

DEALING WITH UNDER-RIPE GRAPES AND GREEN CHARACTER

Even with proper vineyard / harvest management, it is possible to get under-ripe red grapes...

CONCERNS ABOUT MAKING WINE FROM UNDER-RIPE FRUITS:

- Limited extractability from the skins (color and mouthfeel).
- Unripe and green seed tannins.
- Green character ("green pepper").

LIMITED SKIN EXTRACTABILITY

Under-ripe grapes often have thicker skins, which have a limited extractability. Anthocyanins, tannins and aroma precursors will be harder to get. Purified enzymes will help you to extract them without having to work through excessive pump overs. The enzyme **LAFASE® FRUIT** will enhance the fruity character of your grapes. **VR SUPRA®** will protect your skin tannins as well.

ADDRESSING UNRIPE AND GREEN SEED TANNINS

With green seed tannins, you will want to limit the maceration time and the extraction regime during the alcoholic phase of fermentation, to avoid unnecessary astringency in the wine. Enzymes (**LAFASE® FRUIT**) will help you extract valuable components, within a shorter maceration time. The lighter extraction regime may result in lesser tannin content, and potentially color instability. To protect the skin tannins from precipitating out with the proteins, use **VR SUPRA®** at an early stage. It will not only protect the grapes from oxidation, but part of it will also play its 'sacrificial' role, precipitate with the grape proteins. Later on during fermentation, **VR COLOR®** will be highly efficient to stabilize color with long-lasting bounds (ethanal bridge); **VR COLOR®** is soft in mouthfeel.

DEALING WITH GREEN CHARACTER

Pyrazines, or IBMP (Isobutyl Methoxy-Pyrazine), are extracted from the skin and the pulp. IBMP is not metabolized or degraded at any stage of the wine making. The only strategy consists then in masking the perception of this green character and preserving the fruity aromas. The available toolbox includes yeasts, bacteria and oak. **ZYMAFLORE FX10®** has been found to produce wines with significant lower green perception. As you need to minimize maceration, you may also want to choose **ZYMAFLORE F15®** or **ACTIFLORE® F33**, which will ferment fast. Bacteria co-inoculation (**450** or **350 PreAc**) will also preserve the fruity aromas, by reducing the phases without SO_2 protection (oxidation). Last but not least, **NOBILE® AMERICAN BLEND** granular and oak chips will help mask the perception of green character when used during fermentation, and if necessary during ageing. If a green character is still strong later on, **GEOSORB®** may help to reduce this perception. To work on the wine structure, ageing tannins or **BIOLEES®** will also be useful. We will be happy to help you set up bench trials!

