NUTRITIVE VALUE AND AFLATOXIN CONTAMINATION OF GLUTEN FREE FLOURS

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Celiac disease places a huge burden on patients and their families, since a lifelong, strict gluten-free diet is needed in order to maintain general wellbeing and prevent complications. There is a growing interest in making versatile gluten-free foods not only for patients, but also for health-conscious individuals who choose to keep a gluten-free diet. Since the base ingredient of gluten free baked goods is starch, the pseudo cereals and oil seed meals can be used for these products' enrichment. Aflatoxin is a dangerous compound of poorly stored raw materials, known for its carcinogenity and the potential of causing liver cell damage. We aimed to investigate gluten – free flours from natural sources and from minimal processing through comparative analyses of the nutrition facts from the labels, and the determination of total aflatoxin contamination levels. Of the 50 flour samples, 11 types were from pseudo-cereals and 15 types were from oilseed pressing residues. Aflatoxin content was determined using Neogen Q+ for Aflatoxin procedure after sample extraction with 75% aqueous ethanol solution. We found significant differences regarding the dietary fiber and protein content, the energy content was in the range 310 -360 kcal/100 g. With the exception of walnut flour and fatty cocoa powder, all the samples were qualified as safe ingredient as their aflatoxin content did not exceed the official aflatoxin limit. The studied gluten-free flours are safe and nutrient rich materials for food development.