

Evaluation of the rheological properties of the dough and the characteristics of the bread with the addition of purple potato

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Abstract. The aim of this study was to determine the rheological characteristics of the dough at the addition of purple potato powder in different quantities (0-100 g). The wheat flour types 480 and 1250 were used. The rheological characteristics of the dough were determined with the help of Chopin Alveograph analyzing the tensile strength. The rheological measurements were made with the HAAKE RheoWin Mars 40 rheometer and the dough's viscoelastic modulus was analyzed at the frequency of 1-20 Hz. The bread samples were analyzed in terms of volume, porosity, color and texture. The textural parameters determined with the help of the texturometer were the elasticity, adhesiveness and stickiness of the bread crumb. It has been found that the addition of purple potato dough does not adversely alter the rheological properties of the dough. The elasticity and stickiness of the bread core increases with the increase of potato addition in the case of whole-grain flour. The color of the bread intensifies as the dose of purple potato powder increases.

Keywords: anthocyanins; viscoelastic modulus; textural properties; color difference.

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