



## Product Description

**MicroEssentials Oenos** is a complex nutrient formulated for growth and survival of malolactic bacteria. Unlike yeast, bacteria cannot store, nor synthesize all essential amino acids, so complex nutrients are necessary for supplementation. Newly fermented wine can often be deficient or void of nutrients due to yeast utilization, especially *Saccharomyces bayanus*, which can be slow to lyse after fermentation. Nutritional depletion can cause sluggish or even stall malolactic fermentations.

Due to the complex nutritional requirements of malolactic bacteria and the relatively harsh medium for growth, minimizing nutritional stress is important. In addition to amino acids and peptides, which are the most influential nitrogen sources required for malolactic growth, B-complex vitamins and trace minerals are especially important. **MicroEssentials Oenos** was developed specifically for *Oenococcus oeni*. It contains a diverse blend of organic protein sources (no inorganic nitrogen sources, since bacteria cannot utilize it), vitamins and trace minerals. In most cases, **MicroEssentials Oenos** will provide a 20 - 40% faster malolactic fermentation.

## Application

**MicroEssentials Oenos** is recommended for use in white wines and red wines that present challenging conditions, highly clarified wines or varietal wines that are notoriously difficult to put through malolactic fermentation - like Merlot and Zinfandel. Nutrients are strongly recommended if your wine has any of the following characteristics:

- ▶ High alcohol
- ▶ High SO<sub>2</sub>
- ▶ Low pH
- ▶ Temperature extremes (too high or too low)

## INSTRUCTIONS FOR USE

Add **MicroEssentials Oenos** to wine at the time of inoculation with malolactic culture.

- ◇ Dissolve **MicroEssentials Oenos** in warm water
- ◇ Mix solution with wine and ensure the product is dissolved completely

## TECHNICAL DATA

- ◇ Addition Level
  - ▶ Recommended dosage is 5 g / hl (0.2 g / gal)
- ◇ Storage and Shelf Life
  - ▶ Store in a cool, dry, well-ventilated environment
  - ▶ Shelf life at least 18 months if stored under recommended conditions
- ◇ Appearance
  - ▶ Tan colored granulated powder

## PACKING

**MicroEssentials Oenos** is available in 25 kg, 1 kg and 100 g packages.

## PRODUCT SPECIFICATIONS

Typical Analysis	Specification
Protein	30 - 40%
Nitrogen	4 - 6%
Moisture (probe)	12% max
pH (5% solution)	5.0 - 6.5

Microbiological	Specification
Total Bacteria Count	< 20,000 / g
Yeast and Mold	< 100 / g
Coliform Organisms	< 10 / g
<i>E. coli</i>	Negative
<i>Salmonella</i>	Negative



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