A new selected specific inactivated yeast to protect wine against oxidation during storage / aging.

ORIGIN AND APPLICATION

As soon as alcoholic fermentation (AF) is complete, wine becomes very sensitive to oxygen. Oxidation mechanisms are responsible for the loss of fruit aromas and the appearance of heavy notes.

**PURE-LEES LONGEVITY™** is a specific inactivated yeast developed in collaboration with INRA Montpellier in order to provide a tool to help protect wines against oxidation during storage and aging.

**PURE-LEES LONGEVITY™** relies on a high dissolved oxygen consumption capacity.

Since 2008 different specific inactivated yeasts were evaluated in order to establish their capacity to consume oxygen, first at lab-scale using a standard protocol to characterize the oxygen consumption (maximum capacity and speed) in both model-wine solution and real wines; then at pilot-scale to evaluate the impact of the treatment in terms of wine protection against oxidation. Based on this experience, we fine-tuned the best candidate in order to develop **PURE-LEES LONGEVITY™**, a specific inactivated yeast with a high dissolved oxygen uptake capacity.

APPLICATIONS

![Graph showing maximal O₂ consumption capacity](image)

**Figure 1**: Evaluation of the maximal oxygen consumption of several inactivated yeasts – characterization using a standard protocol in a model-wine solution

**PURE-LEES LONGEVITY™** O₂ consumption rate for a dose rate at 40 g/hL is 1.7 mg/L dissolved oxygen. If the dose rate is doubled, the level of O₂ consumption also increases. Consumption rate by this SIY yeast = 0.7 mg/L O₂ per hour.
Several trials undertaken at pilot and winery scale have shown that \textit{PURE-LEES LONGEVITY™} helps protect color and aromas from oxidation (more efficiently than SO$_2$ under these experimental conditions):

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure2.png}
\caption{Sauvignon Blanc wine trial comparing of Control vs. SO$_2$ addition (60 ppm) vs \textit{PURE-LEES LONGEVITY™} (40 g/hL): Color evaluation after 5 months of aging.}
\end{figure}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure3.png}
\caption{Sauvignon blanc wine trial comparing SO$_2$ addition (60 ppm) vs \textit{PURE-LEES LONGEVITY™} (40 g/hL): Thiols evaluation after 5 months of aging.}
\end{figure}

**DOSAGE AND INSTRUCTIONS FOR USE**

- Recommended average dosage is 20 to 40 g/hL.
- Time of contact depends on your ageing process time (from 1 to 9 months).
- Suspend \textit{PURE-LEES LONGEVITY™} in ten times its weight of water or wine and mix.
- Mix well for a quick and optimized impact.
- Add to the must/wine, towards the end of alcoholic fermentation.
- \textit{PURE-LEES LONGEVITY™} is a specific inactivated yeast; thus it contains naturally amino acids and minerals. \textit{PURE-LEES LONGEVITY™} also contributes to the nutritional content available for yeast even though it does not replace the regular nutrition program.

**PACKAGING AND STORAGE**

- 1 kg sealed 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.