



ELECTRONIC NOSE AND SENSORY ANALYSIS: APPLICATIONS TO THE STUDY OF EWE AND GOAT CHEESES

NARIZ ELECTRÓNICA Y ANÁLISIS SENSORIAL: APLICACIONES AL ESTUDIO DE QUESOS DE OVEJA Y CABRA

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Abstract

The electronic sensory instrument is especially designed to characterize a global aroma pattern. This technology allows discrimination between samples, acceptability, improving the relationship between consumers and producers. Before the advent of electronic noses (EN) the instrumental analysis of aroma was made through the identification and quantification of individual chemical compounds by GC-FID, GC-olfactometry and GC-MS. The electronic nose consists of an array of electronic chemical sensors with partial specificity and an appropriate pattern-recognition system, capable of recognising simple or complex odours. Electronic nose assessment has been applied to many industrial and non-industrial applications (i.e. quality control of beverage and food products, food processing, safety, environmental monitoring, medical diagnosis, detection of hazardous gases and chemical warfare agents). Until now human sensory evaluation is the decisive measure of the product quality. This paper briefly reviews the analytical methods most commonly used in food assessment and specially, demonstrates the main features of modern electronic noses (e-noses). The paper summarizes some theoretical aspects of electronic-nose technologies by describing: the e-nose concept and advances; sensory assessment of flavour-aroma odour; diverse applications, and chiefly on cheese discrimination. Two cases study are presented as example of the application of electronic nose for assessment of ewe and goat cheeses authenticity.

Resumen

La Nariz Electrónica está diseñada principalmente para caracterizar el patrón general del aroma. La tecnología permite la discriminación entre las muestras, la aceptabilidad, mejorar la relación entre consumidores e industriales. Antes de la aparición de las narices