

الملخص الإنجليزي للبحث رقم ١

عنوان البحث باللغة الإنجليزية :

Evaluation of some local and imported wheat cultivars: Comparison of physical and chemical properties.

Authors:

Ahmed Rabie Mohamed Maray¹ & Safia Mahmoud Abdel-Mageed Ahmed²

¹Food Science and Technology Department, Faculty of Agriculture, Fayoum Univirsity, Fayoum 63514, Egypt.

² Botany Department, Faculty of Agriculture, Fayoum Univirsity, Fayoum 63514, Egypt.

ABSTRACT:

This study aimed to evaluate some wheat varieties of local Egyptian wheat (Gemiza7, Misr1 and local mixture) and imported wheat (Russian and Romanian varieties) to use for local consumption, such as bread, bakery products, macaroni industry and etc., All wheat varieties were milled to get the whole meal flours (100% extraction rate). Physical and chemical properties were determined. The physical estimations were performed to measure the quality of wheat varieties, the items include on determined the percentage of undamaged kernels, shrunk kernels, broken kernels and Calculate the impurity percentage between all wheat varieties samples. Physicochemical properties included parameters, e.g. gluten quantity and quality, α -amylase activity, Pelshenke value and Sedimentation volume. Chemical analysis included chemical composition of wheat samples. The results showed Convergence in quality attributes relative to physical properties of Egyptian and imported wheat varieties samples. Gluten quantity and quality of wheat varieties showed that Misr1 wheat variety has a higher value compared with other the local and imported varieties. The falling numbers of all samples less than 400 sec. Pelshenke values demonstrated that the strength of gluten imported varieties, while his weakness in the local varieties. The results and statistical analysis revealed that, there were a significant differences between Egyptian and imported wheat varieties in relation to moisture and protein contents, but there are no significant differences between all samples with regard to ash, fat and total carbohydrate contents.