

## Residual Sugar

A number of wine styles traditionally call for a certain amount of sweetness, such as in Sauternes, Ports, etc. This sweetness is referred to as 'residual sugar'. Fermentation of the juice is interrupted at some desired sweetness level through the addition of sulfites, sorbates, and/or alcohol, to levels which will cause the fermentation to stop, leaving a residual, hence the term.

As a winemaker, individual taste preferences can be easily incorporated into any wine produced at home, regardless of grape varietal. Some wines are too dry or may exhibit harsh acidity on the finish and become uncomfortable to consume. In such instances a very small amount of sweetness can be added back to remove or mask the harshness without increasing the perceptible level of sweetness. In the event of excessive acidity sweeteners often hide the tartness much the same as when adding sugar to lemonade. In either of the above cases, adding the sweetener is achieved with the same process.

When a juice is fermented into dry wine, that is, fermented to 0° Brix, the yeast either dies or goes dormant due to the lack of nourishment, i.e., sugar. It will remain in this state until a new source of fermentable sugar is discovered. Therefore, before any sugar is introduced to sweeten the wine, the yeast must be either removed or rendered completely inactive, even in the presence of sugar. If mechanical filtration, to a sterile (approximately .20 micron) level is available, the yeast may be completely removed from the wine to achieve an inert state with respect to re-fermentation. If this method is utilized be aware that other beneficial wine components may also be removed in the process. If filtration to a sterile level is not feasible, the yeast must be attenuated in place.

This is most easily accomplished with the addition of potassium sorbate. Suggested timing is a few days/weeks before bottling. Depending on the pH of the wine, appropriate sulfite should be added to assure preservation. Potassium sorbate is then added at a rate of one teaspoon per gallon or per the packaged instructions. (Both the sulfite and sorbate should be dissolved in warm water before adding to the wine.) Allow the wine to sit a few days to assure the sorbate is properly mixed and the yeasts are attenuated. Then add the sugar and reseal the container with an airlock. Observe the internal pressure for a few days to assure no activity in the container. Bottle as usual.

The choice of sweetener and amount is up to the winemaker's palette. Potential sweeteners include sucrose, dextrose, fructose, corn syrup, table sugar, maple syrup, molasses, etc. Remember, at this point of the winemaking process, the sweetener added will impact the final flavor of the wine, so choose wisely.

For more information, please contact us at 877.812.1137 or email [support@juicegrape.com](mailto:support@juicegrape.com). Thank you.