
DELESTAGE USING ALBRIGI'S PALITANK

The reason for using maceration to make wine with red grapes is to obtain two fundamental characteristics: a) typicality, in terms of expression of grape variety and regional territory; and b) structure, in terms of best concentration of color, aroma and flavor.

For this purpose winemakers use a variety of systems to get the most out of the wealth of components which are present in grape skins. Knowledge and awareness of the composition of wine, in terms of extractable substances and their interaction with other components, as well as understanding the mechanisms whereby such substances pass over from the grapes into the must during maceration are of fundamental importance for obtaining one's goal: high-quality wine.

Resulting from this effort, a few years ago a new system of punching down the marc (follatura) was perfected in France, and it was given the name of "délestage". More specifically, according to explanations offered by Prof. D. Delteil of the ICV of Montpellier, this technique is done during the fermentation phase, pouring the juice through the air into a satellite tank, until there is no more juice to be pumped. Here one must be clever enough to let the dregs, now at the bottom of the tank, continue to drip for a few hours with the drainpipe open.

After that draining phase, one pumps the must back into the initial tank, on top of the skins, also referred to as dregs or marc. The phase of self pressing of the dregs which takes place upon emptying the initial tank constitutes a step of fundamental importance because it allows for greater and more intense emptying. Indeed, during the following step, the dregs are soaked up with must, however less concentrated than before, thereby obtaining greater passage of polyphenols into the juice. This aspect can only be obtained by "délestage" because there is no other punching down method that includes this passage.

Other advantages of "délestage" are connected with the must aeration phase, whereby the transfer from one tank to another produces a considerable loss of CO₂, which favors more vigorous and regular fermentation, especially in cases of types of must which are particularly loaded with sugars, such as when dealing with dried grapes. Furthermore, this aspect is of fundamental importance in the case of vinification of grapes which tend to suffer from reduction problems.

During the last phases of fermentation one can expect there to be a slight production of acetaldehyde, at the expense of ethyl alcohol, which is a key component in the evolution of coloring substances found in red wine, which, acting as a bridge in the condensation reaction between anthocyanins and tannins, allows for the formation of components which are stable and full of color.

During the transfer it is also possible, with the help of a heat exchanger, to regulate the temperature. And by applying a screen, one can separate a great deal of seeds, e.g. in the case of vinifying grapes which are not perfectly ripe, thereby eliminating astringent and bitter tannins.

The number of "délestage" transfers to carry out during vinification is variable, according to the type of wine one wishes to obtain, and according to the type and ripeness of the grapes. When done in this way, however, "délestage" still doesn't resolve the problem of extraction connected with the immobility of the marc, a problem typical in the

case of doing remontage. Indeed, the compactness of the marc increases and decreases in the various phases of processing, inside the fermentation tank, in a uniform manner, making the dissolution processes of the polyphenolic components more difficult. Therefore, at the end of fermentation, we will have pulp which is not quite exhausted, resulting in wines which are less structured than planned.

For the purpose of avoiding this, ALBRIGI Technologies has invented the PALITANK. Specifically, the PALITANK is a system featuring eight stainless steel reinforced pipes, in a radiating configuration, on two levels and staggered. Their task is to “slice” and mix up the marc, using strictly the force of gravity, both during the downward phase (upon emptying the tank), and during the upward phase (upon filling the tank).

In this manner the marc is completely broken up, in a very simple but complete manner, avoiding the use of motorized equipment, and with the handsome side effect of not producing lees.

When there is an increase in the production of lees, the cost of winemaking goes up, and in the process of making the wine statically limpid is adsorbant, since it is here composed of more solid parts, and of a considerable quantity of anthocyanins.

The breaking up of the marc enhances the possibility for it to lixiviate, and consequently also enhances the possibility for one to obtain greater extraction of the components in the grape skins, since one has created the maximum transfer between dregs and must. Together with the phase of automatic compression, these are the key passages for the best possible extraction of polyphenolic components from the skins.

After vinification it is possible to remove all the pipes, such that the PALITANK system is perfect for any type of production and any type of tank.

Inside view of Palitank Albrigi fermenter

