QUALITY EVALUATION OF WHOLE WHEAT FLOUR PHYLLIO (YUFKA) FLAKES WITH POPPY, CHIA, QUINOA AND FLAX SEEDS

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There is a positive correlation between the use of whole grains and seeds to improve human nutritional status and to reduce risk of developing metabolic diseases, like high cholesterol, diabetes, cardiovascular disease, certain cancers and weight control. In this study it was aimed to produce functional phyllo (yufka) flakes (PF) with improved nutritional properties by adding poppy seeds, chia seeds, quinoa seeds and flax seeds in the whole wheat flour. Whole wheat flour PF without seeds were taken as control flakes (CF). The main quality parameters such as moisture and ash content, total dietary fiber, total lipid, protein, water activity, pH, thickness, textural parameters, surface color (brightness, redness and yellowness) and sensory properties—taste, aroma, appearance, brittleness, hardness, general acceptability and purchasing intent were analyzed using the standard methods. Moisture and ash content of PF were found in the range of 2.9-9.3 % and 2.14-2.86% respectively. Total dietary fiber and total lipid content of seed containing flakes were measured higher than CF. PF produced with poppy seeds were showed highest hardness while PF with flaxseed was shown the lowest hardness. Sensory data was observed higher for seed containing samples than CF. Within samples poppy seed flakes were also taken highest scores from panelist in terms of taste, aroma and odor. However highest brittleness, hardness and mouth feel scores were cause chia seeds flakes most acceptable and purchasable. In contrast overall acceptability and purchasing intent of quinoa seed containing flakes were observed lower than others. As a result; it is possible to produce more functional phyllo flakes with poppy, chia and flax seeds. These flakes may be consumed as snack food as an alternative to other popular flakes.

Keywords: functional food, phyllo, poppy, quinoa, chia, flaxseed, flakes,