

Title Discrimination of apricot cultivars by gas multisensor array using an artificial neural network
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Abstract

In this study, an array of 10 metal-oxide sensors, a so-called electronic nose, in combination with artificial neural networks (ANN), was used to analyse the headspace of apricot fruits in order to classify 10 different cultivars.

The ANN coupled to the electronic nose required a small computational effort to assure a satisfactory effectiveness. Different configurations were explored, ranging from one to three hidden layers. The single hidden layer ANN with 35 neurons gave a correlation index higher than 80% on test data set. The trained system allowed at least 90% correct classification of apricot cultivars, showing the potential of these new tools in the quality control of fruits.