

ENARTIS NEWS

TECHNICAL CHALLENGES IN THE PREPARATION OF EARLY RELEASE RED WINE

The wine market is becoming more and more unpredictable. You might find yourself needing wine ready for bottling ahead of your planned schedule. Let's have a look at one of the more complex challenges, red wine. Is it possible to shorten aging and stabilization times in a safe and effective way without sacrificing quality?

TECHNICAL CHALLENGES

Incomplete malolactic fermentation

Managing a wine which has not yet undergone malolactic fermentation is one of the main difficulties related to early bottling. At a sensorial level it is necessary to temper the sour note of malic acid whilst at a microbiological level it is necessary to prevent malolactic fermentation onset after bottling.

Let us first focus on the microbiological aspect.

A pre-bottling filtration at 0.45 µm is absolutely crucial to lower the contamination of lactic acid bacteria for a microbiologically clean wine. In addition to sterile filtration, it is essential to add a product with a strong bacteriostatic effect that can inhibit the development of cells able to pass through the filter. Lactic acid bacteria are relatively sensitive to sulfur dioxide: 0.3 mg/L of molecular SO₂ is lethal for most of the strains.

As an alternative or in addition to SO₂, our new Enartis tannin can be used: Hideki. Hideki has a bacteriostatic effect that helps prevent the onset of malolactic fermentation (Figure 1). Moreover, thanks to its remarkable antioxidant activity, Hideki amplifies the antimicrobial action of SO₂, preserving a higher quantity of molecular SO₂ in bottle for an extended period of time.

HIDEKI • Slows the growth of malolactic bacteria

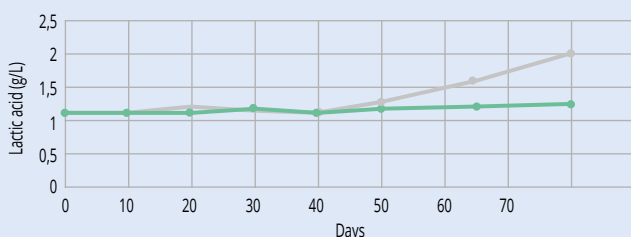


Figure 1: Hideki limits lactic acid bacteria growth thus preventing malolactic fermentation onset. (Red wine with 0.07 ppm molecular SO₂)

Taste Balance

A young red wine can be unbalanced on the palate because of an aggressive tannicity which, in the case of incomplete malolactic fermentation, is amplified by an excessive acidity. In the most severe instances, clarification is the only possible solution. However, it is worth trying other solutions which are easier and faster to apply (Table 1).

The simple addition of polysaccharides such as mannoproteins and gum Arabic often achieve the right balance needed. Sometimes, the best remedy involves the use of a suitable tannin. This is most notable in wines that have not undergone malolactic fermentation. Here the use of tannin over polysaccharides is preferred as it creates a more unfavorable environment for the development of bacteria.

SUBTRACTIVE REMEDIES	ADDITIVE REMEDIES
for ASTRINGENCY AT PALATE ENTRANCE	
ATOCLAR M (low molecular weight gelatin) 4-20 g/hL	SURLI VELVET (yeast mannoproteins) 2-5 g/hL
for ASTRINGENCY AT BACK PALATE	
PULVICLAR S (high molecular weight gelatin) 1-4 g/hL	SURLI VITIS (grape skin tannin + gum Arabic) 2-15 g/hL ENARTISTAN UVASPEED (grape skin tannin) 1-10 g/hL SURLI ELEVAGE (inactivated yeast rich in free mannoproteins) 10-30 g/hL
for EXCESSIVE ACIDITY	
POTASSIUM BICARBONATE	ENARTISTAN UVASPEED (grape skin tannin) 2-8 g/hL ENARTISTAN UVA (grape seed tannin) 0.5g/hL MAXIGUM PLUS (gum Arabic Verek)

Table 1: Subtractive and additive remedies for treating early released red wine with common taste imperfections.

Aroma Complexity

The urgency of preparing wine may require the premature end of the aging phase, resulting in the sub-optimal oxidation-reduction state, or an incomplete treatment with oak or fine lees, thus limiting the full aromatic expression of the wine. The use of tannins can be of great help in correcting these olfactory imperfections (Figure 2).

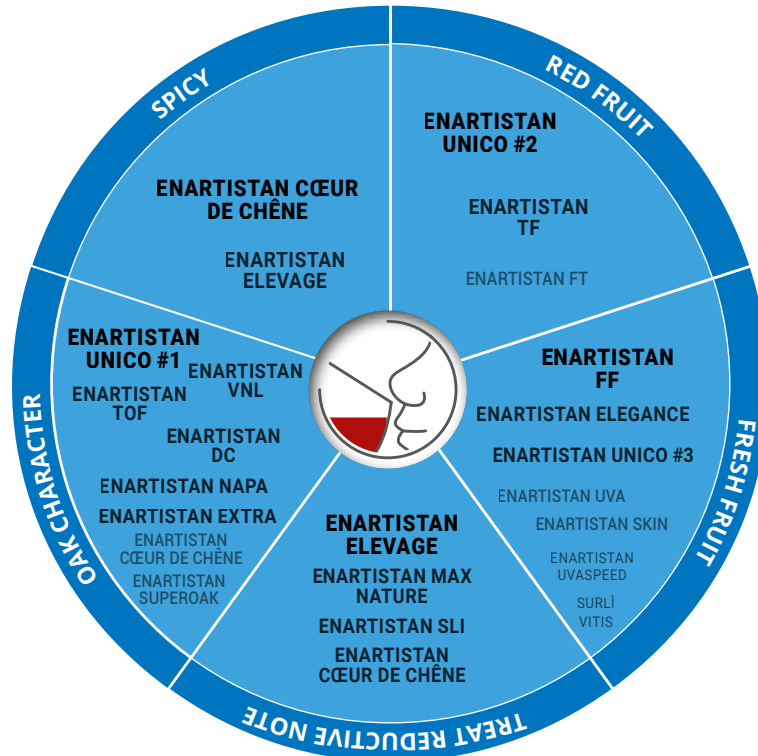


Figure 2: Enartis tannins that can help to treat early released red wine most common taste imperfections.

Stabilization

Cold stabilization on average requires 8-15 days of treatment, and is not always possible with your need to have wines bottled early. Potassium polyaspartate and gum Arabic (Table 2) are the most suitable alternatives to ensure tartrate and color stabilization when you are not afforded the luxury of time.

SOLUTION	DESCRIPTION	TARTRATE STABILITY	COLOR STABILITY
MAXIGUM F	Liquid preparation of highly filterable Verec gum Arabic		✓
MAXIGUM PLUS	Liquid preparation of highly filterable Verec gum Arabic + mannoproteins		✓
ZENITH UNO	Liquid preparation of potassium polyaspartate	✓	
ZENITH COLOR	Liquid preparation of potassium polyaspartate and highly filterable Verec gum Arabic	✓	✓

Table 2: Enartis solutions for the stabilization of early released red wines.

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