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FORMULATION OF GLUTEN FREE BREAD FRIENDLY FOR DIABETICS

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To reduce the glycaemic index of gluten free foods maintaining their nutritional and sensory characteristics is nowadays a scientific challenge and the aim of the present investigation. To achieve the goal the formulation of a commercial gluten-free pre-mix was improved by adding as novel ingredients concentrated rice protein, inulin and robusta coffee silverskin extract (RCSE) (del Castillo M. D. et al., 2013) enriched in phytochemicals presenting antioxidant and antidiabetic properties (del Castillo M. D. et al., 2014; Fernandez-Gomez B. et al., 2016; Mesías M. et al., 2014). Breads were prepared following the instructions of the manufacture of the pre-mix in presence and absence of RCSE (controls) in an automatic bread maker. The bread characterization was performed by analysis of protein, total carbohydrates, sugars, total phenolic compounds, overall antioxidant capacity, activity of alfa-glucosidase and sensory analysis. A novel bread source of protein, high content of dietary fibre, enriched in antioxidants (2.23 mg eq. CGA/g of bread) and inhibitors of alfa-glucosidase (IC 50 27 mg/mL) as well as with acceptable sensory quality was obtained. In conclusion, a novel food friendly for celiac and diabetics has been developed.

Del Castillo M. D. et al. (2013). Application of products of coffee silverskin in anti-ageing cosmetics and functional food. Patent WO2013/004873.

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Fernandez-Gomez B. et al. (2016). Insights on the health benefits of the bioactive compounds of coffee silverskin extract. In press.

Mesías M. et al. (2014). Antiglycative and carbonyl trapping properties of the water soluble fraction of coffee silverskin. Food Res. Int., 62, 1120-1126.