

NovaSOL® for beverages

Crystal clear solutions



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Today and even more in the future nutrition and beverage products have to fulfil more and more functional requirements. These requirements result from a strong consumer demand for functional characteristics of their favourite products, which go far beyond quality assurance. Moreover innovative product portfolios have to include health oriented features.

Reflecting the according trends for beverages often makes manufacturers aware of requirements, which limit or prohibit the design of appropriate beverage products:

- ☑ Transparency
- ☑ Stability / shelf life
- ☑ Sufficient nutrient concentration
- ☑ Natural raw materials.

Therefore beverages today require formulas, which are innovative as well as reliable such as the NovaSOL® product line.



NovaSOL® - liquid formulas

NovaSOL® products are liquid formulas (solubilisates) for a variety of actives, such as vitamins, colors or fatty acids. The solubilisates can be applied to beverages or to beverage compounds and have shown excellent behaviour during production and shelf life. The result: Crystal clear solutions.



*) picture source: see last page

Health actives – ready to use

NovaSOL® offers a sound set of solubilisates, which are ready to use for your beverages or beverage compounds. In addition, AQUANOVA is open for customized solutions, which create a solution for your favourite active.



Colors – easy replacement

NovaSOL® allows to replace azo dyes

- Biomimetic colour system
- Identical colouration & transparency
- Incorporating natural colours

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With NovaSOL® products you can enlarge your scope of beverage concepts. Health actives and natural colors are now available as crystal clear solutions even if they are fat soluble from their nature. Even actives, which formerly were difficult or impossible to handle, can now be incorporated into beverages at reasonable levels.

NovaSOL® health actives such as vitamins A, D, E, K or coenzyme Q10 now become available for a stable and clear dissolution. Even fish oil based omega3 fatty acids can be dissolved with NovaSOL®.

When it comes to the appearance of your beverage, you might be interested in natural colours with clear appearance and high stability.

The crystal clear nature of AQUANOVA's solubilisates is owed to the natural micelle structure of the liquid formula and is a perfect solution with respect to the requirement of natural ingredients and technologies: we also call it "biomimetic" – mimic the nature.

Key features of NovaSOL® solubilisates:

- ☑ Complete & stable water solubility for clear beverages
- ☑ Can be used as ingredient in beverage compounds
- ☑ Enhancing stability of encapsulated nutrients
- ☑ Light and pH stable in suitable compounds
- ☑ Optional to compound: Directly applicable (liquid)
- ☑ Stability: in low pH solutions / against heating processes
- ☑ Standardized additive concentrations
- ☑ Ease of Application
- ☑ Cost-in-Use

Packaging units

NovaSOL® beverage solutions are typically offered as a bulk liquids:

- 5, 10, 25 kg plastic bottle
- 120 kg steel drums
- 1.000 kg container



Strong IP basis

NovaSOL® products rely on protected and proprietary technology and know how.



Documentation & Samples

On request we will supply you with:

- Product data sheet
- Material safety data sheet (MSDS)
- Samples solubilisate
- Sample beverages

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NovaSOL® beverage solutions can help to design and improve your beverage products. The following overview divides our portfolio into health and color solutions.

Health actives

NovaSOL® **Q10** (22,0%)

- ☑ Active: Coenzyme Q10 (ubiquinone)
- ☑ Typical usage range per litre: 150 – 400 mg

NovaSOL® **E** (20,0%)

- ☑ Active: DL- α -Tocopherol acetate
- ☑ Typical usage range per litre: 200 – 500 mg

NovaSOL® **ADEK**

- ☑ Actives: vitamines A, D, E, K
- ☑ Typical usage range per litre: 400 – 800 mg

NovaSOL® **Omega** (14%)

- ☑ Active: Omega3 fatty acids (EPA/DHA) from fish oil
- ☑ Typical usage range per litre: 500 – 1.000 mg

NovaSOL® **D** (0,25%)

- ☑ Active: vitamin D3
- ☑ Typical usage range per litre: 6 – 12 mg

Color solutions

NovaSOL® **Apo** (3,0%)

- ☑ Active: Apocarotenal (E 160e)
- ☑ Typical usage range per litre: 50 – 200 mg

NovaSOL® **β C** (3,0%)

- ☑ Active: β Carotene (E 160a)
- ☑ Typical usage range per litre: 100 – 200 mg

NovaSOL® **CP** (6,0%)

- ☑ Active: Chlorophyll (E 140)
- ☑ Typical usage range per litre: 40 – 120 mg

NovaSOL® **Curcumin** (6,0%)

- ☑ Active: Curcumin (E 100)
- ☑ Typical usage range per litre: 50 – 150 mg

NovaSOL® **Lutein** (2,5%)

- ☑ Active: Lutein (E 161b)
- ☑ Typical usage range per litre: 75 – 200 mg

NovaSOL® **SP**

- ☑ Active: Sweet pepper extract (E 160c)
- ☑ Typical usage range per litre: 75 – 200 mg



New regulatory on foods - azo-dyes to be replaced

EU meeting agrees on warning label:

- The labeling of food additives containing azo-dyes shall display the warning "azo-dyes may provoke allergenic effects and hyperactivity in children".
- The following colours therefore are recommended to be replaced:
 - Sunset yellow (E 110)
 - Quinoline yellow (E 104)
 - Carmoisine (E 122)
 - Allura red (E 129)
 - Tartrazine (E 102)
 - Ponceau 4R (E 124)



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AQUANOVA AG 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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