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Czech J. Food Sci.

**Hrušková M., Šmejda
P.**

Wheat flour dough alveograph characteristics predicted by NIRSystems 6500

Czech J. Food Sci., 21 (2003): 28-33

Rheological quality of wheat dough prepared from 130 variety, stream, and commercial wheat flour samples (wheat harvest 1999, 2000 and 2001) was assessed with alveograph. Spectra of all samples were measured on spectrograph NIRSystems 6500. Calibration equations with cross and independent validation for all rheological characteristics were computed by NIR Software ISI Present WINISI II using MPLS and PLS methods. The quality of the prediction was evaluated by the coefficient of correlation between the measured and the predicted values from cross and independent validation. A statistically significant dependence between the predicted and the measured values (with probability $P < 0.01$) was determined in P (elasticity) and

w (energy) characteristics in the case of cross validation only in the commercial flour sets. P (with $P < 0.01$) and W (with $P < 0.05$) were successfully predicted by independent validation in the set of all samples.

Keywords:

wheat flour dough; alveograph; NIRSystems 6500; prediction of rheological characteristics

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