

Effect of Salt Forms and Concentrations on the Alveograph and Extensigraph Parameters of Rye Flour

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Abstract : Several medical research found that the sodium is one of the main risk factor of high blood pressure and reason for different cardiovascular diseases, while sodium chloride is one of the most ancient food additives. As people consume much more sodium chloride as the recommended value several salt reduction programs started worldwide in the last years. The cereal products are the main source of sodium, and the bakery products are one of the main targets of these programs. In this paper we have evaluated the effects of different concentrations of sodium chloride on the alveo graphical and extensi graphical parameters of rye flours to determine whether it has the same strengthening effect on the dough texture as it was found in the case of wheat flours and these effects were compared to the effects of other salt forms. We found that while the strength of rye flours are similar to the ones of wheat flour, rye flours are much less extensible. The effects of salt concentrations are less significant on the rheological properties of rye flour than on the wheat flour and there is no significant difference between the effects of different salts.

Keywords : alveograph, extensigraph, rye flour, salt

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