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CHEMICAL, PHYSICAL, BIOLOGICAL AND SENSORY EVALUATION OF SOME BAKERY PRODUCTS USING NONTRADITIONAL ADDITIVES (DDGS) MIXING WITH WHEAT FLOUR

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A B S T R A C T
Two different of DDGS (brown and gold) and Egyptian hard red wheat (Masr2) local wheat cultivars were subjected to physico-chemical and biological properties. Results indicated that the Egyptian hard red wheat grains had higher total physical properties. Flour yields were about 70 % for all tested samples. A wide range of protein content (10.3 – 31.0 %) of flours was recorded. The gold DDGS flour had the highest protein content and the Egyptian hard red wheat flour was the lowest protein content. Data indicated that Mix (2) flours had more suitable properties for bread- making than the Mix (1) flours. The different tested wheat flours indicated that those made from Egyptian hard red wheat (Masr2) and Mix (2) were superior but physico-chemical and rheological characteristics as well as phytate contents of wheat, and its mixtures flour approve that DDGS flour decreased the water absorption. Composite flour containing 50% DDGS and 50% wheat flours Mix (2) showed maximum improvement in dough development and softening of dough. However sensory evaluation results showed that 50% wheat replacement with DDGS flour produced Mix (2) acceptable balady breads than the other Mix (1). The biological results also showed that feeding on bread made from a mixture of DDGs, whether brown or golden with wheat flour, improved the nutritional status of rats and reduced the level of blood fats, as well as reduced the level of bilirubin, urea and creatinine from feeding on bread made from wheat flour only. Enzymes are used for wheat flour alone, so it is recommended to add DDGS to wheat flour to make bread for human nutrition

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