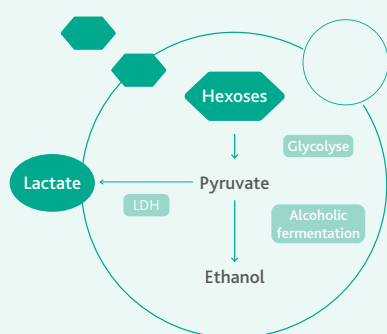


BIOACIDIFICATION WITH *LACHANCEA THERMOTOLERANS*

Lachancea thermotolerans is a yeast naturally present on grapes. It has a unique ability to partially convert fermentable sugars (glucose + fructose) into L-lactic acid instead of ethanol during alcoholic fermentation.

Mechanisms of BIOAcidification by *Lachancea thermotolerans*



Production of L-lactic acid by *Lachancea thermotolerans* through the enzymatic activity of lactate dehydrogenase (LDH; Hranilovic et al., 2018).

The BIOAcidification capacity varies from one strain of *Lachancea thermotolerans* to another. Some strains produce very little lactic acid, while other strains produce high levels of this metabolite.

LAFFORT® SOLUTION



ZYMAFLORE® OMEGA^{LT}

Selected from over 100 *Lachancea thermotolerans* strains for its capacity to produce high levels of lactic acid, ZYMAFLORE® OMEGA^{LT} imparts freshness and restores wine balance.

The level of BIOAcidification induced by ZYMAFLORE® OMEGA^{LT} varies depending on the winemaking objectives and the vinification conditions, in particular the temperature of AF and the timing of *Saccharomyces cerevisiae* inoculation.

Its metabolic activity is stronger at higher temperatures (>20°C (68°F)) and in the absence of *Saccharomyces cerevisiae* (sequential inoculation).

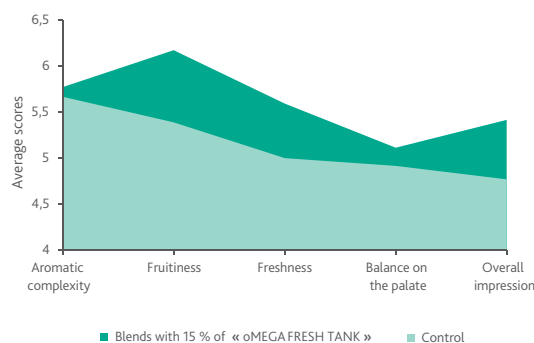
ANALYTICAL & SENSORY IMPACT

- Enhanced acidity perception and fresher organoleptic profiles of wines from warm climates/vintages.
- Decrease in pH and increase in total acidity of the wines, accompanied by a slight decrease in alcohol content.
- Colour stabilisation and increased ageing capacity.
- Alternative to traditional acidification using organic acids; exempt from labelling requirements.
- Enhanced microbial stability during aging due to lower pH resulting in higher levels of molecular SO₂.
- BIOcontrol activity against lactic acid bacteria. Inhibition of MLF with lactic acid production higher than 3 - 4 g/L.

CONCEPT "OMEGA FRESH TANK" CONCEPT

- Technological alternative: production of strongly acidified batches of wines "oMEGA FRESH TANK" to be used as blending components. Improvement of acidity parameters and aromatic profiles in wines.

Enhanced sensory profile of wines due to blending with a component fermented with ZYMAFLORE® OMEGA^{LT}



Sensory evaluation of 4 wines: comparison of control wines and blends with the addition of "oMEGA FRESH TANK". Control wines were made in 2022, 2021, 2020 and 2019, and blended with 15% of "oMEGA FRESH TANK".



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