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Fortified Beverages and Health Claims

Individual micronutrient premixes for many different consumer demands

Attractive added value for fortified water-based beverages

Health has been a megatrend in the food industry for many years now. That is not going to change any time soon - on the contrary, according to current market surveys a healthy lifestyle is important to all age groups. Naturally healthy nutrition plays a central role in this. Using its new premix for healthy bones and heart as an example, SternVitamin shows how beverage manufacturers can address the topic of health and turn a profit.

This micronutrient mix picks up on one of the top trends in the beverage market - water-based fortified drinks. Worldwide, this is the beverage category with the highest growth potential. This vegan premix contains vitamins B1, B12, C, K2 and D3. Organic agave syrup powder gives it a light sweetness, while natural flavors give the drink a dark berry taste. It dissolves clear in water and leaves no turbidity.

Individual lifestyle concepts

This new micronutrient beverage premix is just one of many different target group concepts that address the different life phases of consumers, starting from couples trying for children and continuing through pregnancy, school, study, professional life and senior years. A targeted micronutrient mix for vegans with higher vitamin B12 content is also a

possibility, as this is a nutrient that occurs in meaningful amounts only in animal products. Currently there is no plant source of B12 and to prevent deficiencies, nutrition experts (DGE) recommend taking vitamin B12 supplements. The SternVitamin Premix for Vegans is a very simple way to improve the nutrition profile of people who eat only plant-derived foods. Along with vitamins B12, B2 and D3, it provides the appropriate amounts of iron, zinc, calcium, iodine and selenium. It also contains the amino acid lysin, which occurs in only small amounts in plants.

The U.S. Food & Drug Administration (FDA) goes a step further and recommends that all best agers (50 and older) take supplements or eat foods with added vitamin B12. Women of childbearing age are advised to eat foods naturally rich in iron or with added iron. Simultaneous intake of vitamin C is necessary to help the body absorb the iron. This is easy to do with tailored micronutrient mixes.

Profitable marketing

Alongside its target group-specific premixes, SternVitamin also offers marketing support. Based on the health claims authorized by the EU, the benefits of enriched beverages can be marketed effectively in the EU and worldwide.

"The EU health claims for vitamins, minerals and trace elements cover a wide range of application areas," notes Dr Sabine Hildebrandt, Head of Research & Development at SternVitamin. "If you take a close look at the list, you can find something for many areas and functions of the body. For our customers, this opens up enormous marketing potential. For example, if the product contains enough of the respective micronutrients there can be statements on the packaging that vitamin D is important for growth and bone development in children, or that vitamin B1 contributes to normal heart functioning."

The choice of raw materials determines the quality of the beverage

Without doubt, enriching beverages has high value-addition potential, but is often a challenge. For clear drinks, the question is how to disperse a fat-soluble vitamin. Another problem is the solubility of minerals. If they are not soluble, they can cause clouding or even sedimentation. Dr Hildebrandt: "In new developments, selecting the right ingredients is very important. It is vital that the ingredients dissolve well and not react with each other. They must have no negative effects on flavor, color, pH or mouthfeel."



Photos: Stern-Wywiol Group





Stable, high quality raw materials are also an important criterion in high product quality. The nature of the premix plays a key role. Here, SternVitamin uses modern techniques like fluid-bed drying. "Our fluid-bed processor enables us to convert powders that don't dissolve well into agglomerates with a porous structure which dissolve much more readily in water," notes Dr Hildebrandt. "Another factor is the naturally less appealing flavor of the plant extracts. This can be counteracted with flavorings and bitterness blockers."

Close collaboration at all levels

Networked collaboration with the sister companies of the Stern-Wywiol Gruppe is a major advantage, as it gives SternVitamin access to 15 different specialist laboratories. In the Stern Technology Center near Hamburg some 80 scientists and technicians work daily on innovations, improved formulations and more efficient production methods. Each sister company has its own area of applications expertise, and SternVitamin's customers benefit

from the resulting broad capabilities. One example is its collaboration with sister company Hydrosol. A specialist in stabilising and texturing systems, the company has developed all-in compounds for fruity refreshing drinks. What sets these apart is that they are offered in powder form. This gives them high storage stability along with ideal properties for logistics. Unlike with fruit juice concentrates, there are no expiration date issues. Water-free formulations are microbiologically safer than juices or concentrates. In addition, with no water there is less weight to transport. These are measurable cost benefits for users. In addition, powdered products can be used by manufacturers who were previously not part of the fruit juice industry, and so don't have the specific machinery park.

Naturally the compounds are free of preservatives. They are easy to use, and with just small dosages give refreshing fruity drinks with appealing mouthfeel, color, flavor and viscosity. Individual components can be used flexibly

depending on customer wishes. The fruit content is variable. Sugar content can also be reduced without impacting the quality of the beverage. A portfolio of fruit flavors is available, including favourites like orange, peach and mango, as well as special flavors like raspberry, banana and currant.

Like enriched water-based beverages, these fruit juice drinks can be individually enriched with vitamins and minerals. All this gives manufacturers a custom beverage concept from a single source. SternVitamin's close cooperation with customer development departments is another key success factor, allowing the company to tailor premixes that are an exact fit with the customer's product parameters and manufacturing processes. According to Dr Sabine Hildebrandt, "If we know the production process, we can tell beverage producers exactly when an overdose is beneficial. We clarify all questions together with the customer, so that they get premixes designed specifically for their requirements." 

