Calcium enriched

Dairy alternative Drinks

THINKING OF TOMORROW

High-purity natural Calcium Carbonate

Calcium is the most abundant mineral in the body. It is not only essential for healthy bones and teeth but also required for vascular contraction and vasodilation, muscle function, nerve transmission, intracellular signaling and hormonal secretion.

Adequate, lifelong dietary calcium intake is necessary to support bone health. As a consequence, calcium fortified foods and drinks became mainstream because they allow consumers to achieve recommended daily intake levels of essential calcium easily without impacting individual eating and drinking habits.

Omya offers a large range of high-purity natural Calcium Carbonates, which are an excellent choice for fortifying dairy and non-dairy drinks.

Omya Calcipur®

Omya-Cal®

Specifically selected particle sizes and surface properties

Excellent Source of Calcium

Omya's Natural Calcium Carbonate is among the best bioavailable elemental calcium sources

With 40% of available elemental calcium, it only takes one-quarter gram of Omya's natural Calcium Carbonate to provide 100 mg of elemental calcium: that equates to 10% of an adult's daily requirement. Accordingly, up to five times less Omya's Calcium Carbonate is required to meet the same calcium content and any possible nutritional claim than other available solutions on the market.

PRODUCTS:

Omya Calcipur®

Omya-Cal®

Benefits

- *Excellent source of calcium*
- *Pleasant mouthfeel & neutral taste*
- *High compatibility & performance*
- *Tailor made particles*
  Slower sedimentation / Easy re-dispersion

Omya's natural Calcium Carbonate meets calcium claims

Tailor-made Particles

Slower sedimentation & easy re-dispersion

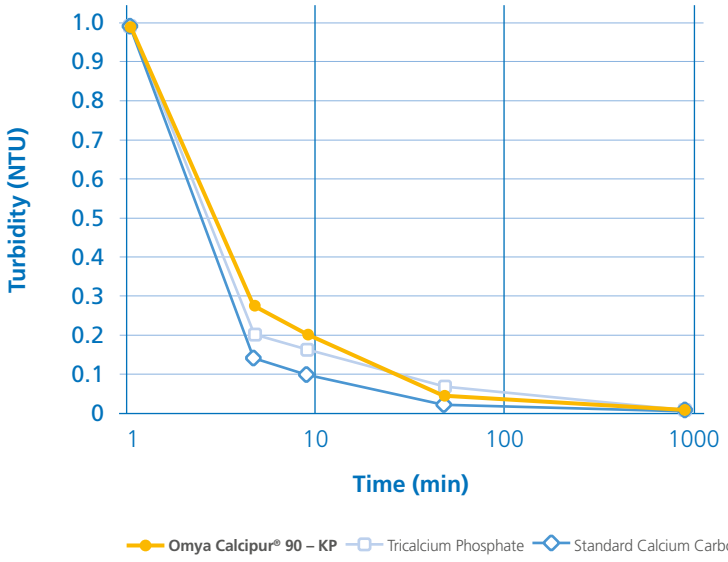
Dairy and non-dairy drinks typically contain carbohydrates, proteins, fats and selected vitamins and minerals, which are dispersed in a water medium. Sedimentation will occur over time as a matter of fact. The addition of stabilizers helps to increase the viscosity of the medium and thus control sedimentation.

In general, fine particles are desired to give the right mouthfeel and stability of beverages. However, for specific characteristics of drinks and their processing parameters, the right Calcium Carbonate grade has to be selected.
With controlled surface properties and particle size, Omya's Natural Calcium Carbonate settles slower than standard Calcium Carbonate or tricalcium phosphate.

Once settled, Omya natural Calcium Carbonate is easy to re-disperse by shaking the product in its container.

Omya offers specific ranges of Natural Calcium Carbonate

Omya Calcipur® 90 - KP shows a slower sedimentation



Omya`s technology meets specific formulation needs by providing the right particle sizes according to surface area / volume ratio.

Omya Calcipur® 90 - KP sediments slower than standard Calcium Carbonate and even smaller tricalcium phosphate particles (see figure 1).

The higher the NTU value, the more particles are suspended in the liquid phase and the longer the particles stay in suspension. As a conclusion for Omya Calcipur® 90 - KP fewer particles precipitate and remain longer in dispension.

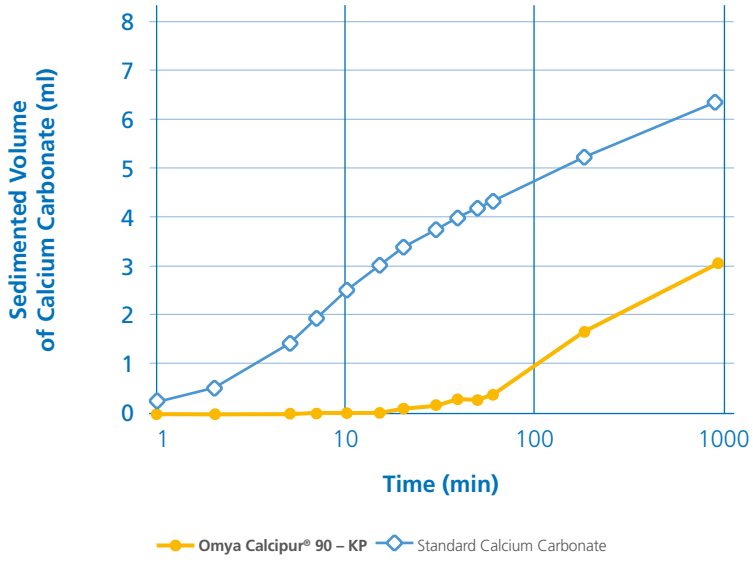
Figure 1: *Sedimentation of various calcium sources in water according to ISO-7027 method by measuring the turbidity in Nephelometric Turbidity Units (NTU) of a solution at various points of time*

High Compactability & Performance

In order to keep Calcium Carbonate in suspension, the right stabilizing system must be chosen. Omya's natural Calcium Carbonate not only shows its high performance within a wide range of common stabilizing agents, but can also work at different viscosities from low to high. This allows formulators to develop beverages according to their needs.

Omya's natural Calcium Carbonate is compatible with common stabilizers

Omya Calcipur® 90 - KP increases suspension rates

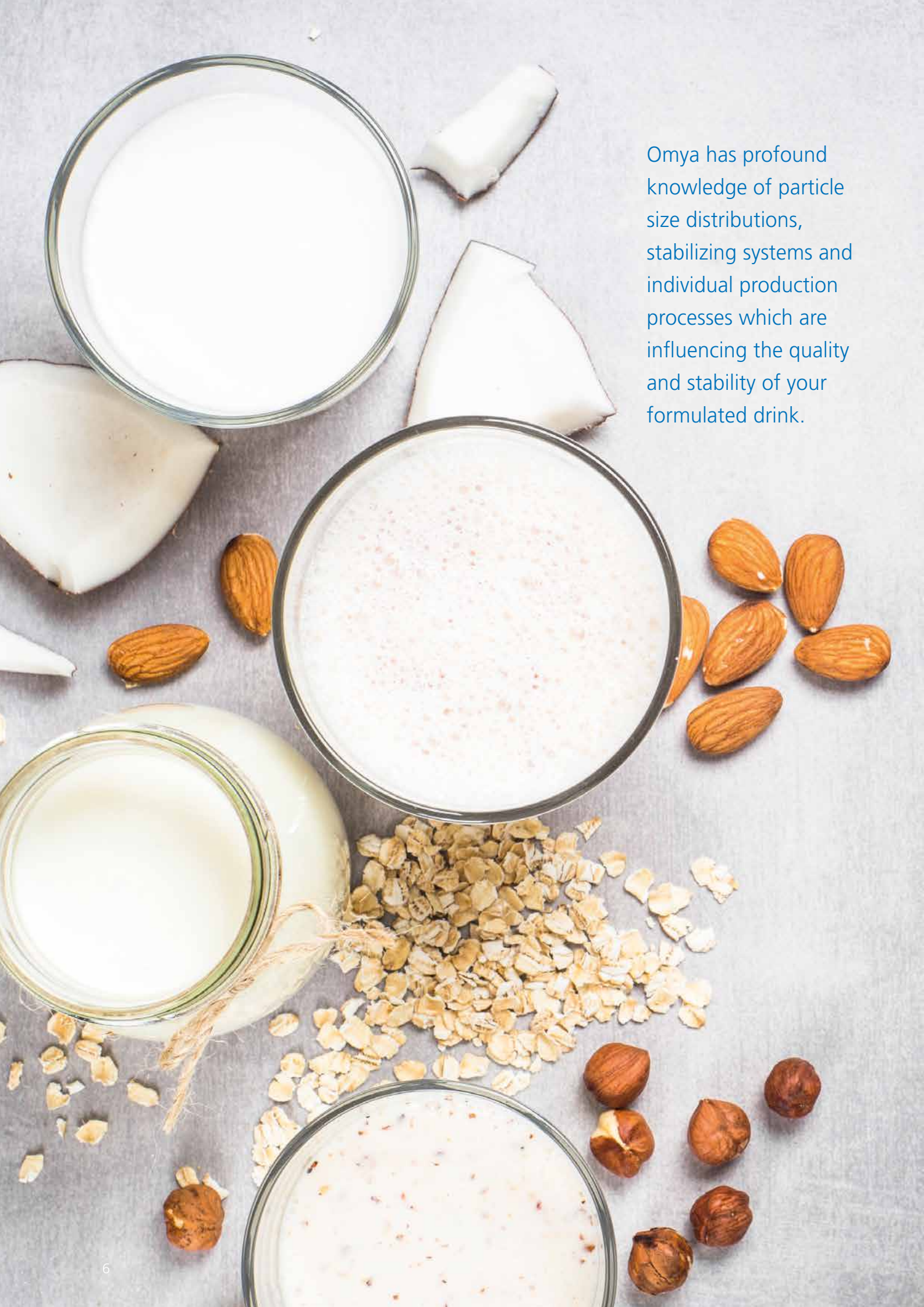


On an average scale, Omya Calcipur® 90 - KP results in overall less sedimentation within a wide range of commonly used stabilizing systems (e.g., cellulose gum, xanthan gum, carrageenan, and colloidal microcrystalline cellulose) compared to standard Calcium Carbonate (see figure 2).

Omya Calcipur® 90 - KP shows increased suspension rates using various stabilizing agents with a fixed viscosity of medium.

Omya Calcipur® 90 - KP is compatible with all common stabilizing agents used in beverage formulations.

Figure 2: *Average volume of sedimented Calcium Carbonate at fixed viscosity using various stabilizing systems. Standardized drink model (water, stabilizing agent, Calcium Carbonate (1%)) used as a test medium*



Omya has profound knowledge of particle size distributions, stabilizing systems and individual production processes which are influencing the quality and stability of your formulated drink.

Pleasant Mouthfeel & Neutral Taste

Thanks to its tailored particle size and outstanding high-purity, dairy and non-dairy drinks enriched with Omya`s natural Calcium Carbonate convince not only with a pleasant mouthfeel and a great taste, but also with exceptional opacity and whiteness.

Product offer

Product	Material type	Country of origin	Median particle size d50% (µm)	Loose bulk density (g/ml)	Recommended usage level (g/l)	
					Non-dairy drinks*	Dairy drinks**
Omya Calcipur® 90 - KP	Natural Calcium Carbonate	Turkey	3.0	0.54	3	qs
Calcipur® 2 - OG		France	3.0	0.69	3	qs
Omya-Cal® FG-4 - AZ		USA	3.5	0.58 (US)	3	qs

** Corresponds to 1200 mg/l (cow's milk calcium concentration)*
*** Addition of calcium as per desired calcium claim*

Omya's natural Calcium Carbonate provides an improved appearance

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Source: Omya International (2022/09) EN