

HYBRID RED WINEMAKING PROTOCOL

Hybrid grapes are the result of crossbreeding different grape species, typically *Vitis vinifera* with North American or other non-*vinifera* species. These varieties combine desirable traits such as disease resistance, cold hardiness, and improved yield, while maintaining the flavor and aromatic profiles of traditional wine grapes. Their adaptability to diverse growing conditions and sustainable viticulture practices makes them a valuable tool in modern winemaking.

Red hybrid grapes don't always behave like *vinifera*. Hybrid reds are known for their low tannin retention, high TA, and sometimes high pH. Each hybrid varietal is different, so consider these guidelines as tools for your hybrid red winemaking to help make the most balanced wine possible with your fruit.

FRUIT RECEIVAL

To fruit in transit, add 2 - 5 g/hL (12 - 30 g/ton) ZYMAFLORE™ EGIDE^{DM} as a form of BIOProtection to prevent spoilage organisms and decrease VA. Lean on the higher side of that dose rate if your fruit is compromised.

Consider: if fruit has significant rot or botrytis, consider using 10 - 20 g/hL (100 - 200 ppm) TANIN GALALCOOL™ in the must to inhibit laccase activity.

FERMENTATION TANNIN

Protection & structure: helps prevent oxidation, preserving aromatic profile. Eliminates oxidized phenolics, prevents browning during barrel aging and removes bitterness. Hybrid reds are classically low in tannin, partially due to their high protein content and naturally occurring tannins precipitating out into solution. Lean on the higher end of the dose rate for best protection against oxidation and oxidative enzymes.

- **TANIN VR SUPRA™**: fermentation tannin, blend of skin, seed, and wood tannins. For enhancing structure, stabilizing color, and inhibiting oxidative enzymes (laccase) from mold infection. Dosage: 30 - 40 g/hL (300 - 400 ppm). Add to must at first tank mixing.
- **TANIN VR COLOR™**: fermentation tannin, high in catechin, specific for stabilizing coloring matter. Contributes to overall structure and balance of the wine. Dosage: 20 - 30 g/hL (200 - 300 ppm). Add during first 1/3rd of fermentation.



Practical Advice

To add structure, volume, an additional tannin source, and subtle vanilla notes, think about NOBILE™ SWEET GRANULAR. Dosage: 2 g/L

Consider: pressing early (~5 brix) to avoid extracting bitter tannins from the seeds.

YEAST SELECTION (20 g/hL - 200 ppm)

Modern: ZYMAFLORE™ EDEN - Very high production of aromatics. Raspberry, blueberry & blackberry. Excellent fermentation kinetics. Consider with: Frontenac, Léon Millot, Marechal Foch, Marquette. Alc. Tol.: 15.5%, Temp: 68 - 86°F.

Finesse: ZYMAFLORE™ XPURE - Aromatic purity, low production of negative sulfur compounds, good mouthfeel with notes of cherry & blackberry. Consider with: Marquette, Baco Noir, Chambourcin. Alc. Tol.: 16%, Temp: 59 - 86°F.

Classic: ZYMAFLORE™ F15 - High production of red fruits, and high glycerol production, malic acid consuming. Consider with: Lenoir, Chelois, Norton. Alc. Tol.: 16%, Temp: 68 - 89.6°F.



LAFFORT

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YEAST REHYDRATION

- **SUPERSTART™ ROUGE:** yeast rehydration nutrient rich in sterols to help build healthy yeast membranes for greater temperature and alcohol resistance. Dosage: 20 g/hL (200 ppm).

FERMENTATION NUTRITION

- **NUTRISTART™:** complex yeast nutrient, organic nitrogen, DAP and thiamine. Dosage: 20 - 60 g/hL (200 - 600 ppm).
- **NUTRISTART™ ORG:** 100% organic nitrogen from yeast origin. Dosage: 30 - 60 g/hL (300 - 600 ppm).
- **THIAZOTE™ PH:** diammonium phosphate (DAP) and thiamine. Dosage: 10 - 50 g/hL (100 - 500 ppm).

MALOLACTIC FERMENTATION

To take the edge off high-malic varieties, we encourage malolactic fermentation.

- **LACTOENOS™ B7 Direct:** direct inoculation, robust ML bacteria in challenging conditions.
 - **Early Co-inoculation:** 24 - 48 hours after AF starts. For musts with pH less than/equal to 3.4, we recommend late co-inoculation or sequential inoculation.
 - **Late Co-inoculation:** 5.2 - 2.6 Brix.
 - **Sequential Inoculation:** after AF has finished.

AGING

- **POWERLEEST™:** inactivated yeast rich in mannoprotein and Hsp12 peptides, plus β - glucanase enzymes, to maximize mouthfeel and fruit flavors. Will give a perception of sweetness and weight to the finished wine. Timing: Add any time during fermentation or aging. Dosage: 15 - 30 g/hL (150 - 300 ppm).
- **EXTRACLEAR™:** helps settle and increase filterability on challenging wines. Add during the last 1/3 of fermentation to take advantage of the warmth of fermentation, or anytime during aging. Dosage: 6 - 10 mL/hL.
- **OENOBRETT™:** a preventative and curative treatment against *Brettanomyces* and general microbial control. Use after malolactic fermentation has been completed. Ideal for high pH wines that need additional protection. Dosage: 5 - 10 g/hL (50 - 100 ppm).

AGING TANNIN

It can be challenging to achieve a hybrid red with tannin structure resembling a vinifera red. We recommend aging tannins for protection from oxidation during the aging process, and some find they can help provide additional structure and palate length.

- **TAN'COR™ GRAND CRU** - rich in catechin, grape tannins, and ellagic tannins. Enhances structure and palate length, stabilizes color. Starting dose: 10 - 20 g/hL (100 - 200 ppm).
- **TANIN VR SKIN™** - 100% grape-derived from skins, can compensate for lack of natural grape tannin. Starting dose: 10 - 20 g/hL (100 - 200 ppm).



Practical Advice

NOBILE Oak Alternatives - If you're not aging in barrel, consider our line of Chips, Blocks, Staves, and Barrel Refresh for aromatic complexity, mouthfeel, and antioxidant benefits of oak.

