



## Plenary Lecture



### Classification of Roasted Date-Pits at Different Heating Temperature using Electronic Nose (e-nose)

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#### Abstract

There is a need to develop robust reliable and satisfactory methods to measure quality of foods. These methods should be easy, fast, portable and reliable. The new technologies related to e-nose are being used to assess the quality of foods similar to human olfactory senses. Traditionally roasted date-pits are used to make hot drink. Caffeine free date-pits drink could be alternative to the coffee drink, while providing similar flavors to coffee. A portable electronic nose (e-nose) based on 32 sensors was used to evaluate the variations of roasted date-pits flavor components. The heating temperature of date-pits treatment was varied from 60 to 150oC in an oven. The variability and sensitivity of the e-nose was first assessed considering different variables for measurement (i.e. first and second purges, and sample draw time, sample size, and waiting time for consecutive measurements for the same sample). The e-nose automatically selected 10 best features (i.e. sensor's response) from the signals of 32 sensors. Principal Component Analysis (PCA) was used to explore the relationships between the volatile-features and to classify date-pits treated at different temperatures. Results showed that

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*Keywords:* Type your keywords here, separated by semicolons ;

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