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PC30. Evaluation of an electronic tongue for honey classification according to its pollen analysis.

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Electronic tongues (ET) have attracted great interest due to its potential to obtain global information from complex samples that could hardly be obtained by traditional instrumental methods of analysis. These multi-sensor arrays provide a huge amount of sample information which, by applying chemometric methods, allows sample identification/classification, taste evaluation as well as, multicomponent analysis. The method of operation consists in obtaining a signal pattern which corresponds to the overall information on the sample using chemical sensors with high stability and cross sensitivity to different species in solution.

In this work, a potenciometric electronic tongue or taste sensor array was used. The device had 20 sensors, based on all-solid-state electrodes with lipid polymeric membranes formed on solid conducting silver supports.

This analytical system was used to analyse unifloral honeys, which honey pollen profiles were obtained by pollinic analysis, that are representative of eight main types of pollens: *Castanea sp., Echium sp., Erica sp., Eucalyptus sp., Lavandula sp., Prunus sp., Rubus sp.* and *Trifolium sp.*.

The signal profile information obtained from the ET analysis of the honey samples was related with the pollinic analysis, using linear discriminant analysis. The results showed that ET could be used for classifying the type of honey according to their pollen profile, when the main pollen is in great abundance, being a possible alternative to traditional honey classification techniques that are time consuming and require expert labour. The influence of the second main pollen showed to be relevant in honey classification.

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