

الملخص الإنجليزي للبحث رقم ٥

عنوان البحث باللغة الإنجليزية :

Physicochemical and functional properties, nutritional value and bioactive compounds of some composite flours.

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ABSTRACT:

The aim of this work was to study the properties of composite flours for cereals (oats) and legumes (chickpea and sweet lupine) in addition to 72% wheat flour. The chemical composition, physicochemical and functional properties, nutritional value and bioactive compounds for all flours were determined. The results showed that there were significant differences ($P<0.05$) between the flour samples in the majority of those parameters. Data showed that the whole sweet lupine flour had a higher value of each protein, ash, lipid and crude fiber content, while the lowest values of the same chemical composition components were obtained with the 72% wheat flour. In the same trend, whole sweet lupine flour had higher amounts of physicochemical and functional properties, including (WAC and OAC) and bulk density, but its pH value was low compared to other flours. For the mineral contents, the whole oat flour had a higher content of Mg, P and Zn; and higher amount of Fe was recorded with chickpea flour; and a higher value of K was achieved by whole flours from chickpea and sweet lupine, on the other hand the 72% wheat flour had lower contents of those minerals. Results showed that the whole sweet lupine flour had higher values with regard to the amino acid composition and (TPC and TFC). It was discovered that the whole flour from legumes, particularly sweet lupine flour, had the highest values for most these parameters.