmetics
- Protection against damage of hair by UV-light

## Medical/pharmaceutical effects

- Inhibition of edema formation
- Inflammation inhibition
- Improvement of Gingivitis
- Reduction of Bromidrosis axillae (foul-smelling armpit sweat)
- Reduction of itching

# Vitamin E based on natural sources

## **D-alpha Tocopherol – INCI Tocopherol**

stands for high biological efficacy in terms of cell protection

## **D-alpha Tocopheryl Acetate - INCI Tocopheryl Acetate**

stands for the same but delayed activity as free alpha-Tocopherol

## **Mixed Tocopherols – INCI Tocopherol**

= alpha, beta, gamma, delta = natural composition in oils with high anti-oxidant efficacy in terms of oil protection/stabilization



# Our Vitamin E range of natural source

## The actives mainly for efficacy claims

D-alpha Tocopherol

**Copherol<sup>®</sup> F 1300 C**

D-alpha Tocopheryl Acetate

**Copherol<sup>®</sup> F 1250 C**

## The actives/anti-oxidants for efficacy claims and formulation protection

Mixed Tocopherols (50%)

**Covi-ox<sup>®</sup> T 50 C**

Mixed Tocopherols (70%)

**Covi-ox<sup>®</sup> T 70 C**

## The antioxidant mixtures for the protection of unsaturated fatty acids in a formulation

Blend for synthetic compounds

**Controx<sup>®</sup> KS C**

Blend for natural compounds

**Controx<sup>®</sup> VP C**

# What can we do against aging?

- Protection against UV-radiation
- Protection against oxidative stress
- Influence on the collagen biosynthesis
- Influence on the mitosis
- Improvement of the DNA/RNA repair mechanism
- Influence with hormones





# Skin Topographie Improvement with Vitamin E

## Test conditions

Panel size: 20  
Age: 42 - 64  
Area: edge of eye lid  
Time: 4 weeks  
Treatment: 2x daily  
Formulation: O/W creams  
D- $\alpha$  tocopherol concentration: 5%



## Results of improvement

**Skin roughness** 63 %

**Length of lines** 53 %

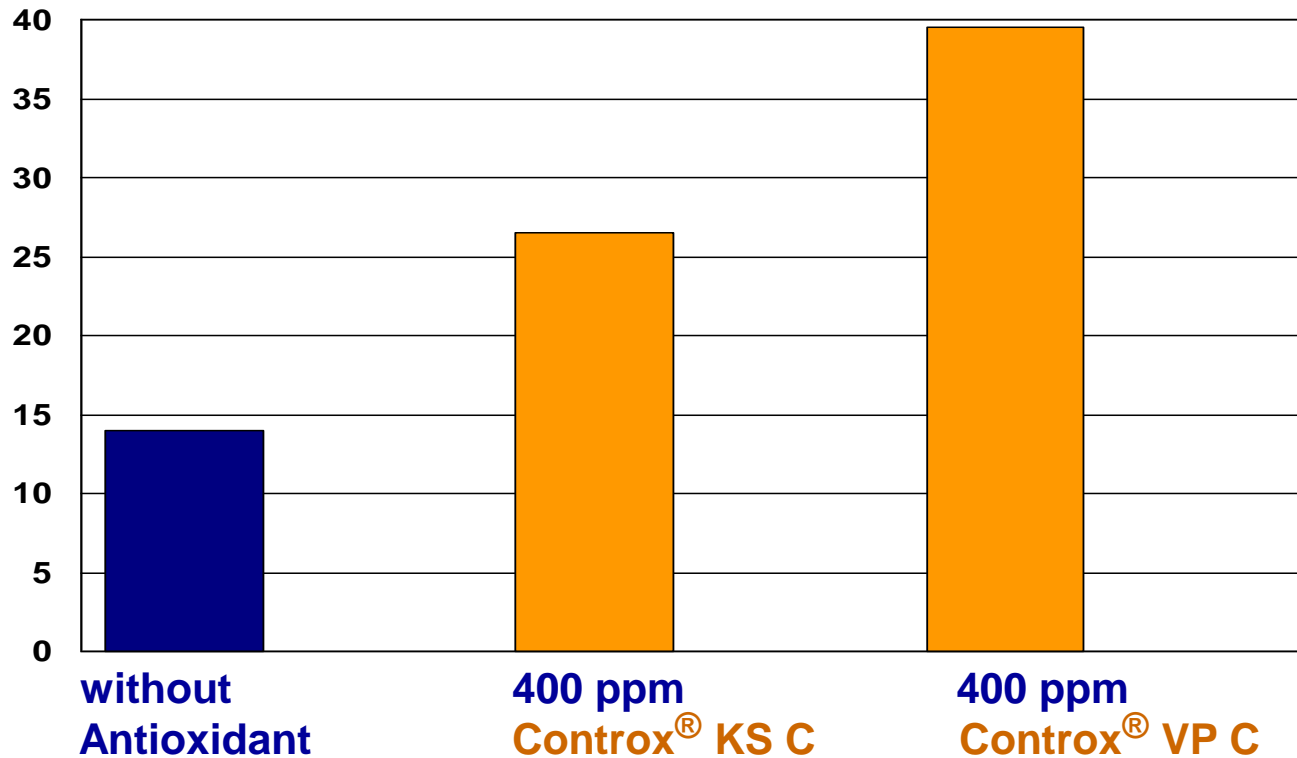
**Wrinkles** 53 %



**The convincing anti-age active**

# Protection of Raw Materials from Autoxidation with Controx<sup>®</sup> - Example: Sun Flower Oil in the Rancimat Test

Induction time (h) Rancimat

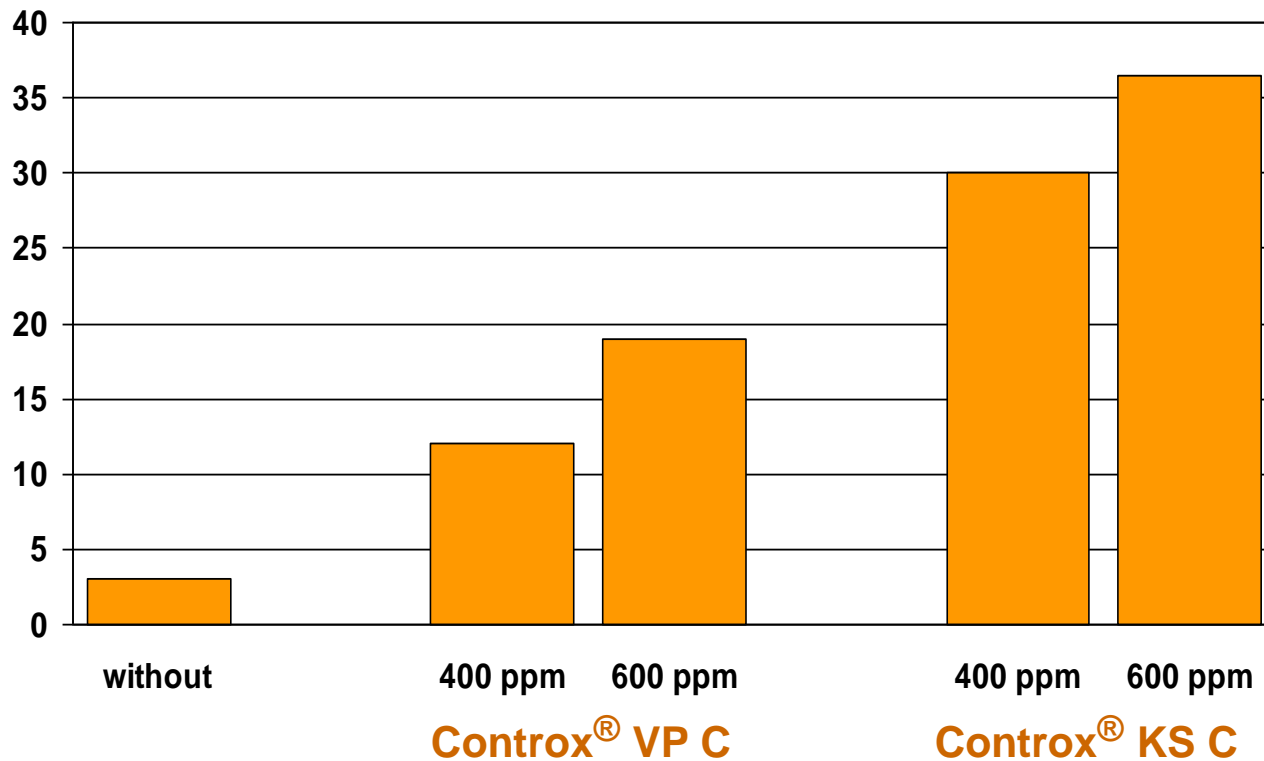


*Controx VP  
with a high  
induction value=  
high efficacy=  
optimal protection  
for vegetable oils*

# Protection of Raw Materials from Autoxidation

with **Controx<sup>®</sup>** - Example Cetiol<sup>®</sup> V (Decyl Oleate)/Rancimat test

Induction time (h) /Rancimat



*Controx KS  
with a high induction value =  
high efficacy = optimal protection  
for oils without  
own vitamin E content*


# Antioxidant Effect of an emulsion with Vitamin E

- The **oxipress test** is used to prove the antioxidant effect of formulations.
- The higher the induction time values the better is the efficacy.
- Different Vitamin E types and concentrations were added to one base formulation.
- **The highest efficacy is obtained by:**
  - **7.5 – 10% free alpha tocopherol Copherol® F 1300 C**
  - **5% Copherol® F 1300 in combination with Controx® VP C**
  - **2.5% Copherol® F 1300 + 2.5% Copherol® 1250 C**
- It also shows that the addition of an antioxidant like Controx® is insufficient and that the free tocopherol is superior in efficacy compared to the tocopheryl acetate.

# Antioxidant Effect of Vitamin E products in an emulsion tested with the oxipress method








	% Copherol® F 1300 C	% Controx® KS C	% Copherol® 1250 C	induction time h
Placebo	--	--	--	5.0
	5.0	0.1	--	22.0
	5.0	--	--	17.5
	--	0.1	--	9.5
	2.5	0.1	2.5	17.5
	--	0.1	5.0	11.5
	0.5	--	--	13.0

# Sun Care Fluid SPF 16

Ingredients	Eco status	INCI	Weight % (as is)
Eumulgin® VL 75		Lauryl Glucoside (and) Polyglyceryl-2 Dipolyhydroxystearate (and) Glycerin	0.5
Cosmedia® DC		Hydrogenated Dimer Dilinoleyl/Dimethylcarbonate Copolymer	2.0
Myritol® 331		Cocoglycerides	10.0
Cetiol® CC		Dicaprylyl Carbonate	6.0
Copherol® F 1300 C		Tocopherol	1.0
Uvinul MC 80		Ethylhexyl Methoxycinnamate	7.5
Parsol 1789 (Givaudan Roure)		Butyl Methoxydibenzoylmethane	2.0
Cosmedia® SP		Sodium Polyacrylate	0.3
Water		Aqua	65.7
Glycerine		Glycerine	5.0
Preservative pH-value			q.s. 6,0
Viscosity (mPas),		Brook.RVT, 23 °C, sp. 5, 10 rpm	12,200







Formulation number: DE 02/096/74

# Vitamin E Day Cream

Ingredients	Eco status	INCI	Weight % (as is)
Eumulgin® SG		Sodium Stearoyl Glutamate	0.25
Cutina® PES		Pentaerythrityl Distearate	1.0
Cutina® MD		Glyceryl Stearate	0.5
Cetiol® CC		Dicaprylyl Carbonate	1.0
Cetiol® PGL		Hexyldecanol (and) Hexyldecyl Laureth	6.0
Uvinul MC 80		Ethylhexyl Methoxycinnamate	7.5
Cosmedia® SP		Sodium Polyacrylate	0.7
Parsol 1789 (Givaudan Roure)		Butyl Methoxydibenzoylmethane	0.5
Copherol® 1250 C		Tocopheryl Acetate	1,0
Glycerine		Glycerine	3.0
Water, demin.		Aqua	83.55
Panthenol (BASF)		Panthenol	1.0
Perfume, Preservative pH-value			q.s. 3.96
Viscosity (mPas),		Brook.RVF, 23 °C, sp.TE, 4 rpm, with Helipath	100,000

Formulation number: SC-DE/05/019/04

# Passionflower Hair Treatment with Instant Effect

Ingredients	Eco status	INCI	Weight % (as is)
Dehyquart® F 75		Distearoylethyl Hydroxyethylmonium Methosulfate (and) Cetearyl Alcohol Behentrimonium Chloride	1.3
Genamin KDPM (Clariant)		Behentrimonium Chloride	1.3
Lanette® O		Cetearyl Alcohol	5.0
Cegesoft® SBE		Butyrospermum Parkii Butter (EU) Butyrospermum Parkii (Shea Butter)	3.0
Cegesoft® VP		Olus (and) Hydrogenated Vegetable Oil (and) Candelilla Cera (EU)	1.0
Cegesoft® PFO		Passiflora Incarnata Oil (EU) Passiflora Incarnata (Passionflower Oil (non-EU)	1.0
Controx® VP C		Lecithin (and) Tocopherol (and) Ascorbyl Palmitate (and) Hydrogenated Palm Glycerides Citrate	0.05
Water, de-ionized		Aqua	87.2
Perfume			0.3
Preservative			q.s.
pH-value			3.96
Viscosity (mPas),		Brook., 20 °C, sp.TE, 5 rpm, with Helipath	100,000

Formulation number: HB-ES/04/061/10V



# Cognis Vitamin E products on natural base....

... corresponds perfectly on the natural,  
green trends and is the best choice for  
efficient protection !





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## Technical Information

**Covi-ox® T-50 C**

PRD 30533824

Valid since	25.07.2017
Revision	6.0
WF-No.	11922
Page	1 of 4

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**Care Chemicals****Vitamin/Antioxidant****INCI name(s)**

Tocopherol

**Chemical description**

Alpha, beta, gamma, delta -Tocopherols

**Physical form:**

Transparent, brownish-red, viscous oil with characteristic odor

<b>CASR-No.</b>	<b>Ingredient</b>
1406-66-2	Tocopherols
59-02-9	alpha-Tocopherol
16698-35-4	beta-Tocopherol
54-28-4	gamma-Tocopherol
119-13-1	delta-Tocopherol

**Characteristic values**

The specifications stated in the paragraphs 'Quality control data' and 'Additional product descriptive data' finally and conclusively describe the properties of the product.

**Quality control data**

(Data which is used for quality release and is certified for each batch.)

<b>Test property</b>	<b>Specification</b>
Appearance at room temperature	Corresponds to the standard
Odor at room temperature	Corresponds to the standard
Tocopherols, mixed	min. 500 mg/g

Specific methods used for batch release see Certificate of Analysis.

## Technical Information

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**Care Chemicals**

#### Additional product descriptive data

(Data which is proven statistically but not determined regularly.)

##### Test property

non-alpha-Tocopherols  
Optical Rotation  
Acidity

##### Specification

min. 80 % of total tocopherols  
min. + 20 degree  
max. 1.0 ml of 0.1 N NaOH in  
1 g

Specific methods used for batch release see Certificate of Analysis.

## Storage information

#### Shelf life

36 months

#### Storage temperature

Between + 15 °C and + 30 °C

#### Storage conditions

In original sealed containers and protected from moisture

#### Additional information

Covi-Ox® T 50 C is sensitive to oxygen, light, particularly in the presence of oxidizing agents or in alkaline media. The product darkens slowly upon exposure to air and light.

## Stabilising additives / Auxiliaries

#### Preservatives

not present

#### Antioxidants

Product is an antioxidant

#### Solvents

not present

#### Others

Soybean oil

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**Care Chemicals****General information****Raw material basis**

Vegetable: (mainly soy, but also others e.g. sunflower oil, rape seed)

**Composition hints for finished product label****INCI Components**

<b>INCI Name (US/EU/CN)</b>	<b>Content</b>
Tocopherol	min. 50 %

**Auxiliaries**

<b>INCI Name (US/EU/CN)</b>	<b>Content</b>
Glycine Soja (Soybean) Oil (US, CN), Glycine Soja Oil (EU)	max. 50 %

**Product properties****Solubility**

Ethylalcohol:	soluble
Water:	practically insoluble

**Miscellaneous information****Example of use**

The product is a mixed tocopherol of natural origin. It may also contain low quantities of other vegetable oil constituents due to the raw material used and the manufacturing process applied. Covi-Ox® T 50 C is suitable as a natural antioxidant or as an active substance in personal care products.



We create chemistry

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**Care Chemicals**

### **Intended for use as cosmetic ingredient**

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