

## PRODUCT GUIDE

# Lalmin® Vita D



## THE NATURAL, VEGAN SOLUTION FOR VITAMIN D SUPPLEMENTATION

**Vitamin D** refers to a group of fat-soluble micronutrients produced by the human body when **skin is exposed to ultraviolet (UV)** light. Vitamin D can be also obtained from the diet, but it occurs only in a small range of foods (fish liver oils, meat liver, eggs etc.).

Several factors can limit the amount of Vitamin D in our body, leading to a **Vitamin D deficiency** in most parts of the world.

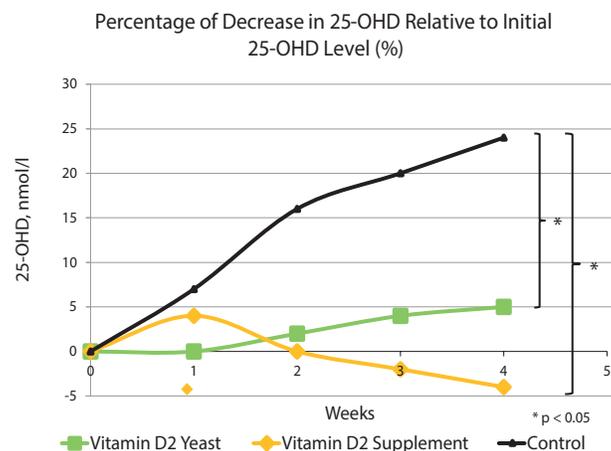
## LALMIN® VITA D: THE NATURAL SOURCE OF VITAMIN D

**Lalmin® Vita D** is dried, fermented and inactivated whole cell yeast (*Saccharomyces cerevisiae*) containing naturally elevated levels of vitamin D. Subjected to UV-light under controlled conditions; the active yeast is able to produce Vitamin D2 from its endogenous ergosterol.

- **Natural Enhancement** of the content of **Vitamin D** in yeast
- **Naturally elevated** levels of Vitamin D2 **standardized** to contain 400 IU or 10 µg of Vitamin D in a 50 mg quantity
- Preservation of the level of **vitamins, minerals** and other **micronutrients** naturally present in yeast

## VITAMIN D YEAST IS BIOAVAILABLE IN HUMANS<sup>(1)</sup>

In this study, 38 healthy women were given either Vitamin D2 from yeast or from a supplement (25 µg or 1000 IU) daily for four weeks. Serum 25-hydroxyvitamin D concentrations were measured as a marker of Vitamin D status in the body.



When comparing levels of serum 25-hydroxyvitamin D at baseline and again at 4 weeks, the results showed:

Significant difference between supplement & control

Significant difference between yeast bread & control

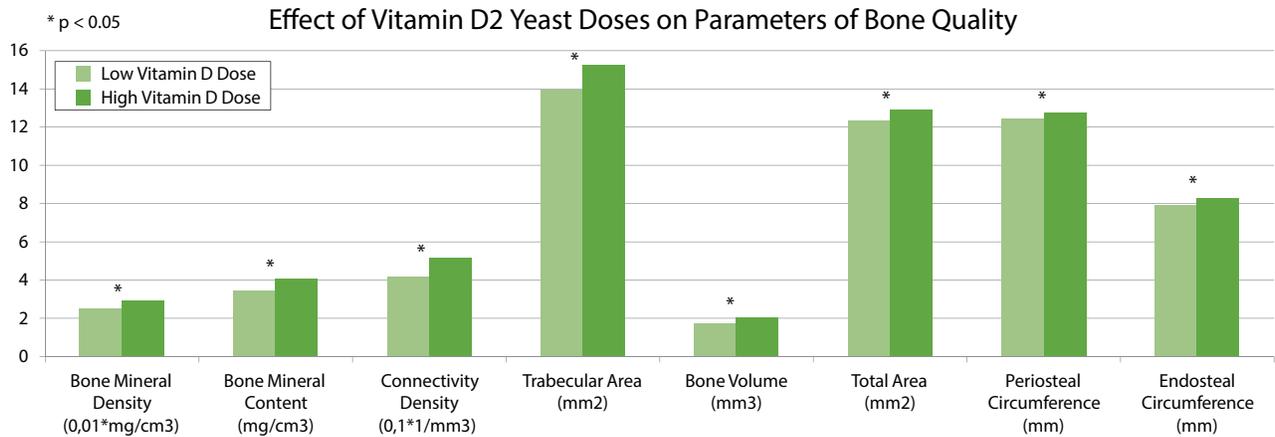
No difference between supplement and yeast bread

**Vitamin D2 from yeast or from a supplement had the same effect on serum 25-hydroxyvitamin D levels during the 4-week trial. Both contributed to an increased level during the study.**



**VITAMIN D YEAST IMPROVES BONE HEALTH<sup>(2)</sup>**

The bioavailability and efficacy of vitamin D in an 8 week dose-response study of bread made with vitamin D2-rich yeast compared to crystalline vitamin D3 in growing, vitamin D-deficient rats was assessed. Both sources of vitamin D were shown to be equally effective in improving bone quality.



**VITAMIN D: APPROVED HEALTH CLAIMS<sup>(3)</sup>**

According to the European claim regulation - Article 13.1 of Regulation (EC) No 1924/2006: **Rats fed with the highest doses of vitamin D2 yeast had significantly greater (p < 0.05) bone parameter results** compared to rats fed with lower doses.

These parameters have also been measured for the highest doses of crystalline vitamin D3 and no significant difference due to the vitamin D source has been shown: **Both sources of vitamin D are equally effective at improving bone density.**

Non-GMO  
Allergen-free  
Gluten-free  
Vegan  
Kosher  
Halal

|                              |   |
|------------------------------|---|
| <b>Calcium absorption</b>    | Vitamin D contributes to normal absorption/utilization of calcium and phosphorus and maintenance of normal blood calcium concentrations |
| <b>Bones and teeth</b>       | Vitamin D contributes to normal development of bones and teeth  |
| <b>Immunity</b>              | Vitamin D contributes to the normal function of the immune system   |
| <b>Muscle health</b>         | Vitamin D contributes to the maintenance of normal muscle function  |
| <b>Cardiovascular</b>        | Vitamin D contributes to the maintenance of normal cardiovascular function  |
| <b>Bone Growth</b>           | Vitamin D is needed for normal growth and development of bone in children   |
| <b>Falling and fractures</b> | Vitamin D may reduce the risk of falling. Falling is a risk factor for bone fractures   |

**References**

1. Bioavailability of Vitamin D from Bread made with Vitamin D Baker's Yeast. University of Helsinki
2. Hohman E, et al., 2011. Bioavailability and Efficacy of Vitamin D2 from UV Irradiated Yeast in Growing, Vitamin D Deficient Rats. Journal of Agricultural and Food Chemistry.
3. EFSA Panel on Dietetic Products, Nutrition and Allergies (NDA); Scientific Opinion on the substantiation of health claims related to vitamin D.