

Microencapsulated
Minerals



LIPOCAL™
microcapsules

Bioavailable and dispersible source of calcium

Description

LIPOCAL™ microcapsules is a water dispersible micronized source of calcium coated with lecithin which increases calcium dispersibility and absorption.

Composition

Tricalcium Phosphate, Identity preserved soy lecithin.

*Product contains 36% of calcium

A nutritional view

There is a growing awareness of the importance of maintaining a high calcium intake throughout life, not just for bone health but also for the health of other body systems.

Calcium intake, particularly that during childhood, is a major determinant of bone mass in adults, and it also influences the rate of bone associated with aging. Osteoporosis, a disease affecting many millions of people around the world, is characterized by bone fragility that over time leads to bone fracture.

The major benefit of calcium is preventative, mitigating the risk of developing osteoporosis during the aging process. Low dietary intake of calcium is also associated with higher risks of colon cancer and hypertension and may affect normal growth in children.

Although dairy products account for about 70% of dietary calcium, total calcium intake remains inadequate. This realization has led to the calcium fortification of an expanding number of foods. Particularly pressing is the need to ensure adequate calcium intakes for vegetarians and for those with milk aversions.

LIPOCAL™ microcapsules is a bioavailable non-animal source of calcium, suitable for vegetarians, that can be easily incorporated in a wide range of food applications.

Applications

Milk powder, dairy products, soy milk and a wide range of dietary supplements including capsules, pills, chewable tablets, effervescent tablets, drops, syrups, etc.

Competitive advantages

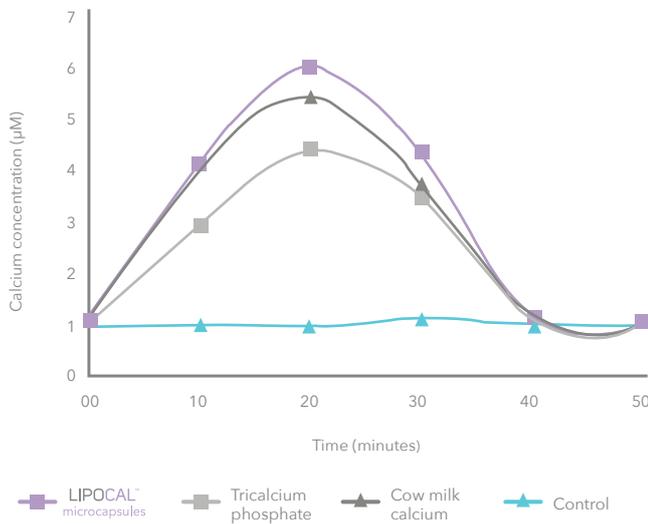
- Improves dispersibility
- High calcium concentration
- More bioavailable than other calcium sources
- Non-animal source of calcium

In vivo efficacy

1. Calcium absorption profile

A study of dietary calcium absorption in guinea pigs was performed at the University of Barcelona, in order to compare the bioavailability of calcium from three different sources: Tricalcium Phosphate (TCP), LIPOCAL™ microcapsules and dairy calcium.

Four groups of five male Hartley guinea pigs weighing 400-450g were orally administered a dose of 3.43 mg calcium/kg body weight, corresponding to two dairy yogurts of 100 grams for a person of 70kg. Blood samples were extracted before and after 10, 20, 30, 40 and 50 minutes of administration and the plasma calcium concentration was measured through Inductively Coupled Plasma Atomic Emission Spectrometry. The absorption profile of calcium during 50 minutes was obtained and the overall uptake per time was calculated.

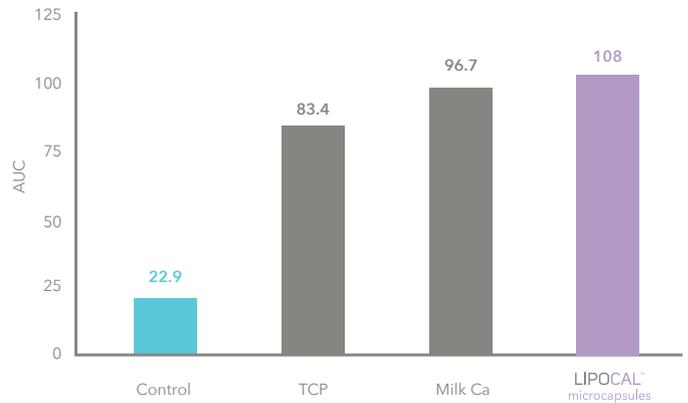


LIPOCAL™ microcapsules increases calcium blood concentration in animals faster

A faster calcium absorption profile is observed with LIPOCAL™ microcapsules compared to other sources of calcium.

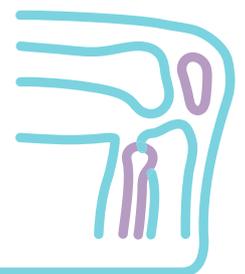
2. Plasma calcium concentration curve

The corresponding area under the curve (AUC) for plasma calcium concentration for each formulation was estimated measuring the amount of calcium absorbed during the experimental period.



LIPOCAL™ microcapsules is a highly bioavailable calcium source

Results show LIPOCAL™ microcapsules is 41% more bioavailable than TCP and 15% than milk calcium.



For more information, visit www.lipofoods.com