



Pure-Chel™ Calcium Fructoborate

—Highly Bioavailable Calcium-Boron Synergistic Mineral Ingredient

Calcium Fructoborate is an organic calcium-boron complex. It stands out as a next-generation functional mineral ingredient, offering high bioavailability and a synergistic effect from its dual calcium and boron nutrients.



ABOUT

Calcium Fructoborate (CF) is an innovative nutritional compound centered on a naturally chelated structure. It is formed by the unique coordination bonding of calcium, boron, and fructose molecules (molecular formula: $C_{24}H_{40}B_2CaO_{24}$).

Its structure mimics the natural borate-sugar complexes found in plants, combining high bioavailability with multiple physiological activities. This makes it beneficial for a wide range of health areas. CF provides a synergistic solution for bone health, joint health, and hormone regulation, making it an innovative choice for upgrading dietary supplements and functional foods.

Benefits

- Synergistic Effects of Boron and Calcium^[1,2]
- High Bioavailability, More Efficient Absorption^[3,4]
- Natural Anti-inflammatory, Pain Relief^[3-5]
- Hormone Regulation, Relief of Menopause Symptoms^[6]
- Reduced Risk of Vascular Calcification^[7]



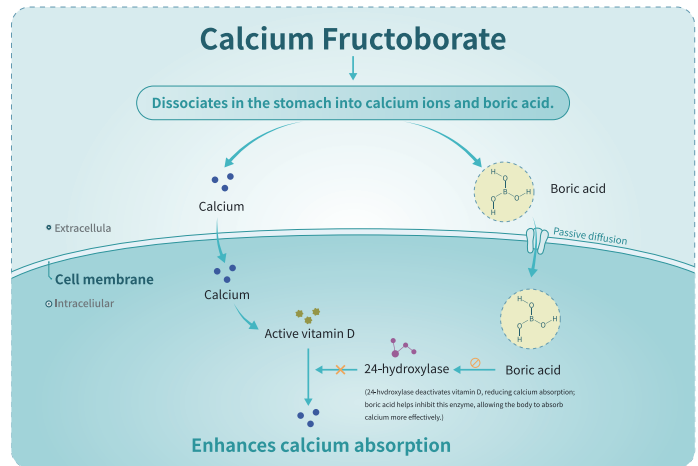
Advantages

- Naturally sourced, with plant-based fructose and pure boron and calcium
- Produced via an aqueous reaction without solvents, ensuring safety and harmlessness
- A patented purification process with precise pH control (D-fructose:boric acid ratio 2:1) minimizes monoester impurities, ensuring purity of ≥99%
- Optimized for multiple formats such as tablets, capsules, liquids, and powders
- High Safety Profile, Compliant with EFSA Standards

How does it work

Boron contributes to maintaining the activity of vitamin D, thereby facilitating calcium absorption and utilization, synergistically supporting bone health.

1. Calcium fructoborate breaks down in the stomach, releasing boric acid and calcium ions.
2. Boric acid, absorbed by passive diffusion in intestinal cells, inhibits the enzyme that deactivates vitamin D, keeping it active.
3. Active vitamin D promotes calcium absorption. The absorbed calcium enters the bloodstream and deposits into bones, strengthening bone health.



Specifications

PRODUCT NAME	TYPES	MAIN INGREDIENT CONTENT	HEALTH FUNCTION	DOSAGE FORMS	APPLICATION SCENARIOS
Calcium Fructoborate	Powder	Calcium 4.5-5.0%	Bone Health	Tablets	Dietary Supplements
		Boron 2.5-2.9%	Joint Health	Powders	Nutrient-Fortified Foods
		Fructose >80%	Hormone Balance	Capsules	Sports Nutrition
				Liquids	Bone and Joint Health Supplements

You may claim

- High Bioavailability
- Fully Soluble
- Non GMO
- No Allergens
- Gluten-Free
- Vegan Friendly

Reference

[1]Nielsen, F. H. (2008). Is boron nutritionally important? Nutrition Reviews, 66(4), 183-191.

[2]Scorei, R. I., & Rotaru, P. (2011). Calcium Fructoborate—Potential Anti-inflammatory Agent. Biological Trace Element Research, 143(3), 1223-1238.

[3]Miljkovic, D., Scorei, R. I., Cimpoiasu, V. M., & Scorei, I. D. (2009). Calcium Fructoborate: Plant-Based Dietary Boron for Human Nutrition. Journal of Dietary Supplements, 6(3), 211-226.

[4]Nielsen, F. H. (2014). Update on human health effects of boron. Journal of Trace Elements in Medicine and Biology, 28(4), 383-387.

[5]Scorei, R. I., Cimpoiasu, V. M., & Iordachescu, D. (2008). In vitro evaluation of the antioxidant activity of calcium fructoborate. Biological Trace Element Research, 124(1), 73-79.

[6]Nielsen, F. H., Penland, J. G., & Gallagher, S. K. (1999). Boron supplementation of peri-menopausal women affects boron metabolism and indices associated with macromineral metabolism, hormonal status, and immune function. Journal of Trace Elements in Experimental Medicine, 14(1), 1-14.

[7]Mogoşanu GD, Biţă A, Bejenaru LE, Bejenaru C, Croitoru O, Rău G, Rogoveanu OC, Florescu DN, Neamţu J, Scorei ID, Scorei RI. (2015). Calcium Fructoborate for Bone and Cardiovascular Health. Biol Trace Elem Res. 2016 Aug;172(2):277-281.

