

الملخص الإنجليزي للبحث رقم ٣

عنوان البحث باللغة الإنجليزية :

Evaluation of some local and imported wheat cultivars: Chemical, rheological properties and mineral contents of their flours.

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ABSTRACT:

The aim of this study is evaluating the effect of the milling process for the local Egyptian and imported wheat cultivars on the chemical, rheological properties and mineral contents. Two local wheat varieties (Gemmiza7 and Misr1), in addition to a Mixture local and imported wheat and Russian, Romanian imported wheat varieties were used. The different wheat varieties were milled, starting with cleaning the grains, conditioning, then grinding and sifting to obtain whole wheat flours and wheat flours (72% extraction). Results showed that no significant differences ($P>0.05$) between all flour samples of different varieties regarding moisture, ash, fats and crude fiber contents, but the protein and total carbohydrate contents significantly differed. The data showed that the rheological properties of the local Egyptian flours had a higher farinograph values regard to water absorption, mixing time, dough stability and dough weakening compared to the imported varieties. For extensograph parameters; elasticity and a proportional number values had higher values with a Mixture local and imported flour variety. Extensibility and dough energy parameters showed that the higher values achieved by (the local Gemmiza7 and imported Romanian flour varieties) and the local Misr1 flour, respectively. The mineral contents had decreased of Mg, K, P, Fe and Zn for wheat flours (72% ext.) after the milling process of different local and imported wheat varieties, but whole wheat flours had higher values of those elements.