



NUTRITION

FUNCTIONAL FOODS & BEVERAGES

NUTRITION BARS

PERSONAL CARE

SOYA FOODS

VITAMINS & SUPPLEMENTS

# NATURAL-SOURCE VITAMIN E

## HEALTH BENEFITS

Vitamin E is a major lipid-soluble antioxidant, which protects lipoproteins and the unsaturated fatty acids in cell membranes. Fighting against the effects of free radicals derived from oxygen and environmental pollutants, vitamin E reduces the rate of free radical attack on the polyunsaturated fatty acids in membrane phospholipids and at other biologically important sites. The biological potency of natural-source vitamin E (d-alpha-tocopherol) is recognised to be approximately twice that of the synthetic form (known as dl-alpha-tocopherol).

Vitamin E is the subject of numerous scientific research studies, the conclusions of which have led to its increasing popularity as a dietary supplement. Some of the research projects have investigated the role of vitamin E in:

- Protecting cells from free radical damage.
- Decreasing risk markers associated with certain cancers.
- Oxidation of LDL cholesterol (a risk factor associated with development of atherosclerosis).
- Immune responses.
- Protection against the risk of cataract formation.

## DIETARY SUPPLEMENTS

In conjunction with exercise and a balanced diet, vitamin E dietary supplements may also be beneficial in other health-maintenance areas. Studies indicate that vitamin E may aid in reducing oxidation of low-density lipoprotein (LDL) cholesterol. Higher vitamin E intakes may also be associated with other benefits.

### BENEFITS

- Comprehensive product range for a wide variety of applications
- Derived from natural sources
- Research shows that, compared with synthetic vitamin E, natural-source vitamin E is preferentially retained\*

\* American Journal of Clinic Nutrition. 1994: 60:397-402. Acuff, Robert V., et al.



## FOOD PRODUCTS

In certain foods, adverse processing and/or storage conditions may lead to large oxidative losses. This is why ADM has developed a wide range of products to meet a great variety of application needs. Light, heat, alkaline pH and various metals such as iron and copper, can affect food products leading to a reduction in nutrient content and poor taste profile. Vitamin E can be used to protect, fortify or enrich a variety of products, some examples of which would include: spreads, extruded cereals, dehydrated food systems, dairy products, and even pet foods and feeds for use in animal nutrition.

## COSMETICS

Through their antioxidant properties, mixed tocopherols may be used to retard oxidation in a wide range of cosmetic products.

Vitamin E, in combination with other antioxidants, can also be used to enhance the performance of pre-applied sun care products by interacting with UV light.

Vitamin E products are utilised in a comprehensive array of skin care preparations where they can provide a wide range of product and consumer benefits.



Natural ingredients, to promote health and well-being, custom formulated for any food or supplement. **RESOURCEFUL BY NATURE™**

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## ADM NATURAL-SOURCE VITAMIN E PRODUCT RANGE

Product	Minimum Content mg/g	IU/g	Physical Form	Shelf Life*
<b>MIXED TOCOPHEROLS</b>				
Mixed tocopherols are natural antioxidants for use in fats, oils and in a wide range of fat-containing food and feed products. Mixtures of the natural d-forms of alpha-, beta-, gamma- and delta-tocopherols are available as either oil solutions or in powder form.				
<b>Decanox® MTS-30P</b>	300	N/A	Powder	12 months
<b>Decanox® MTS-50</b>	500 (minimum 80% non-alpha)	N/A	Oil	36 months
<b>Decanox® MTS-70</b>	700 (minimum 80% non-alpha)	N/A	Oil	36 months
<b>Decanox® MTS-90</b>	900 (minimum 80% non-alpha)	N/A	Oil	36 months
<b>Decanox® MTS-90G</b>	900 (rich in d-gamma-tocopherol)	N/A	Oil	36 months
<b>Vitamin E 4-50</b>	250 d-alpha-tocopherol / 250 non-alpha-tocopherol	372	Oil	18 months
<b>Vitamin E 4-80</b>	537 d-alpha-tocopherol / 135 non-alpha-tocopherol	800	Oil	18 months
<b>Vitamin E 3-50 GA</b>	235 d-alpha-tocopherol / 59 non-alpha-tocopherol	350	Powder	12 months
<b>D-ALPHA-TOCOPHEROL</b>				
d-alpha-tocopherol is the form of tocopherol that is preferentially absorbed by and retained in human tissues. In Europe, d-alpha-tocopherol is the only type of tocopherol that can be declared as vitamin E. All ADM d-alpha-tocopherol products have very low viscosity, which makes them ideally suited for use in soft gel capsules.				
<b>Vitamin E 5-67</b>	672	1000	Oil	48 months
<b>Vitamin E 5-87</b>	873	1300	Oil	48 months
<b>Vitamin E 1490</b>	960-1020	1490	Oil	48 months
<b>D-ALPHA-TOCOPHERYL ACETATE</b>				
The esters of d-alpha-tocopherol have reduced susceptibility to degradation when exposed to air or elevated processing temperatures; these particular benefits allow for flexibility in product formulations. It is d-alpha-tocopheryl acetate that has been used by ADM in developing our innovative water-dispersible and water-soluble products.				
<b>Vitamin E 6-81</b>	810	1100	Oil	48 months
<b>Vitamin E 1360</b>	960-1020	1360	Oil	48 months
<b>Vitamin E 700D</b>	515	700	Powder	48 months
<b>Vitamin E 700S</b>	515	700	Powder	48 months
<b>D-ALPHA-TOCOPHERYL ACID SUCCINATE</b>				
Vitamin E succinate is a pure crystalline material offering a product with the highest potency commercially available in dry form. It also provides products with higher oxidative stability.				
<b>Regular Grade</b>	960	1162	Powder	48 months
<b>HPMC</b>	960	1162	Powder	48 months

\* When stored, unopened in the original containers, under normal ambient warehouse conditions.

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