Lactic acid bacterium for white wine production

CSIC and the Consiglio per la Ricerca e la Sperimentazione in Agricoltura have isolated two strains of *Pediococcus damnosus*, a lactic acid bacterium, for carry out the malolactic fermentation in white wines. With these bacteria the organoleptic characteristics of this kind of wine are improved by an increase in the honey aroma and a decrease in the acidity. Wine manufacturers interested in the utilization of these bacteria under a patent licence, are sought for.

*An offer for Patent Licensing*

**Malolactic fermentation in white wine**

After the alcoholic fermentation carried out by yeast in wine, it can take place the malolactic fermentation, where lactic acid bacteria metabolise the malic acid in lactic acid. This can occur naturally or by the inoculation of a specific bacterium which it leads to desirable transformations in wine. The process is common in red wines but unusual in white wines.

The strains of this invention have been isolated from a fermented white wine called *Caiño Blanco* and produced in the North of Spain. The bacteria are able to convert the whole malic acid of white wines in lactic acid in less than 30 days, when this organic acid content is between 0.5 and 5 g/L.

This transformation leads to a decrease (about 10%) in the sensory acidity of the white wines tested and an increase (about 15%) in the honey aroma. Moreover, in the *Albariño* white wine, this malolactic conversion produces an increase in its yellow-golden highlights, an increase in the herbal aroma, a decrease in the pineapple aroma, an enhancement in the body and an increase of the softness. On the other hand, in the *Caiño Blanco* white wine, this fermentation causes a decrease in the herbal aroma and a decrease in the bitterness.

**Main applications and advantages**

- The bacteria are able to carry out the malolactic fermentation in white wines, where it is an unusual process.
- They improve the sensory quality of wine, specially its aroma.
- They are not genetically modified, since they have been isolated from a natural source.
- They do not produce biogenic amines, which are detrimental for wine quality.

**Patent status**

Priority established by a patent Spanish application. April 2012

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