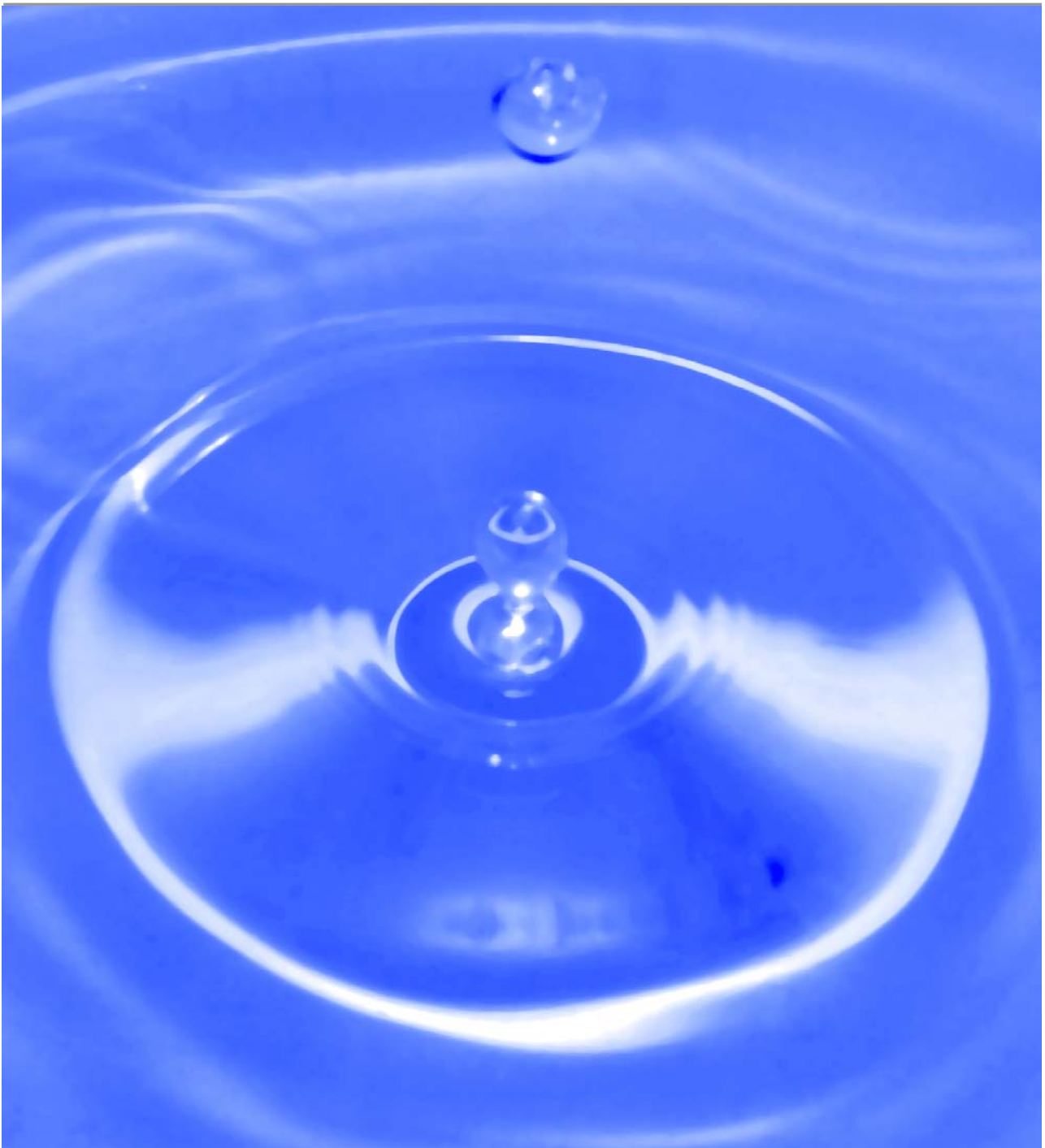


NovaSOL® E

Water soluble vitamin E for clear solutions



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Clear solutions for a major health ingredient

Vitamins help to enhance a healthy lifestyle and are well accepted as a part of every day's life. It is therefore a vital task to make them part of nutrition, functional foods, value added beverages, dietary supplements and cosmetics. In order to create sustainable products in that area, NovaSOL® E supports distinguishable product differentiation, high quality and ease of use in application.

While the processing of water soluble vitamins such as vitamin C (ascorbic acid) is rather easy, manufacturers are facing hurdles, once they deal with fat soluble vitamins, which shall become part of beverages or foods containing high percentages of water. Once the product is designed to be clear, the incorporation of fat soluble actives such as vitamin E at reasonable levels becomes restrictive.

Superior bioavailability

Furthermore, as health claims become more and more important, also bioavailability of vitamins is a topic, that has to be dealt with, because no vitamin can be beneficial without being digested at proper levels.

AQUANOVA's development for vitamin E relies on scientific research, which has demonstrated in clinical trials, that vitamin E, solubilised with the NovaSOL® formula allows superior absorption.



Vitamin E

- a superior health ingredient

A huge variety of studies and reports have associated vitamin E with positive health effects, such as:

- Essential for fertility and reproduction
- Reduces oxidative stress (antioxidant)
- Skin protection & better wound healing
- Sufficient levels prevent tiredness
- RDA (German DGE): 12mg/day



NovaSOL® E

- a superior formula

- Fully water & fat soluble
- 20% concentration
- pH stable
- Alcohol stable
- Available in different grades
- Available as surfactant free formula
- Ready to use yellowish, viscous liquid
- Active ingredient conforms to the applicable monographs in the current United States Pharmacopoeia (USP) and Food Chemicals Codex (FCC)

Strong IP & scientific basis

NovaSOL® E relies on protected and proprietary technology and know how. Our expert network is a precious source for your development of sustainable and reliable healthcare products.

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Broad scope from beverages to cosmetics

Encouraged by the positive bioavailability results, AQUANOVA has conducted further research, showing that NovaSOL® E can be an effective and easy to use formula for innovative cosmetics. Clinical trials have proven, that the NovaSOL® solubilisation results in faster dermal active resorption of vitamin E respective absorption. A clinical trials has shown the deeper penetration of vitamin E into the stratum corneum. Due to the superior dissolution in water, cosmetics such as clear gels can be achieved even with high contents of vitamin E.



Using the fully water soluble and highly bioavailable NovaSOL® E, manufacturers can overcome current hurdles.

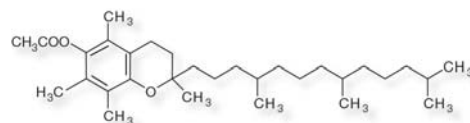
Due to its highly developed solubilisation technology NovaSOL® allows the superior health ingredient vitamin E to become part of clear beverages and sophisticated food or cosmetic products, which want to rely on scientific evidence.

Consumers thus can benefit from cell protecting, antioxidant products with superior quality – a crystal clear solution.

Beverage grade

NovaSOL® E besides its superior solubility has further benefits that make it a perfect choice for beverages.

- Clear and colorless dissolution
- Minimized foaming during filling
- No ringing effects
- Highly stable in beverages
- Directly dispersible in water
- Higher dosage levels without affecting beverage clarity



Packaging & storage

- Packaging in 25 kg drums
- Stability – stable for at least 24 months when stored in the original unopened container at room temperature (maximum 25°C)
- Applications – can be used in all beverage types
- Storage – store in original container, protected from light, in a dry place at room temperature (max. 25°C)



Documentation & Samples

On request we will supply you with:

- Product data sheet
- Material safety data sheet
- Solubilisate samples
- Beverage samples

Water soluble vitamin E for clear solutions



AQUANOVA is a supplier of innovative and versatile formulations of food and cosmetic ingredients, nutrients and pharmaceutical actives with superior properties providing new application opportunities. AQUANOVA in close cooperation with renowned scientists develops and manufactures (under ISO / GMP) liquid formulas (solubilisates with product brand "NovaSOL®") utilizing its proprietary technology. The solubilisates have a micelle structure, which is thermally, mechanically and pH stable, even in gastric acid. Owing to the special properties of this micelle structure, the solubilisates support the development of novel innovative and pioneering dietary supplements, functional foods and beverages, cosmetic products and pharmaceuticals. The company's headquarter is located in Darmstadt (near Frankfurt), Germany.

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