

NovaSOL® COF

Innovative amphiphilic antioxidant for oils & fats



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NovaSOL® COF is a novel, highly effective antioxidant for edible fats and oils, fat spreads and other fat containing foods. It has been developed by AQUANOVA German Solubilisate Technology (AGT). NovaSOL® COF is liquid and readily soluble in oils and fats but also in aqueous systems (ambiphilic). This is due to AQUANOVA's patented solubilization process, which yields colloidal solutions in which vitamin C (ascorbic acid) is embedded in a stable micellized form.

The solubility of NovaSOL® COF in fats and oils allows, for the first time, to apply ascorbic acid, in a chemically unmodified form and without any further additives, as an antioxidant in the fat phase of foods where antioxidants are primarily needed to prevent fat oxidation. Experiments have shown that NovaSOL® COF is the more effective the lower the natural stability of the substrate is.

NovaSOL® COF allows for the replacement of undesirable antioxidants like BHT, BHA, ascorbyl palmitate and others while offering a very good cost/performance ratio.

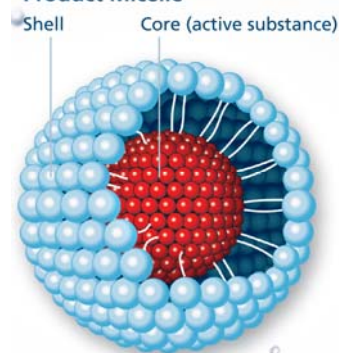


Applications

NovaSOL® COF is recommended for the following applications:

- Confectionery products
- Vegetable oils and fats
- Shortenings
- Margarine and fat spreads
- Sauces and salad dressings
- Mayonnaise

Product Micelle



Advantages

Utilize the unique NovaSOL® COF characteristics for your products:

- Vitamin C based (ascorbic acid)
- Low usage levels such as 400ppm
- Superior antioxidative capacity
- Liquid and clear solution
- Both water & fat soluble ("ambiphilic")
- Ready-to-use
- Chemically unmodified ascorbic acid
- Mechanically, thermally, pH stable
- Processing without additives
- Sound research & analysis basis
- Patent protected formula

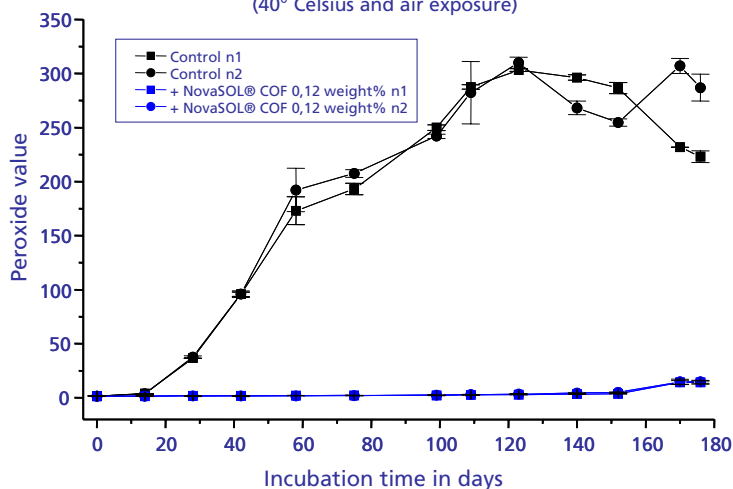
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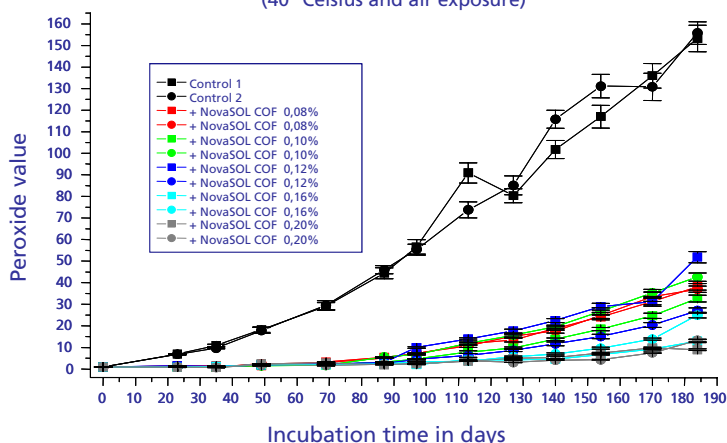
It has been known for a long time that ascorbic acid (vitamin C) is a very effective antioxidant. However, since ascorbic acid is soluble in water only it could not be used at all in pure fats/oils or essential oils.

Due to its amphiphilic character, NovaSOL® COF is a superior vehicle for the high antioxidative capacity and goes beyond the known application barriers and limitations. The diagrams show the superior antioxidative capacity of the novel and unique NovaSOL® COF.

Rape seed oil + NovaSOL® COF (10% pure ascorbic acid)
(40° Celsius and air exposure)



Fully refined palm oil + NovaSOL® COF (10% pure ascorbic acid)
(40° Celsius and air exposure)



Presentation

NovaSOL® C is offered as bulk solubilise (yellow-orange liquid)



NovaSOL® COF offers superior antioxidative performance

For example in palm and rape seed oil (see graphs), where a superior stabilization effect can be obtained. At accelerated conditions NovaSOL® COF stabilizes the oils as the half year analysis proves, which corresponds to appr. 2 years at ambient conditions. The same is true for other oils and fats as well.



Documentation & Samples

On request we will supply you with:

- Product data sheet
- Material safety data sheet (MSDS)
- Study report
- Samples solubilise

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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.

AQUANOVA AG

Birkenweg 8-10
64295 Darmstadt
Germany

Phone: +49 6151 / 6 69 69 -0
Fax: +49 6151 / 6 69 69 -29
E-Mail: agt@aquanova.de

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