

Innovative Dispensing Bottle Caps for Sensitive Vitamins

29 May, 2009 by [Anton Steeman](#)

It is generally known, that most vitamins and other nutrients are very sensitive and lose their power the moment they get mixed with a liquid, particularly water. And even worse the longer they stay mixed, the less efficiently vitamins and nutrients work.



One of the features a properly functioning ‘vitamin injection’ cap requires is the unavoidable extra space to house the rising volume which occurs when carbon dioxide releases from the liquid, which might end up to some 15%.

Recently two developments came to fruit solving this problem.

In April the United States Patent and Trademark Office issued [VIZ Enterprises LLC](#) of Atlanta, Georgia, a patent covering the VIZcap dosing and dispensing bottle cap. The VIZcap offers manufacturers of functional and energy drinks, spirits and pharmaceutical products the ability to create more fresher and potent beverages.

The VIZcap stores liquid and powder nutrients in an oxygen and moisture-restricted chamber situated in the bottle cap, until the consumer releases the still potent ingredients into the content of the bottle.



The system is simple to operate. Around the bottle cap with its transparent dome-shaped moisture-free chamber, in which the fresh ingredients are stored, sits a tamper-evident tear-strip, which should be removed, after which the plunger (the dome-shaped cap) can be pushed downwards and the ingredients are released into the liquid.

Besides the typical characteristic of a fresher and more powerful drink, the VIZcap features the appealing advantage that the vitamins and nutrients are visible in the clear dome where they are housed.

[Formation Design](#), one of the most well-known industrial design companies, developed the VIZcap not only as an aesthetically pleasing, user-intuitive and flexible dosing and dispensing cap, but also as a bottle cap that could seamlessly run at existing bottling lines. The VIZcap can be moulded and manufactured to fit any bottle size and can contain both large and small powder quantities.

VIZdrink doesn't manufacture the bottle cap itself, but licenses its VIZcap technology to third parties to get it on the worldwide beverage market.

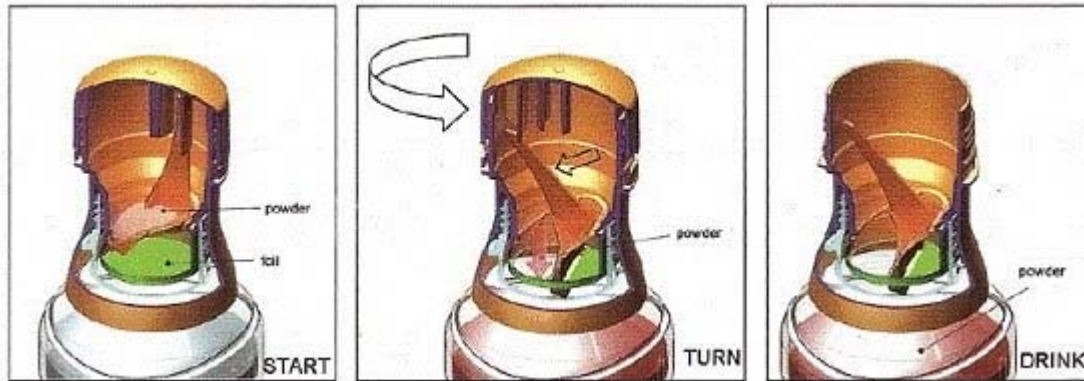
Is the VIZcap a development out of the blue without a first customer to use it, the second is a development instigated by the Croatian food company [Cedevita](#) and executed by the Dutch injection moulder Teamplast.



Cedevita is in Croatia a well-known quality brand for healthy vitamin drinks. For her newest product, Cedevita Gol, the company selected the Dutch injection moulder [Teamplast](#) to develop a dispensing bottle cap. The result: with a simple, rotation of the dispensing cap 26 gr vitamin powder is dispensed into the liquid of the bottle, creating a fresh, healthy, on-the-go bubbling multi-vitamin drink.

Since the communist downturn in 1992, the Croatian food brand Cedevita developed from a faceless brand, selling its vitamin powder in simple 1 en 1.5 kilo bags, to a creative commercially operated quality food brand with a western look, packing its products in shrink-sleeved plastic jars and introducing the new ready-to-go vitamin drink in a PET-bottle with an cleverly designed powder dispensing cap. Mixing the liquid and the vitamins at forehand is useless as vitamins in dissolved status have a shelf life of only one day.

Teamplast developed a system which transfers a rotating movement into a linear one. The movement is activated by a handle which is connected to an oval disc with at the bottom a sharp knife-like point pinching the seal foil when the handle is moved.



The dispensing cap features two pieces: the, with an aluminium foil sealed ‘vitamin chamber’, including the handle with the pinching knife and the bottle cap itself.

The system works as follows: A device which picks up the top of the handle when rotated is located inside the cap. Moving the handle anti-clockwise (opening the bottle) pushes the knife

down. The beauty of the system is that activating the vitamin drink the consumer has only to exercise the common doings of opening a bottle, namely to turn the cap anti-clockwise to operate the ‘vitamin-system’ and to get access to the vitamin drink.

These powder dispensing closures offer many new market possibilities for the energy and healthy drinks sector, even dispensing pharmaceuticals or the ingredients in drinks known as ‘beauty foods’, ‘nutracosmetics’ or ‘neutraceuticals’. They feature all one characteristic: a separate dry storage, which avoids the ingredients to deteriorate, and to loose their glamour and power, before they are mixed with the liquid.