Table of Contents

Editorial Board

For Authors

- Authors Declaration
- Instruction to Authors
- Guide for Authors
- Copyright Statement
- Submission

For Reviewers

- Guide for Reviewers
- Reviewers Login

Subscription

Czech J. Food Sci.

Codină G.G., Mironeasa S., Bordei

D., Leahu A.:

Mixolab versus Alveograph and Falling Number

Czech J. Food Sci., 28 (2010): 185-191

Recently, in 2005, a new method for monitoring the rheological properties of the dough on the entire technological process of bread making became available through Mixolab at an international level. This laboratory equipment has amazing possibilities for the research and development, enabling a complex analysis of flour. It allows the analysis of flour proteins quality (water absorption, stability, elasticity, weakening), the analysis of starch behaviour (gelatinisation, gelatinisation temperature, the modification of its consistency on additives addition) and the analysis of enzymatic activities (proteolytic, amylolytic). The objective of this study is to establish a relation between the alveograph, Falling Number and Mixolab values. Sixty flours, collecte around the Romanian country, were

analysed simultaneously on alveograph (standard protocol), for the Falling Number, and on Mixolab ("Simulator" and the standard option "Chopin+" protocol). A selection of principal factors based on the Principal Component Analysis (PCA) was applied which allowed the building of an efficient predictive model for each parameter. There were significant correlations between most of the Alveograph parameters: maximum pressure (P), deformation energy (W), extensibility (L), alveograph ratio (P/L) and Simulator Mixolab stability. Using the Mixolab standard option "Chopin+" protocol a close association was found between some Mixolab parameters: stability and protein weakening (C2, difference of the points C1 – C2 abbreviated C12) and the alveograph values (P, W). From the point of view of the correlations established with the Falling Number index, very good results were obtained with the parameters