IMPACT OF ADDITION OF THE PREBIOTIC DIETARY FIBER AND XYLANASE ON THE WHEAT-RYE BREAD TEXTURE ATTRIBUTES

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Summary. Data regarding analysis of impact of prebiotic dietary fiber Fibregum and fungal β-xylanase on wheat-rye bread texture attributes and their changes during storage are presented in this article. Two sets of bread were analysed. First set of bread samples was prepared with increased amount of Fibregum from 3 % to 5 %. In the second set additionally β-xylanase, (0.08 g/1000 g flour) was added to each sample.

Porousity and specific volume of bread samples decreased with increasing amount of dietary fiber content in the sample. Addition of xylanase showed positive impact on specific volume of control and with 3 % of Fibregum bread sample. Addition of enzyme didn't have significant influence on bread porousity. Addition of prebiotic fiber and enzyme had no significant impact on bread crumb hardness. During storage period crumb of the control bread sample became more firm than bread samples with addition of enzyme and fiber. Cohesiveness, gumminess and chewiness of fresh and bread samples after storage decreased with increasing amount of fiber. Toughness evaluated by fingers decreased with increase of prebiotic fiber, enzyme had no impact on this tendency. Addition of enzyme eliminated negative influence of Fibregum on bread elasticity in the mouth and cohesiveness evaluated by fingers.

Key words: wheat-rye bread, prebiotic fiber Fibregum, β-xylanase, texture attributes.