

## الملخص الإنجليزي للبحث رقم ٦

عنوان البحث باللغة الإنجليزية :

Effect of using high fiber plant wastes, by-products and composite flour on the quality of the resulted biscuits.

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### ABSTRACT:

In this research, wheat flour 72% was partially replaced by oat flour, orange peel powder and red wheat pollard during making biscuit in order to raise the level of fibers in the produced biscuit. The percentage of replacement for such additives with 2, 4, 8, and 12% regarding to the wheat flour used in biscuit recipes. The study follows the changes which happened in the chemical components of biscuits, data indicated that a significant differences for all determinants of chemical composition between control biscuits in comparison with the oat biscuits, red wheat pollard biscuits and orange peel powder biscuits, except for the moisture content, which does not show significant differences ( $p < 0.05$ ) for it. The contents of ash, fat and crude fiber of biscuits were increased with adding the red wheat pollard, also the whole oat flour led to an increase in protein content in biscuit samples. Organoleptic evaluation was also followed to the quality attributes of biscuit. Results showed that there were significant differences ( $p < 0.05$ ) between all biscuits treatments of the evaluated characteristics, except the piece size, uniformity and taste. The red wheat pollard biscuits had the highest score in the sensory evaluation, followed by oat flour biscuits, while orange peel powder biscuits recorded the lowest values. The acid value of biscuits was also determined and registered after a storage period up to 6 months at room temperature of  $25 \pm 2^\circ\text{C}$ . Data mentioned that the acid value increased with increasing the addition rate of additives and with increased storage period up to 6 months.