

New Nutriventia Study Confirms Sustained-Release C-Fence Creates Higher Absorption

C-Fence is Nutriventia's vitamin C direct-compression granules made with the company's proprietary modified-release technology.

The Nutriventia Company Logo, featuring the word "nutriventia." in a lowercase, black, sans-serif font. The "n" is stylized with a red circle around it.

Nutriventia Company Logo

MUMBAI, INDIA, August 31, 2022

/EINPresswire.com/ -- As vitamin C

remains high in demand worldwide,

Mumbai, India-based [Nutriventia](#) has announced results of a new study demonstrating its sustained-release [C-Fence](#) achieves higher absorption, providing better-intended benefits. The new study was published in July in the Journal of Pharmacology and Pharmacotherapeutics.

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*Anand Godbole, Vice
President of Marketing,
Nutriventia*

The goal of the study was to observe and quantify the pharmacokinetics of the novel sustained-release tablets at 500 mg in 18 healthy adults compared to placebo. The study was motivated by the knowledge that because of the saturable active transport mechanisms in the absorption, distribution, and excretion of vitamin C, oral doses above 400 mg/day are not effectively utilized.

The researchers write, “It has been suggested that multiple daily gram doses of vitamin C can help in exceeding the homeostatic saturation level. Studies have demonstrated

that single gram-dose supplements produce two- to three-fold higher peak plasma concentrations, however, these returned to steady-state levels within 24 hours after intake. Additionally, oral administration of higher doses of vitamin C is limited by osmotic diarrhea and saturation of absorption, along with an additional risk of hyperoxaluria. Lack of compliance to multiple daily dosing is also a practical issue. Thus, a slow-release formulation can serve as a potential alternative, which can release vitamin C at sub-saturation levels for a prolonged period, and thereby effectively increase overall exposure and uptake.”

In the study, the concentration-time profile, and pharmacokinetic parameters of L-ascorbic acid, including C_{max} (maximum plasma concentration), T_{max} (time to reach C_{max}), and AUC_{0-24h} (area under the plasma concentration versus time curve from time 0 h to 24 h) were calculated

using baseline-corrected values.

A total of 17 blood samples were collected from each participant, including four pre-dose samples and 13 post-dose samples; samples were analyzed for the pharmacokinetics of plasma L-ascorbic acid (vitamin C).

The researchers found that the plasma concentrations of vitamin C in the placebo group did not differ much from the baseline values while the vitamin C concentration in the C-Fence group was about eight times higher. The C_{max} and AUC_{0-24h} values show that with a 500 mg sustained-release preparation, vitamin C was well absorbed, and the levels were sustained well above the baseline values for the entire 24-hour study duration.

Further, the results showed that the average time to achieve maximum levels (mean-1.39 µg/mL) in plasma was about 4.5 hours in the C-Fence group, in contrast to the 2 to 3 hours seen with immediate-release formulations, which indicates the slow release of the active ingredient. More importantly, even at 12, 16, and 24 hours post-dose, the plasma concentrations remained much above both the baseline concentrations and the peak concentration in the placebo group. The researchers concluded that these findings confirm the slow and sustained-release characteristic of C-Fence.

In 2021, vitamin C remained the top-selling immune supplement with 17.84% of the market, according to Nutrition Business Journal's 2022 Condition-Specific Report. And while post-pandemic (2020) numbers are down, they are expected to pick right up by 2025.

"Vitamin C is the single vitamin that consumers historically turn to for immune and overall wellness," said Anand Godbole, vice president of marketing for Nutriventia. "A majority of consumers take higher doses in the effort to flood their bodies with the vitamin, but more are understanding that to do so is to waste it, as well as their money. The new technology used in our C-Fence allows health-conscious consumers to achieve the desired higher doses, as shown by our new study."

C-Fence is Nutriventia's vitamin C direct-compression granules made with the company's proprietary modified-release technology allowing for a smaller dose of vitamin C to be consistently released periodically. C-Fence DC granulates maintain consistent plasma concentration for an effective 24-hour sustained support, allowing improved benefits at a lower dose. C-Fence is also free of excipients and processes.

Nutriventia, Inventia Healthcare's health, and wellness brand is at the cusp of science and nature. The journey at Inventia began almost four decades ago, when two scientists with deep-rooted knowledge in medical sciences, ventured out to develop solutions that were an improvement on generic products becoming the pioneers of NDDS products in India. Today, Nutriventia is a preferred partner to multinational and Indian transnational companies for their global requirements. Nutriventia uses proprietary and patented processes to improve

ingredients by addressing issues and concerns in manufacturing, formulation, and clinical research.

For ingredient information visit <https://www.nutriventia.com/product/cfence-vitamin-c-granules>.
Study information can be found at <https://doi.org/10.1177/0976500X221111669>.

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