ZYMAFLORE® OMEGA^{LT}

Non-*Saccharomyces* yeast (*Lachancea thermotolerans*) for the BIOAcidification of wine.
Selected Active Dry Yeast (ADY), non GMO, for oenological use. Suitable for the preparation of products intended for direct human consumption, in the scope of regulated use in oenology. Complies with Commission Regulation (EU) 2019/934.

SPECIFIC CHARACTERISTICS AND OENOLOGICAL PROPERTIES

Resulting from a mass selection from the *Lachancea thermotolerans* species, **ZYMAFLORE® OMEGA^{LT}** stands out for its strong capacity for acidification. It can convert part of the fermentable sugars in the must into L-lactic acid, thus adding freshness to the wine and restoring its balance.

The use of **ZYMAFLORE® OMEGA^{LT}** allows:

- An increase in total acidity and a reduction in pH.
- A slight reduction in the alcoholic strength of the wines
- Production of wines in a fresh, fruity style, while respecting the typical character of the grape varieties.
- Stabilisation of the colour and increased ageing capacity.
- Production of more acidic batches with a view to blending.
- Inhibition of MLF at L-lactic acid concentrations greater than 3 - 4 g/L.

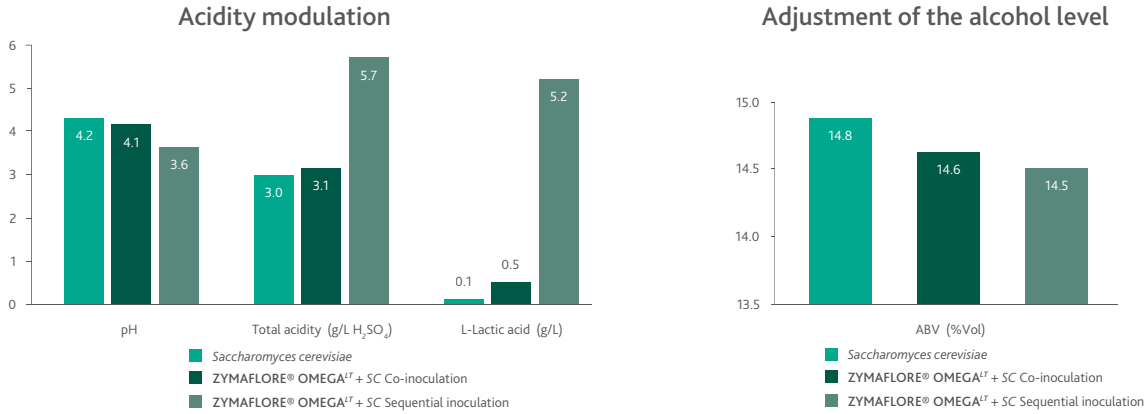
PARAMETERS AFFECTING THE GROWTH OF ZYMAFLORE® OMEGA^{LT} :

The metabolic activity of **ZYMAFLORE® OMEGA^{LT}** and the resulting production of L-lactic acid are highly sensitive to environmental conditions and in particular:

- SO_2 concentration; initial sulphite addition <4 g/hL, or less in the case of low pH.
- Fermentation temperature; activity stimulated at high temperatures (>20 °C), and limited at low temperatures (<18 °C)
- Under favourable conditions, such as a temperature above 20°C and the absence of sulphites, this strain is capable of producing high levels of L-lactic acid (>12 g/L).

EXPERIMENTAL RESULTS

ZYMAFLORE® OMEGA^{LT} should be used in combination with *S. cerevisiae* to achieve the alcoholic fermentation, either though co-inoculation (simultaneous yeast additions) or sequential inoculation. Sequential inoculation of *S. cerevisiae* favours the expression of production of L-lactic acid by **ZYMAFLORE® OMEGA^{LT}**.



*Adjustment of acidity and alcohol level in wines resulting from co-inoculation (simultaneous yeast additions) or sequential inoculation with **ZYMAFLORE® OMEGA^{LT}** and a strain of Saccharomyces cerevisiae (SC).*
Conditions: Viognier, Australia, 2019; AF temperature 18°C (64°F), pH 3.9 (Hranilovic et al. 2022).

PHYSICAL CHARACTERISTICS

Dehydrated and vacuum-packed yeasts.

Appearance ..... granules

CHEMICAL AND MICROBIOLOGICAL ANALYSES

Humidity (%) ..... < 8
Viable SADY cells (CFU/g) ..... ≥ 2.10^{10}
Lactic acid bacteria (CFU/g) ..... < 10^5
Acetic acid bacteria (CFU/g) ..... < 10^4
Yeasts of a different genus, species or strain (%) ..... < 5
Coliforms (CFU/g) ..... < 10^2
E. coli (/g) ..... none

Staphylococcus (/g) ..... none
Salmonella (/25 g) ..... none
Moulds (CFU/g) ..... < 10^3
Lead (ppm) ..... < 2
Arsenic (ppm) ..... < 3
Mercury (ppm) ..... < 1
Cadmium (ppm) ..... < 1

PROTOCOL FOR USE

OENOLOGICAL CONDITIONS

- Strain sensitive to SO_2: initial sulphite addition < 4 g/hL (40 ppm) or less in case of low pH.
- Minimum recommended pH > 3.3.
- To be used with a strain of *S. cerevisiae* to achieve the alcoholic fermentation.

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Co-inoculation (simultaneous yeast additions):

1. Prepare a *S. cerevisiae* starter according to the usual **LAFFORT®** protocol (20 g/hL (200 ppm)).
2. At the same time, prepare the **ZYMAFLORE® OMEGA^{LT}** starter.
3. Add both yeasts at the same time, then thoroughly mix the tank.
4. Adjust the assimilable nitrogen on inoculation or within 24 hours of inoculation with both starters according to the nitrogen requirement of *S. cerevisiae* and the chemical parameters of the must - see Yeast Nutrition DMT on www.laffort.com, **LAFFORT & YOU** area).

Sequential inoculation - recommended for a higher level of BIOAcidification or under limiting oenological conditions for ***L. thermotolerans***:

1. Prepare the **ZYMAFLORE® OMEGA^{LT}** starter.
2. Add the yeast then thoroughly mix the tank.
3. Add yeast not later than 24 h after inoculation with **ZYMAFLORE® OMEGA^{LT}** , unless the goal is to produce very high levels of L-lactic acid (72h maximum). Prepare a *S. cerevisiae* starter according to the usual **LAFFORT®** protocol (20 g/hL / 200 ppm).using **SUPERSTART®** (20 g/hL / 200 ppm).
4. Make an addition of assimilable nitrogen in the order of 100 - 130 mg/L N on inoculation with *S. cerevisiae* to make up for consumption by **ZYMAFLORE® OMEGA^{LT}**.

DOSE

Recommended dose: 5 -20 g/hL (50 - 200 ppm) depending on the environmental conditions, fermentation temperature and the required level of BIOAcidification

ADDITION

- Yeast strain to be rehydrated in 10 times its weight in water at a temperature of 37°C (99°F) for 20 minutes, then add 10 times its weight in must to avoid temperature differences greater than 10°C (50°F) between the must and the starter.

STORAGE RECOMMENDATION

- Store off the ground in the original unopened packaging in a cool (2 - 10°C (35.6 - 50°F)) and dry area not liable to impart odours.
- Optimal date of use: 2 years.

PACKAGING

500 g vacuum bag.

10 kg box.

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