

WATER SOLUBLE VITAMIN D POWDER

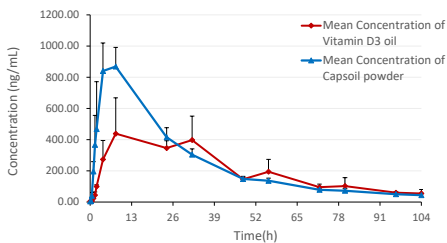
A game-changing solution for the
food and beverage, and dietary
supplements industries.

caps^oil
food tech | by Prodalim

Capsoil Foodtech's powder ingredients have some unique benefits.

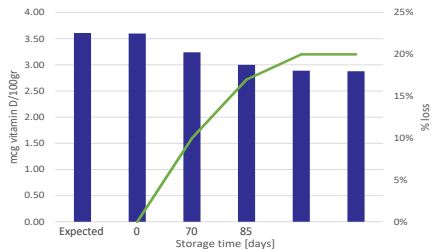
- High oil load (30-60%)
- Self-emulsifying system soluble in water
- Higher bioavailability of lipophilic ingredient (shown in pre-clinical studies)*

Mean Plasma Concentration of Vitamin D3 Nano powder vs Vitamin D3 Oil



- Bioavailability of Capsoil Foodtech's vitamin D₃ was tested in a pre-clinical study
- Capsoil's vitamin D₃ powder was compared to a vitamin D₃ oil
- All measures were improved following intake of Capsoil Foodtech's product including C_{max} , T_{max} and AUC

Stability of Capsoil Foodtech's Vitamin D3 in Iced Tea



- Iced tea mixture was prepared with 3.6 µg/ 100 ml drink
- Little loss of vitamin D₃ in the preparation process (including pasteurization)
- After 360 days of shelf life at RT, there was a 25% loss of vitamin D₃



Help your consumers get their daily value of vitamin D.

Vitamin D is a lipophilic – oil loving – vitamin which is produced naturally in our body by converting cholesterol when we are exposed to sunlight.

Vitamins, as a whole, are essential nutrients for our well being and we need to consume them through our diet. Our modern lifestyles prevent our bodies from producing the right amounts of vitamin D we need from sun exposure alone. Many of us spend much of our time indoors, and because of this, the deficiency in vitamin D in the population is high (as high as 24% in the USA and close to 40% in Europe).**

Due to the Covid-19 pandemic the importance of vitamin D has been highlighted for its positive effects on our immune system.*** As a result, more and more consumers are now actively adding vitamin D to their diet (mainly through supplements and foods fortified with vitamin D).

Being a lipophilic ingredient, vitamin D does not dissolve, and is not stable, in water-based products. Vitamin D is also light sensitive, so if packed in clear bottles this may also lead to degradation, making the addition of the vitamin to water, for example, highly challenging.

Capsoil Foodtech's game-changing technology can help! We've developed an innovative production process to create ultra-fine powders from natural oils.



Capsoil Foodtech's unique technology can convert any oil-based or lipophilic ingredient into water-soluble powder.

- Self emulsifying nano-emulsion leading to water solubility
- Better bioavailability (bioaccessibility and absorption)
- High load of oil in powder
- Clean production process – no use of solvents or heat allows the starting material to maintain nutrient content





Discover all the ways Capsoil Foodtech's technology can create value in your products.

We're constantly innovating and testing our technology across a range of ingredients and applications, so contact us today to see how our game-changing technology can help your products stand out.

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* currently internal data

** Amerinetal, Nature, 2020

*** Lingetal, Nutrients, 2020; Sullietal, Nutrients, 2020