

Natural formula

the basics... oil-in-water

Borislav Toshev introduces a new naturally derived emulsion technology for clean label beverages.

When two liquids are immiscible but do not separate immediately they are said to form an emulsion. The emulsion itself consists of small droplets of one liquid within the body of a second liquid. An emulsion containing droplets of oil in water is called an oil-in-water emulsion and the oil is called the dispersed phase, while the water is called the continuous phase. A good oil-in-water emulsion consists of very fine oil droplets homogeneously dispersed throughout the body of water.

The main problems occurring in the production of beverage emulsions are related to obtaining stability between the water and the oil phase within the liquid. Since the oil droplets are much lighter in mass, they constantly try to separate. This lack of homogeneity could cause four major problems associated with the emulsion's stability: coalescence, flocculation, creaming, and breaking.

Overcoming the problems

It is well known that obtaining a stable beverage emulsion is a very difficult process. Usually, at the first stage it is done through inclusion of weight agents, in order to make the oil drops heavier. Secondly, the stability process requires a special blend of hydrocolloids to prevent merger among the oil drops. The third stage is proper homogenisation, which should reduce the droplets to a specific, exact size, in order to prevent separation of the liquids.

The innovation

Panteley Toshev Ltd. is a company driven by innovation. We spot emerging trends and respond to them with unique product concepts. This is one of the main reasons for us to develop new breakthrough beverage emulsions that contain only natural ingredients.

The revolutionary idea of our 'Natural Formula'



is that we managed to replace all the artificial weight agents within the emulsions, with a blend of natural extracts. In this way we decided the most complicated technological problem in the production of emulsions: the creation of a highly stable product, which does not contain the commonly used artificial components such as brominated oils, ester gum, SAIB etc.

The final result is a beverage emulsion with great stability, pleasant taste, good opacity and substantial body. Furthermore, the sensory properties of the readymade soft drinks are much clearer and natural on taste, compared to the ones produced using traditional technology.

The advantages

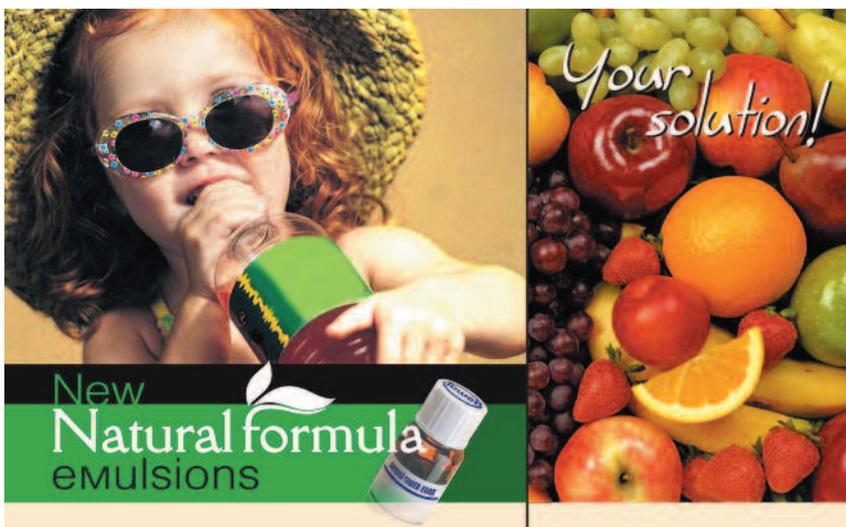
Toshev 'Natural Formula' emulsions have numerous advantages. The companies that decide to use them can generate very important benefits that will contribute to the success of their brands.

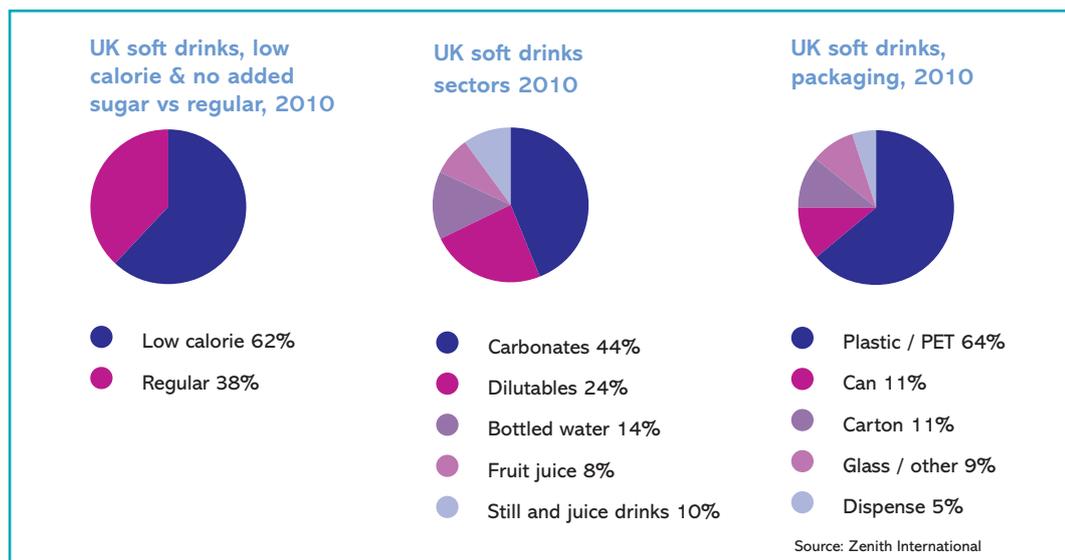
A great advantage for producers will be the fact that they will gain the competitive edge of being first on the market. In the past few years, many of the leading beverage producers shifted their drink formulations towards more naturally oriented products. They excluded the artificial colours and flavours thus making their products more appealing to a wider group of consumers. However, those companies intending to follow this trend are hindered by the saturation in the segment. Nevertheless, our innovative concept allows companies to explore the full potential of this market by providing them with the opportunity to produce the world's first soft drink composed entirely of natural ingredients.

There is another significant advantage of using this breakthrough product. In an internal panel test for taste evaluation, the specialists of Panteley Toshev constituted that the soft drinks made with 'Natural Formula' emulsions possess more natural taste, compared to their traditional counterparts. It is because the weight agents such as ester gum, brominated oils, SAIB and all the other types of synthetic stabilisers are characterised by unpleasant taste. On the contrary, our natural blend of extracts even enriches the mouthfeel by enhancing the natural flavours.

Finally, all added value provided by the emulsions comes at a very reasonable price – their cost ranging between two to three euro cents per litre.

Continued opposite





BY POPULAR DEMAND
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when the weather is warm and the sun shines.

Another factor is the price. The 2011 UK Soft Drinks Report also tells us that the total retail value of the market rose by 5.8% in 2010 to reach £13,880 million, which sounds substantial before you take account of inflation. The Consumer Prices Index rose by 3.7% in 2010, meaning that in real terms, the average soft drinks price actually fell by 2%. Everybody loves a bargain, and in the soft drinks aisles there were plenty.

The soft drinks industry's focus on health and well-being did not let up in 2010. The range of products offering diet and low calorie options grew, as did the importance of the products containing natural and functional ingredients. No-added-sugar drinks gained market share slightly

to reach 62% of the market, giving the lie to the suggestion that soft drinks consumption must lead to obesity.

The truth is that the soft drinks industry exists to meet consumer demand. Its products offer a great range of tastes and formats, have the widest imaginable range of pack sizes (150 ml to 10 litres or more), and are available in a growing number of retail outlets. Its sales are made to people who want to buy them – no-one is obliged to do so – and there is full nutrition and ingredients information on the label, so that people can know what they are buying.

There can be no better background for any industry to operate against, in order to satisfy popular demand. ■



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The content

Since the emulsion is composed of natural ingredients it can be referred with a high level of safety. Here is further information about its content:

- Flavour: natural essential oils;
- Fractionated coconut oil;
- Colour: naturally derived colourings such as beta- carotene (*Blakeslea trispora*);
- Stabilisers: blend of natural extracts approved for human nutrition (derived from plants);
- The emulsions are manufactured in compliance with the kosher and halal principles (no alcohol is used for dissolution of the citrus oils).

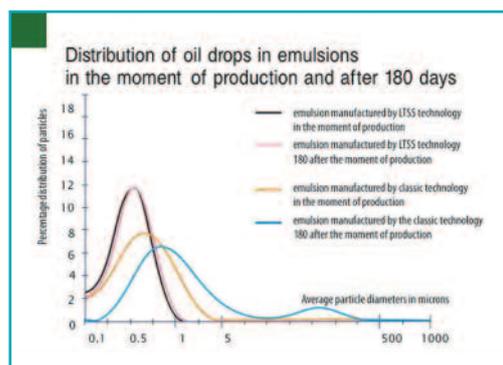
Applications

From a technological perspective, using 'Natural Formula' emulsions is no different from using standard emulsions. The wide variety of application areas can be vast: soft drinks, fruit juice and nectars, juice-containing drinks, sport drinks, drinking yoghurt, sugar products etc.

About Panteley Toshev Ltd

Panteley Toshev Ltd is a rapidly growing company specialising in the development and production of beverage and food ingredients. As one of the leading manufacturers in the region, it produces a wide variety of raw materials for alcoholic and non-alcoholic beverages, sugar products and confectionary, ice cream, dairy products, etc.

From its modern production and trade centre



located in the capital of Bulgaria, Panteley Toshev Ltd markets about 1,500 standard products to more than 1,200 customers, throughout 17 countries, on several continents. The company possesses several laboratories, furnished with highly sophisticated equipment for new product development and quality control, which provide the basis of its prestigious award 'The 2009 most innovative company in Bulgaria'.

The success of the company primarily relies on exceptional quality and service. High quality is based on modern and automated production facilities as well as faultless incoming and outgoing manufacturing control, trained and motivated personnel, prompt production and delivery, tailor-made solutions, and technological assistance. ■

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