

phytomin **Ca**™



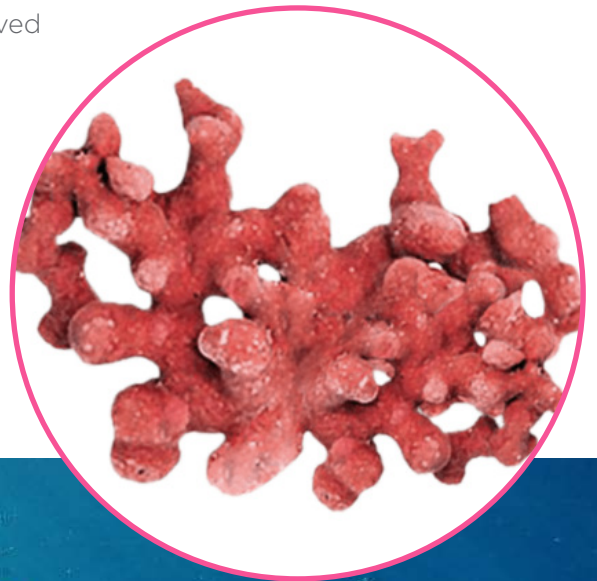
RED ALGAE CALCIUM FROM ISLAND SHORES

Phytomin Ca™ is an algae-derived calcium. Distinct from traditional rock calcium such as calcium carbonate or calcium citrate, algae calcium is a plant-based form of calcium that includes a complement of 72 trace minerals.

Phytomin Ca™ is derived from red ocean algae, described as calcified Lithothamnion species. The living algae attach to seaweed or rock strata on the ocean floor, they eventually detach and wash ashore. Our red algae is 100% sustainably hand-harvested from island shores meeting pristine tropical waters in the Philippine Islands archipelago.

As distinct from rock-derived calcium ingredients,

the calcium present in red algae has been taken up by the organism and retains its biological microporous structure, even when ground to enable use in supplement products. This micro-structure is the subject of investigation for both algae calcium's suggested enhanced uptake, and also a tantalising proposition regarding effects on immune modulation.



A unique mineral powerhouse



THE CHALLENGE

Consumer preference and awareness is quickly shifting toward plant-based ingredients. Phytomin Ca™ allows the best of both worlds: a plant-based, sustainably wild-harvested calcium ingredient with emerging science to differentiate it from rock-based forms. With a microstructure consisting of countless tiny pores, Phytomin Ca™ is readily digested and bioavailable. Its complement of minerals, including bone-building magnesium and 72 trace elements makes it a true mineral powerhouse.

Second to this, recommended daily doses of calcium tend to be high and this typically results in large dosage units, which is particularly problematic when used for tablet production. Large tablets have poor consumer acceptance, this is not just a matter of preference but can present a physical barrier to some individuals, especially in older populations suffering from swallowing difficulties (dysphagia). Rock-derived calcium can require high product loadings due to a relatively low calcium content. As an example, in stark contrast is the calcium content of calcium citrate (tetrahydrate) at 21% versus that in Phytomin Ca™ at not less than 32%. A product using Phytomin Ca™ only requires 66% of the calcium-containing active ingredient relative to a product using calcium citrate. Use of Phytomin Ca™ allows for tablets two-thirds the size while delivering the same dose of calcium.

WHY PHYTOMIN Ca™?

Advanced marine algae calcium vs calcium citrate

- Calcium content 32% vs 21% - only requires 66% of the active ingredient to deliver the same amount of calcium
- Tablet size reduced to two-thirds, greatly enhancing consumer acceptance
- While bioavailability between calcium forms may be similar - clinical trials suggest algae calcium as building bone at a greater rate than calcium citrate
- Phytomin Ca™ supplementation may result in a net yearly increase of bone density, compared with calcium citrate that is only slowing net bone loss
- Phytomin Ca™ is an excellent candidate for clinical trials with or without complementary active ingredients, cementing market leadership and IP protection
- Phytomin Ca™ is vegetarian, vegan and non-GMO

