The vinification on clarified or highly clarified white musts at low temperature is a process applied to a large number of wineries around the world on noble types of grape varieties such as the Muscat, the Sauvignon, the Chardonnay and the Viognier and also on neutral types of grapes such as the Colombard and the Trebbiano. This type of winemaking, generally made without aeration can be problematic for most of the yeasts, especially if the deficiencies they cause combine with a low content in assimilable nitrogen.

Lalvin QA23®, selected on soil types from the area of the appellation of Vinhos Verdes in Portugal offers qualities of fermentative security bound to a weak demand in assimilable nitrogen and O₂.

Moreover this yeast combines its essential qualities with abilities to enhance citrus-fruit-type aromas (lime, grapefruit) in the aromatic white grapes.
Saccharomyces cerevisiae var. bayanus

- Competitive factor
- Tolerance to alcohol: up to 16%
- Average lag phase
- Fast fermentation rate
- Fructophylic yeast well completing the fermentations
- Optimum temperature range: 14 to 28°C

- Very low requirement in assimilable nitrogen, at any temperature (18 to 28°C)
- Low requirement in O₂
- Low production of volatile acidity: < 0.2g/L eqH₂SO₄ as an average
- Low SO₂ production
- Low production of H₂S due to the low requirement in assimilable nitrogen
- Low foam formation

**FERMENTATIVE SECURITY AND AROMAS**

Comparison of the needs in assimilable N₂ between different yeasts in a synthetic N₂-deficient must (Julien, 2000)

Comparison of the production of volatile acidity between 3 yeasts in the vinification on a highly clarified must of 20 NTU of turbidity.

<table>
<thead>
<tr>
<th>Type of vine</th>
<th>Wine-growing region</th>
<th>Aromas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chardonnay</td>
<td>Oregon, Chile</td>
<td>Citrus fruits, pineapple</td>
</tr>
<tr>
<td>Muscadet</td>
<td>Loire Valley</td>
<td>Aromas of white-flesh fruits (young wines), dry fruits (wines after aging)</td>
</tr>
<tr>
<td>Ugni-blanc</td>
<td>Gers</td>
<td>Fresh citrus fruits, floral aromas (peony and rose)</td>
</tr>
<tr>
<td>Muscat petit-grain</td>
<td>Roussillon</td>
<td>Citrus fruits, pineapple, white peach</td>
</tr>
</tbody>
</table>

Table realized with tasting carried out by professionals on winemaking made on vintages 1992 to 1994.

**DOSSAGE**

White winemaking: 25 to 40g/hL

1°/ Rehydrate in 10 times its weight of water (temperature between 35 and 40°C).
2°/ Dissolve carefully by gentle stirring and wait for 20 minutes.
3°/ Add to the must. The temperature difference between the must to be inoculated and the rehydration medium should never be over 10°C (if any doubt, please contact your supplier or Lallemand).
4°/ The total rehydration duration should never exceed 45 minutes.
5°/ It is essential to rehydrate the yeast in a clean container.
6°/ The rehydration in must is not advisable.