



# Agricultural Journals

*Czech Journal of*

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# **Czech J. Food Sci.**

**Jirsa O., Hrušková M.,  
Švec I.:**

# Bread features evaluation by NIR analysis

Czech J. Food Sci., 25 (2007): 243-248

Bakery characteristics of wheat dough and the final product and their predictability by NIR technique was investigated using 231 variety and commercial wheat samples (crop years 2003– 2005). The behaviour of doughs was assessed with Brabender maturograph and OTG (Germany), the final product quality was evaluated by the baking test and image analysis. NIR spectra of flours were acquired on a NIRSystem 6500 spectrometer. Calibration equations for the selected rheological characteristics were computed by WINISI II using mPLS regression. The quality of prediction was evaluated by means of coefficients of correlation between measured and predicted values from cross and independent validation. A statistically significant dependence (with probability higher than 99%) was found with all rheological characteristics. The standard errors of cross-validation were

achieved as follows: dough elasticity 10  
BU, bread volume (11 min) 58 BU,