

OPTI-MUM WHITE™

For aromatic intensity and longevity
in white and rosé wines

DESCRIPTION

OPTI-MUM WHITE™, a new natural specific inactivated yeast with guaranteed glutathione levels is the result of specific GSH+™ process that enhances glutathione availability. Added to the must at the earliest stage of alcoholic fermentation (after settling), the unique properties of OPTI-MUM WHITE™ protect against oxidation.

In terms of aromatic quality, a better expression and a longer preservation of thiols and esters after one year of aging is observed. Due to the polysaccharides release, OPTI-MUM WHITE™ addition increases mouthfeel perception and contributes to enhance wine complexity.



BENEFITS & RESULTS

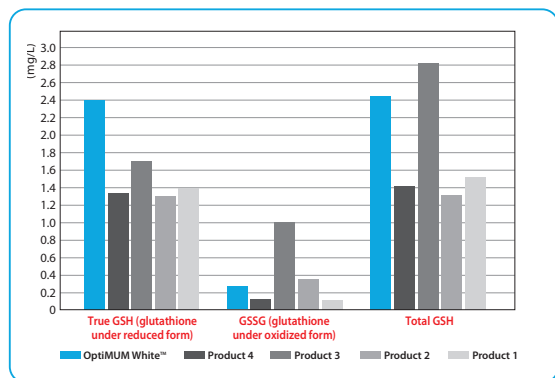


Figure 1: Reduced (GSH), oxidized (GSSG) and total glutathione (reduced + oxidized GSH) content released by various GSH-rich SIY a wine-model solution.

Optimized effective glutathione availability

Among Lallemand portfolio, a specific wine yeast was chosen for the production of OPTI-MUM WHITE™, and the process from yeast multiplication to inactivation and drying has also been adapted in order to get a high content of soluble reduced glutathione (over 18 mg/g) in the final SIY. The ability of the inactivated yeast to release GSH in the media after its addition is also an important criteria. In a research done by Stellenbosch university, different **Specific Inactivated yeast with guaranteed Glutathione levels** were studied and as presented in Figure 1, OPTI-MUM WHITE™ was the one showing a higher glutathione (under reduced form) level (Kritzinger *et al.*).

Optimized impact on aromas' content

Many studies have shown the impact of glutathione on various aromas such as terpenes, esters and naturally volatile thiols (Curtin, Fragasso *et al.*, Andújar-Ortiz *et al.*, Aguera *et al.*). Some results are shown in figure n°2, where different aromas compounds (esters and terpenes) were measured in Roupeiro et Rabo de Ovelha

GSH+™ Process
Glutathione optimized process

GSH+™ (Glutathione Optimized Process): An innovative LALLEMAND specific inactivation process to maximize the natural synthesis of glutathione to obtain a higher content of soluble reduced glutathione in the final product.



varietal wines (Portugal) treated with a standard glutathionerich inactivated yeast (standard GSH-SIY) and OPTI-MUM WHITE™, and compared to a control. The wines treated with OPTI-MUM WHITE™ had significantly more different esters and terpenes from both the control and the wine treated with the standard GSH-SIY.

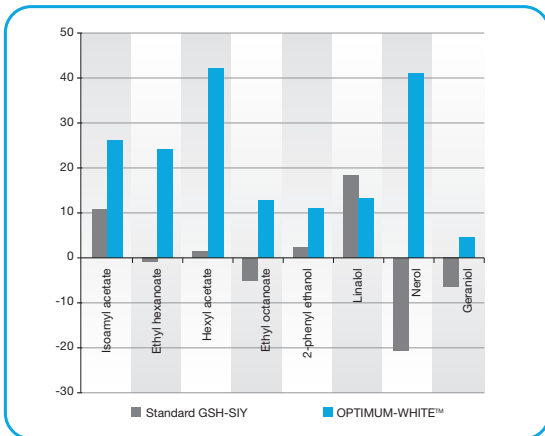


Figure 2: Trial led on Rupeiro & Rabo de Ovelha (Alentejo, Portugal): comparison between Control, Standard GSH-SIY (20 g/hL) and OPTI-MUM WHITE™ (20 g/hL) added at the beginning of AF.

Better preservation of aromas along aging

Several studies and trials have shown the positive impact of glutathione on the preservation of thiols along aging. The results presented in figure 3 and figure 4, from experimentations led in collaboration with INRA Montpellier on Sauvignon Blanc and Syrah Rosé winemaking (*Aguera et al.*) show the better preservation of the 3-mercaptohexanol (3MH) and its acetate (3MHA), which are responsible for passion fruit and grapefruit aromas, on the wine treated with OPTI-MUM WHITE™ at the beginning of AF.

Figure 3: Trial - Sauvignon Blanc: analysis of thiols after 1 year of storage in bottle (ng/L)

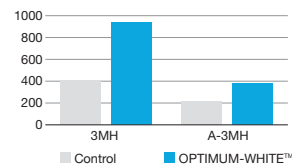
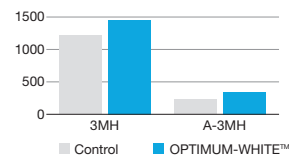


Figure 4: Trial - Syrah Rosé: analysis of thiols after 1 year of storage in bottle (ng/L)



Perception thresholds:
• 3MH : 50 to 60 ng/L • A-3MH : 2.5 to 9 ng/L

INSTRUCTIONS FOR OENOLOGICAL USE

Recommended dosage: 20 to 40 g/hL (1.7 to 3.4 lb per 1000 U.S gallon) depending on the benefits desired.

- Suspend in 10 times its weight of water or must and add to the must at the beginning of the alcoholic fermentation.



OMRI (Organic Materials Review Institute) is a US national nonprofit organization that determines which input products are allowed for use in organic production and processing.

PACKAGING AND STORAGE

- 1 kg and 2.5 kg sealed alu foil bags.
- Store in a cool dry place.
- To be used once opened.

Distributed by:

C.A.L LTD

3-34 Mihini Road,
Henderson, Auckland 0610

john@cal.org.nz | www.cal.org.nz

+64 21 505 331

The information in this document is correct to the best of our knowledge. However, this data sheet should not be considered to be an express guarantee, nor does it have implications as to the sales condition of this product. April 2022.



WINE YEASTS



WINE BACTERIA



NUTRIENTS /PROTECTORS



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ENZYMES



CHITOSAN



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