



OptiMUM WHITE™



For aromatic intensity and longevity of white and rosé wines, added at the beginning of fermentation.

ORIGIN AND APPLICATION

OptiMUM WHITE™ is a natural specific inactivated yeast, with guaranteed glutathione levels. It is now well understood that glutathione is a natural anti-oxidant, preserving the wines aroma and colour over time. **OptiMUM WHITE™** contains the highest level of true active and efficient form (reduced form) of glutathione of any SIY on the market. A specialized process and timing of inactivation (developed by Lallemand R&D) and an enrichment process permits rapid availability of the soluble fractions of the inactivated yeast, such as glutathione.

Since its release in both Australia and New Zealand for the 2011 vintage, the results have been impressive. After using **OptiMUM WHITE™** the wines demonstrate a freshness of fruit expression and a reduction in harsh acid perception. It has been used extensively in Pinot Gris, Sauvignon Blanc and Riesling, varieties where the preservation of varietal aromas is paramount.

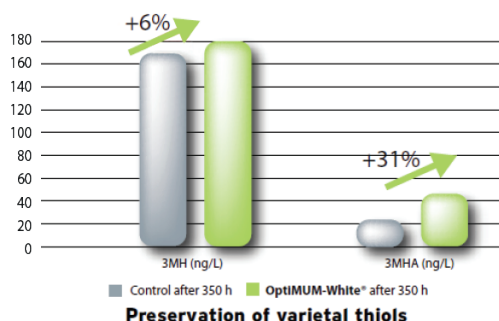


**OptiMUM
WHITE**

OENOLOGICAL PROPERTIES

- White and rosé wines only ● ●
- Highly recommended for Pinot Gris, Riesling and Sauvignon Blanc.
- The high glutathione content protects against oxidation.
- Better expression and longevity of thiols and esters one year after bottling.
- **OptiMUM WHITE™** contributes to enhanced wine complexity and has a smoothing effect to bring more roundness to the wine.

Numerous studies have shown the positive impact of glutathione on the preservation of thiols during wine ageing. The treatment with **OptiMUM WHITE™** shows better preservation of the 3-mercapto-hexanol (3MH) and its acetate (3MHA), which are responsible for passionfruit and grapefruit aromas.

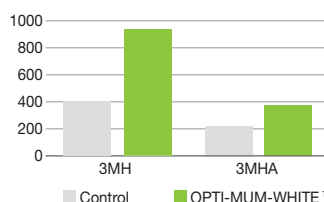


Trial on Sauvignon blanc: Simulation of accelerated oxidative ageing in the wine

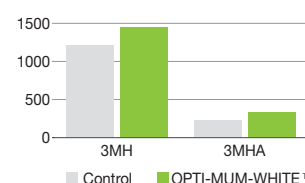
Specific protocol: The wine is put in contact with pure O₂ in a half-filled container for 350 hours at 20°C. The O₂ concentration measured with PreSens® is 50 mg/L at the end of 350 hours exposure.

Perception thresholds : • 3MH – 50 to 60 ng/L | • 3MHA – 2.5 to 9 ng/L

Trial - Sauvignon Blanc 2008: analysis of thiols after 1 year of storage in bottle (ng/L)

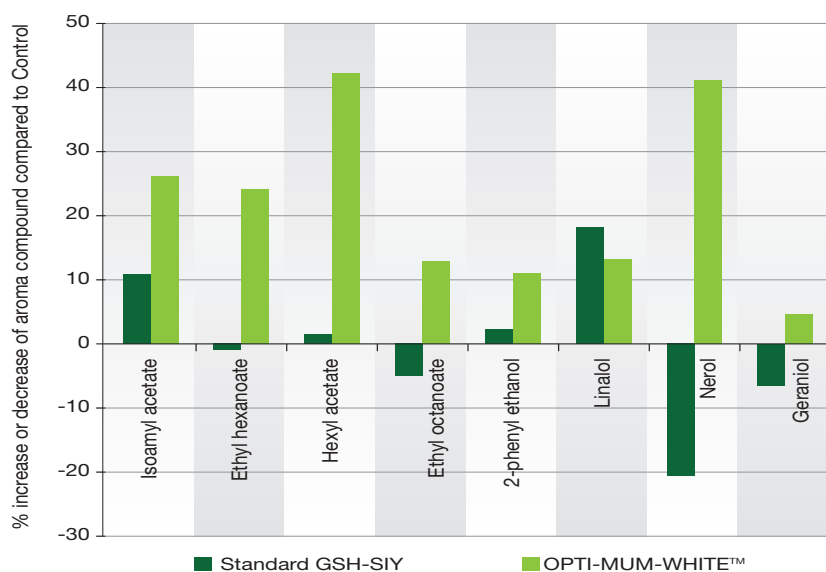


Trial - Syrah Rosé 2008: analysis of thiols after 1 year of storage in bottle (ng/L)



Perception thresholds:

• 3MH : 50 to 60 ng/L • A-3MH : 2,5 to 9 ng/L



Optimised impact on wine aromas

Many studies have shown the impact of glutathione on various aromas such as terpenes, esters and volatile thiols (Curtin 2009, Fragasso et al 2010, Andújar-Ortiz et al 2010, Aguera et al 2012).

Example shown: Roupeiro & Rabo de Ovelha varietal wines (Portugal) treated with standard glutathione-rich inactivated yeast (standard GSH-SIY) and OptiMUM WHITE™, and compared to a Control. The wines treated with OptiMUM WHITE™ have significantly more esters and terpenes than the Control and standard GSH-SIY wines.

FURTHER INFORMATION

Ask a Lallemand representative to provide the following information:

Proceedings of XVIIIes Entretiens Scientifiques Lallemand – South Africa 2006 – ‘New Trends in the Use of Specialty Inactivated Yeast During Winemaking

The Wine expert (Jan 2013) – Practical Winemaking Information “ Glutathione and its application in Winemaking”

DOSE RATE

Recommended average dose is 30 g/hL (300 ppm) (maximum: 40 g/hL).

INSTRUCTION FOR USE

- Suspend **OptiMUM WHITE™** in 10x its weight in water or juice and mix.
- Ensure the product is well suspended, free of lumps before adding to the juice, after yeast inoculation, or early in fermentation (within the first 24 hours).
- The efficacy of the product is optimised by adding early during fermentation (within the first 24 hours). The results may not be as significant if added late in fermentation.

The use of **OptiMUM WHITE™** does not replace the need for a good nutrient regime during alcoholic fermentation.

OptiMUM White™ is patented in Europe (No. 1706478), New Zealand (No. 548618) and South Africa (No.2006/05985)

PACKAGING AND STORAGE

- 2.5kg sealed, aluminum foil bags.
- Store in a dry environment below 25°C.

The information herein is true and accurate to the best of our knowledge; however, this data sheet is not to be considered as a guarantee, expressed or implied, or as a condition of sale of this product.