

Product Data Sheet

1. Product Description

Vita**CALCITE** is a functional plant booster based on foliar application (EC 1907/2006 – Reach). It provides effective supplementation with calcium (Ca), silicon (Si), and other (micro)nutrients (Mg, Fe, Zn, Mn, Cu, Mo) which is shown through significant improvement in plant/crop productivity – by increasing crop yield, quality, and improving growth rate.

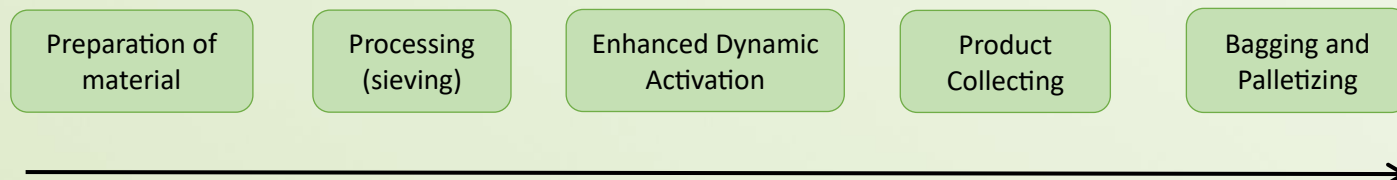
The product contains micronized natural calcium (average particle size of 5 pm) produced through our advanced dynamic activation technology. Vita**CALCITE** is composed of calcite (calcium carbonate), quartz (silicon dioxide), and other calcite related minerals such as dolomite [magnesium calcium carbonate; $\text{CaMg}(\text{CO}_3)_2$]; ankerite [$\text{CaM}(\text{CO}_3)_2$ where M = Mn, Zn, Fe], etc.

Average ingredients:

Essential nutrients:		Trace elements:		Physiochemical attributes:	
CaCO_3 :	86% - 96%	Mn:	20 - 70 mg/kg	Color:	Grey powder
MgCO_3 :	1,25% - 4,5%	Zn:	10 - 60 mg/kg	Weight:	2,5 - 2,8 g/cm
SiO_2 :	0,10% - 1,70%	Cu:	6 - 30 mg/kg	Particle size:	2 - 12 pm
Fe_2O_3 :	0,10% - 0,70%	Mo:	< 0,1 mg/kg	PH (0,3%):	6,0 - 8,0

Vita**CALCITE** does not contain any kind of toxic or pollutive ingredients, nor does it contain nitrates, chlorites, or other kinds of chemical excipients.

2. Production Flowchart



Vita**CALCITE** is an innovative natural plant aid. In a special preparation process, the so-called **Enhanced Dynamic Activation** (EDA), Vita**CALCITE** particles precipitate at high speed and are reduced to microbial small pieces and gain an energy charge. In addition, the surface area of the particles is significantly increased. Upon exit, the now-micronized particles of Vita**CALCITE** can be efficiently absorbed by the leaves and enter the target area of leaf stomata, where indispensable nutrients and trace minerals are released.

The water dissolved Vita**CALCITE** gets absorbed directly by target plant/crop where the various nutrients (Ca^{2+} , HCO_3 , Mg^{2+} , micro-elements, etc.) diffuse, resp. they reach the leaves inside cells. As a result, substantial improvement in metabolic processes ensues. Supplying important nutrients from above and helping plants become more resilient, Vita**CALCITE** provides essential plant support and is the ultimate solution to the plants' needs for mineral fertigation.



3. Application and Usage

Vita**CALCITE** foliar plant aid is deployed as a 0,3 – 0,5% solution for a total of 2 – 5 times each 15 to 30 days throughout the vegetation cycle, depending on culture. In general, 1,5 – 3kg of product is mixed into approximately 200 to 400 liters of water (per ha) and applied in the form of a fine spray onto the leaf surface. The result is accelerated plant growth and improved resistance to environmental stress.

Vita**CALCITE** can be mixed with most common agrochemical products (foliar fertilizers or pesticides) with neutral or alkaline pH reaction. It is not compatible with acidic products. When combining with another product, make sure to run a test trial before a general application.

Vita**CALCITE** is suitable for implementation in arable farming, pomiculture, vegetable growing, viniculture, commercial timberlands, cultivation of ornamental plants, lawns etc.

Vita**CALCITE** crop summary:

- **field crops** (wheat, barley, oats, corn, sunflower, sugar beet, rapeseed, soybeans, lentils, rice, etc.)
- **fruits** (pear, strawberry, plum, cherry, apple, grapes, olives, melon, watermelon, etc.)
- **vegetables** (tomatoes, cucumbers, potatoes, peppers, onions, zucchini, cabbage, kale, carrots, beets, lettuce, etc.)
- **flowers and ornamental plants, grass, and forest areas**

4. Product Benefits

Effective calcium fertigation (prevention of calcium-deficiency induced plant disorders)

Additional supply of silicon (Si) and other (micro)nutrients (Mg, Fe, Zn, Mn, Cu, Mo) manifesting in:

1. Improved photosynthesis (subsequently, the main products of biosynthesis: starch, cellulose, lignin, etc.);
2. Increased resistance to the negative effects of outside stresses (e.g., hydro stress – lack of precipitation and high temperatures, plant diseases – particularly fungal ones);
3. Increased biosynthesis of secondary metabolism products (terpenes, flavonoids, vitamins, auxins, resins, triglycerides, etc.);
4. Improved absorption of nutrients (added to the soil by regular fertilization) through the plants' system of capillary roots, leading to better mineralization;
5. Enhanced fruit dry substance resulting in better transportability and prolonged shelf life
6. Rapid growth speed on account of higher metabolic activity

and as an effect of all (1-6):

Significant improvement in plant & crop productivity – increasing crop yield and quality as well as improving growth and nutrient content (vitamins, minerals, antioxidants)

5. Product Packaging

Vita**CALCITE** is supplied in 20kg Polyethylene bags packed at the rate of 50 bags per 1 euro pallet. If proper storage conditions are observed and met, the shelf life of the product is 2 years.

The information provided in this document is based on the present state of our knowledge. It characterizes the product in relation to its scope and methodology of use. It does not represent a guarantee of the properties of the product.