

# Pinnacle MaloSafe product information

# Type:

Pinnacle MaloSafe is a pure, concentrated and freeze-dried culture of *Oenococcus oeni* sp selected to secure malolactic fermentation.

## **Characteristics:**

• Thanks to its high concentration formula and high purity standards, Pinnacle MaloSafe can adapt to many different conditions: high alcohol, high concentration in polyphenols, low pH, etc. Pinnacle MaloSafe is fast, SO<sub>2</sub> resistant and does not produce detectable biogenic amines.

# Application:

- It covers a wide spectrum of wine applications: from low pH white wines to high-alcohol red wines rich in polyphenols.
- It ensures stability of the wine and provides softness and aromatic complexity to the wine.
- Pinnacle MaloSafe is suitable for sequential or co-inoculation (except Pinnacle Robust).

#### Formulation:

Pure concentrated active freeze-dried culture of *Oenococcus oeni* sp, maltodextrin as carrier.

## Instructions for use:

Open the sachet, add directly to the wine and mix gently without oxygenating. For more difficult wines (low pH, high alcohol), rehydration with non-chlorinated water is recommended to keep the maximum viability/vitality. To do this, dilute 1:10 for 15 min at room temperature. However, if non-chlorinated water is not available then direct pitch is recommended.



#### Dosage:

1 g/hL

This will bring a quantity of microorganisms sufficient to complete malolactic fermentation in all wines (even the most difficult) in a short time.

#### Storage conditions:

-18°C (-0.4°F).

## Shelf life:

Three years from date of manufacture when stored at -18°C (-0.4°F).

One and a half years from date of manufacture when stored at 4°C (39°F).

## Packaging:

25g laminate sachets.

# Scientific background:

Malolactic fermentation is complete when a malic acid result of 'not detected', which is usually <0.05g/L by enzymatic analysis. However, a result of 0.1 g/L or less is low enough for the maloactic fermentation to be considered virtually complete and to minimise the risk of spoilage.

Product approved for oenological use, in accordance with the regulation (EC) n° 606/2009 and OIV codex.

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CHARACTERISTICS	
Minimum - maximum temperature range	18-27°C (64-81°F)
pH tolerance	≥ 3.25
Maximum free SO <sub>2</sub> resistance (mg/L)	< 18
Max total SO <sub>2</sub> resistance (mg/L)	< 50
Alcohol resistance (%v/v)	≤ 16.5%
Fermentation rate (malic-to-lactic conversion speed)	fast
Fruity notes	moderate
Diacetyle notes	very low
Volatile acidity	very low
Biogenic Amines production	no
MICROBIOLOGICA	ANALYTICS
Viable bacteria cells:	> 10 <sup>11</sup> cells/g
Yeast:	< 10 <sup>3</sup> CFU/g
Moulds:	< 10 <sup>3</sup> CFU/g
Acetic acid bacteria:	< 10 <sup>3</sup> CFU/g
E. coli:	Absent in 1g
Salmonella:	Absent in 25g
Lead:	< 2 mg/Kg d.m
Mercury:	< 1 mg/Kg d.m
Arsenic:	< 3 mg/Kg d.m
Cadmium:	< 1 mg/Kg d.m

## **Physical properties:**

Colour: beige/cream. Form: fine powder. Solubility: water soluble.

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