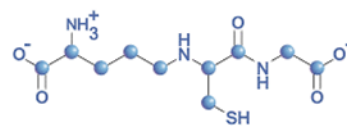


Glutathione

Glutathione is a natural tripeptide (Glu-Cys-Gly) that can protect grape must and wine from oxidation through its ability to react with quinones to form the grape reaction product, thus, preventing browning and loss of aroma in wine.

This is particularly important in white varieties, such as Sauvignon blanc.



Glutathione

GLUTASTAR™

Glutastar™

Innovative tool of choice for managing wine oxidation, aroma preservation and control of wine ageing

- A new Specific Yeast Derivative with the highest level of reduced glutathione (GSH)
- Unique combination of nucleophilic compounds, including GSH, that act as competitors of quinones and protect wine aromas and colour
- The use of glutathione-enriched inactivated dry yeast is permitted in winemaking (OIV & FSANZ)
- Certified for organic winemaking by [BioGro](#)

Features of using reduced [GSH in winemaking](#)

- It is important to have good nutrition for fermentation, to ensure that the yeast do not use GSH as a nitrogen source and potential for H₂S production
- GSH in an inactivated yeast product needs to be added early (within the first third) of the fermentation
- Glutastar™ contains the highest allowable amount of GSH by OIV standards.
- OptiMum White contains high levels of GSH, within OIV standards



Use of Reduced Glutathione – when it all began

The addition of reduced glutathione (GSH) in winemaking to prevent enzymatic browning of wine and to preserve wine colour and aroma compounds was proposed over 20 years ago. In the late 2000's the use of inactivated yeast enriched with glutathione was trialed, and since then there has been much investigation by several international research teams to understand the mechanisms behind the oxidative protection of GSH.

Lallemand R&D has been working with inactivated yeast enriched glutathione products for over 10 years, and Glutastar™ is the 3rd generation Specific Yeast Derivative (SYD) product (Opti White – OptiMum White – Glutastar)

- It is a combination of the GSH, peptides and nucleophilic components in SYD that are protecting wine aroma compounds.

[Regulations](#) on GSH use in winemaking

The use of pure glutathione is not permitted in winemaking by OIV & FSANZ. However, the use of glutathione-enriched inactivated dry yeast (Specific Yeast Derivative, SYD) is permitted in winemaking by OIV & FSANZ.

The OIV has been working on the use of GSH and glutathione-enriched inactivated dry yeast for almost 10 years and has undertaken vast amounts of validation research to then approve the use of glutathione-enriched inactivated dry yeast in winemaking. During this process there are a series of OIV resolutions from 2009 to 2018.

<https://www.oiv.int/public/medias/5365/oiv-oeno-532-2017-en.pdf>

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