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Subscription

Czech J. Food Sci.

Chen Q., Zhao J., Liu M., Cai J.:

Nondestructive identification of tea (Camellia sinensis L.) varieties using FT-NIR spectroscopy and pattern recognition

Czech J. Food Sci., 26 (2008): 360-367

Due to more and more tea varieties in the current tea market, rapid and accurate identification of tea (*Camellia sinensis* L. varieties is crucial to the tea quality control. Fourier Transform Near-Infrared (FT-NIR) spectroscopy coupled with the pattern recognition was used to identify individual tea varieties as a rapid and non-invasive analytical tool in this work. Seven varieties of Chinese tea were studied in the experiment. Linear Discriminant Analysis (LDA) and Artificia Neural Network (ANN) were compared to construct the identification models based on Principal Component Analysis (PCA). The number of principal components factors (PCs) was optimised in the constructing model. The experimental results showed that the performance of

ANN model was better than LDA models The optimal ANN model was achieved when four PCs were used, identification rates being all 100% in the training and