HOW TO ENSURE THE DRINKABILITY OF RED WINES

Supple, generous red wines that are easy to drink because their alcohol content is not too high and their tannin structure is well blended. **These hedonistic tasting characteristics are sought after by wine consumers, as shown by the most recent studies.**

However, climate changes like higher temperatures and drought result in grapes with higher sugar concentrations and lower acid concentrations. Phenolic and aromatic maturity also change, directly impacting organoleptic characteristics.

As a result, the wines obtained have a **higher alcohol content** and are **less acidic, with heavier and sometimes less intense aromas – completely at odds with market expectations. Translating these sensory attributes into oenological terms** is essential if we are to understand the issues at stake and come up with appropriate solutions.

RED WINE

Drinkability is the term used to describe **a red wine that is easy for** consumers to **enjoy**. For winemakers, this implies giving careful **thought to the maceration itinerary** (thermovinification versus traditional maceration) and **working on the tannins to control mouthfeel parameters** such as structure and astringency. It's also a question of **composing the aromas and controlling what can mask them.**

MARTIN VIALATTE® HAS IDENTIFIED 4 KEY MOMENTS, DESCRIBED AND SUPPORTED BY THE APPROPRIATE TOOLS

1 HOW TO MASTER GRAPE POTENTIAL

Achieve oenological goals by targeting problems in the vineyard with nutritional biostimulants

To guarantee the drinkability of wines it is first necessary to **ensure and preserve the quality of the raw material, i.e., the grapes.**

From veraison until leaf fall, vines accumulate nutrients that will enable them to complete their cycle. If these reserves are not replenished, particularly as a result of adverse weather conditions, the smooth progress of stages such as flowering may be jeopardised. This key stage is necessary, for example, **to ensure the uniformity of the berries, as well as phenolic maturity and the aromatic potential** that will contribute to the freshness of the wines.

It may be advisable to **make nutritional** corrections at an early stage to protect the vines from stress and make up for any imbalances that may impact these key mechanisms.

	EFFECTS ON VINES	OENOLOGICAL IMPACT
oenoterrisfleur	Nourishes, rebalances and unblocks to ensure successful flowering	Uniform phenolic maturity, optimised aromatic potential
AFTERWARDS oenoterrisexpression	Better berry growth and polyphenol synthesis	Enhanced colour potential and structure, and higher ester concentrations

The importance of the harvest date

Assessing the maturity of the grapes is paramount to target **the right aromatic window**. It is possible to establish the optimum harvest date based on the desired aromatic profile with the help of **MaturOx**, a maturity index from the NOMASense™ PolyScan by WQS.

This tool uses voltammetric measurements to fingerprint the grapes, enabling us to **determine when sugar loading has stopped** and to define the **'fresh fruit'** aromatic window.

RECEIVING THE HARVEST

Preventive and systematic **microbiological control**

At harvest time, biochemical reactions take place in the berry:

- **oxidation mechanisms caused by the enzymes present**
- **development of microorganisms that begin to break down sugars**

Preventing and limiting this development helps to preserve the organoleptic quality of the must.

This is all the more necessary in the current climate context.

Rising pH and the resulting drop in acidity is conducive to the development of these spoilage microorganisms.

KTS FA

A preparation made from **activated chitosan**, used as a **biocontrol agent** to **reduce contamination** caused by spoilage microorganisms.

WHY?

Quickly and effectively reduces indigenous microbial flora. Prevents masking of fruitiness by limiting the production of unpleasant tastes by these microorganisms.

WHEN?

As early as possible, ideally on the grapes.

HOW?

To spray on grapes, prepare a 5% solution and do not leave it out in the sun (chitosan degrades at T°>40°C).

2 HOW TO MANAGE AROMAS AND POLYPHENOLS

AFTER HOT MACERATION

Viazym THERMO

Concentrated liquid enzyme preparation used to **degrade pectins and colloids in thermovinified must.**

WHY?

To facilitate pressing and clarification of musts that have undergone heat treatment (thermovinification, flash détente, hot pre-fermentation maceration).

WHEN?

After thermovinification.

HOW?

Incorporate in the volume to be treated when its temperature is below 65 °C.

Thermovinified grapes are very rich in pectins, making them very difficult to press and clarify without adding enzymes.

Thermovinification solution

This technique and its variants involve **heating the grapes for a variable period of time, cooling them** (classic thermovinification, MPC, flash detente), and then vinifying the resulting must in the liquid phase (thermo, MPC) or solid phase (MPC, flash).

This allows you to **extract anthocyanins for colour**, and **polyphenols for structure** and **fruity aromas, while limiting those that give the wine a grassy flavour.**

Thermovinification is also a good alternative for matrices with health problems. With these, long maceration is more delicate as it helps to **eliminate undesirable microorganisms and polyphenol oxidases.**

However, **particular care** must be taken with a matrix obtained using this technique, for two reasons:

- The **anthocyanins released** are unstable and highly sensitive to oxidation, and need to be protected **by co-pigmentation**, then **stabilised** with exogenous tannins.
- The juices are **highly turbid** and need to be clarified before fermentation.

3 HOW TO REVEAL THE AROMAS

The importance of the yeast/nutrition pairing

It is just as important to **choose organic nutrition** for red wines as it is for white and rosé wines. The assimilation of amino acids by the yeast, optimised with **split doses (20+20)**, will enable it to produce more esters that contribute to the "fresh fruit" aroma bouquet. From the chemical perspective, the yeast strain has the ability to produce **numerous volatile compounds linked to the fruitiness of red wine.**

NUTRICELL® AA

Complex organic nutrient to ensure **AF management** and promote the **production of fermentation esters.**

WHY?

To optimise the production of fermentation esters and reveal thiols.
Avoid nitrogen deficiencies, which are responsible for the production of H_2S and other sulphur compounds.

WHEN?

Add to the tank at yeasting time, at the latest before 1/3 AF.

HOW?

Addition by pumping over.

AND

VIALATTE FERM® R26

Saccharomyces cerevisiae for the **production of a fresh, fruity, spicy aromatic profile.**

WHY?

To promote the production of esters and higher alcohols.

WHEN AND HOW?

Yeasting. AF temperatures between 20 and 25 °C.

OR

SO.FRUITY®

Saccharomyces cerevisiae for the **production of a fruity "red berries" aromatic profile.**

WHY?

To encourage the production of fermentation esters and reveal varietal aromas.

WHEN AND HOW?

Yeasting. AF temperatures between 20 and 25 °C to promote aromatic freshness.

4 HOW TO MANAGE HIGH ALCOHOL CONTENT

Using of specific tools

The high sugar concentrations sometimes found in particularly hot vintages **result in wines with a very high alcohol content, at odds with** the goal of drinkability. The use of an **osmotolerant, alcohol-resistant strain of yeast** is therefore necessary in this type of situation in order to **gain freshness**. When managing high alcohol content fermentation (>15% vol.) it is important not only to **nourish the yeast well, but also to maintain the nitrogen/lipid balance** by adding organic nutrients rich in sterols and ergosterols.

ALCOHOLIC FERMENTATION

VIALATTE FERM® HD18

Saccharomyces cerevisiae selected for its ability to **trigger alcoholic fermentation at very high sugar levels**, coupled with its **great resistance to high alcohol content**.

WHY?

To start AF with sugar levels of up to 300-310 g/L.
To produce powerful, aromatic red wines.

WHEN AND HOW?

It is important to choose the appropriate nutrition – rich in sterols at the start of AF, rich in yeast hulls and amino acids for a balanced supply of nitrogen and lipids during AF, and also rich in sterols at the end of AF to ensure that nitrogen is successfully assimilated.