

Electronic tongues measure grape ripeness

January 5 2014

Electronic tongues can become an ally of grape growers as they offer detailed information on the degree of grape maturity and this could improve competitiveness. The study has been carried out by researchers at the Universitat Politècnica de València, in collaboration with Valencia winery Torre Oria. The conclusions of this work have been published in the journal *Food Research International*.

In the study, researchers applied electronic tongues developed in his lab to measure the maturity of eight different types of grapes (Macabeo, Chardonnay, Pinot Noir, Cabernet Sauvignon, Shyrah, Merlot and Bobal) in several locations of vineyards of Utiel and Requena (Valencia) and observed a good correlation between the response of the tongue and parameters analysed in traditional tests: the acidity of the fruit and its amount of sugar.

The results confirm the usefulness of these devices for controlling grape maturity and, therefore, evaluate the most appropriate time for harvesting. Among its main advantages, the tongues are cheap and portable. "The latter is especially useful to assess the degree of ripeness as with current methods of analysis further assessment in a laboratory is usually required," says Ramón Martínez Máñez, researcher at the Centre for Molecular Recognition and Technological Development (IDM) - Universitat Politècnica de València.

Similarly, producers also highlight the potential usefulness of the tongue to perform analysis on the fruit at the premises where the produce is taken.

The researchers are currently working on new applications of electronic tongues in the sector. Specifically, they evaluate their use to control the fermentation of grapes in vats. "These devices allow performing a continuous monitoring of the process, which would result in greater control over the product, and ultimately an increase in competitiveness" adds the researcher Inma Campos.

More information: [www.sciencedirect.com/science/ ...
ii/S0963996913005577](http://www.sciencedirect.com/science/.../S0963996913005577)

Provided by Asociacion RUVID

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