



The Vineyard

wine and beer making supplies



"turning beginners into experts since 1983"

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What is Malolactic Fermentation?

'Malolactic fermentation' describes a 'processing' by bacteria (*leuconostoc oenos*) that are able to convert malic acid from grapes into lactic acid. It occurs alongside, and in addition to regular fermentation, and can be desirable for two reasons:

1. Reducing excess acidity. By converting the relatively harsh tasting malic acid into the softer lactic, Malolactic fermentation softens the flavour of the wine.
2. Adding complexity. In addition to converting the acid, malolactic bacteria can add a component of 'buttery' flavour (diacetyl), along with more complex flavours and aromas.

Uncontrolled Malolactic fermentation is very undesirable. The same bacteria responsible for reducing acidity are responsible for the production of sauerkraut, whose flavours and aromas are not what you would expect in a fine wine. In addition, if malolactic bacteria work in the presence of potassium sorbate (a preservative in kit wines and some commercial wines) it will produce geraniol, a compound that smells like a cross between ripe salmon and rotting geraniums.

In addition to transforming malic acid into lactic, *leuconostoc oenos* also transforms citric acid into acetic acid, which is the acid that gives vinegar its distinctive flavour. This usually isn't a problem, unless the must has been treated with citric acid.

Because it reduces fruity flavours, there are few white wines that will benefit from ML, and some reds are best left fruity as well. Generally, only wines made from grapes get malolactic treatment. The reason for this, being that the bacteria needs a small amount of grape pulp and solids to get a foothold in the wine.

Wines made from concentrate and juice/concentrate kits are generally unsuitable for malolactic treatment. Not only are the acidity levels usually balanced toward the low side for early drinking, the levels of solids in concentrate are virtually nil. In addition, some concentrates may have small amounts of sorbate in them, causing geraniol problems.

For more information on Malolactic fermentation drop in to either store.