

Grape Pomace as an Ingredient to Enhance the Nutritional and Functional Properties of Gluten-Free Cookies

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Abstract- Grape pomace, which is the byproduct of wine industry, consists the skin and seeds and occurs in a huge amounts. These waste products generally leads environmental pollution problems. The use of by-products of the wine processing industry as a source of functional ingredients such as antioxidants, total phenolic, dietary fibers and minerals continue to rise day by day. On the other hand, celiac patients' diets are often deficient in functional components. Therefore, a development of gluten-free bakery products with functional properties, is very important for these population. Thus, this study was aimed to assess the effects white grape pomace as dried and ground powders, on the physical, textural, sensory, and functional properties of gluten free cookies (GFCs). At all enrichment levels (5, 10 and 15%), the addition of grape pomace powder (GPP) was improved the total dietary fiber and protein content of GFCs. GPP added GFCs had similar fat content, antioxidant and water activity as no GPP containing counterparts. The diameter and thickness of GFCs were decreased with increasing level of GPP from 0% to 15%. High values of hardness were found for GFCs supplemented with GPP whereas similar fracturability values were exhibited by control and GPP containing GFCs. A progressive decrease in both lightness (L value) and yellowness (b value) was observed with the addition of GPP from 5 to 15% while the redness of crust improved with the inclusion of GPP. Compared to the control formulations, sensory scores were altered slightly with addition of GPP however purchasing intent of all gluten-free cookie samples were found in the same range. In conclusion grape pomace can be converted to value added food ingredient by using in gluten free cookie formulations to improve their functional properties for celiac patients.

Keywords- Celiac, Cookie, Grape Pomace