



XVIIth World Congress of the International Commission of Agricultural and Biosystems Engineering (CIGR)



Hosted by the Canadian Society for Bioengineering (CSBE/SCGAB)
Québec City, Canada June 13-17, 2010

SHELF-LIFE DETERMINATION OF “QUESO DOBLE CREMA” BY MEANS OF ELECTRONIC NOSE

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CSBE101183 – Section VI: Postharvest Technology and Process Engineering conference

ABSTRACT The determination of food shelf life is a critical parameter in the food industry, because it gives important information to consumer about acceptable sanitary, nutritional and sensorial qualities of foods. Nowadays, techniques making possible the rapid control of food damage are developed. The main purpose of this work was to study the viability of the electronic nose to determine the shelf-life of “queso doble crema”, a traditional cheese from Colombia, during storage at two different temperatures (4 and 10°C), and to correlate the obtained results with the standard physicochemical, microbiological and sensory analysis normally used for the shelf-life determination. Multivariate analysis (PCA) of electronic nose data showed that this instrument is able to identify differences between cheeses stored at different temperatures, as well as within different storage times at the same temperature. Electronic nose data were well correlated with the microbiological and sensory analysis, indicating that it can be used as a new technology for measuring the shelf life of “queso doble crema” in real-time.

Keywords: electronic nose, shelf-life, double-cream cheese.