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Optimization of a Gluten Free Formulation of the Turkish Dessert Revani using Different Types of Flours, Protein Sources and Transglutaminase

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Abstract

Revani is a dessert made from semolina and syrup, which is mostly consumed in Middle Eastern countries and in Turkey. However celiac patients cannot consume revani because semolina contains gluten. In this study, gluten-free revani was made using corn flour, rice flour, potato flour, corn starch and tapioca starch and the recipes were developed with soy protein, pea protein and transglutaminase (TG) enzyme. A combination of TG and protein sources was found more effective in enhancing the hardness of revani based on rice flour compared to soy protein only. Image analysis of gluten-free revani samples was carried out to observe the distribution of air bubbles. A blend of rice flour and corn starch or a blend of corn flour, potato flour and corn starch provided more regular distribution of air bubbles in revani. The source of the protein and TG did not affect the sensory properties of gluten-free revani samples made from a blend of corn flour and rice flour. The results revealed that combination of 62.5% corn flour and 37.5% rice flour with soy protein and TG can be successfully used to in gluten free revani formulation.

Key Words: Gluten-free revani dessert; celiac disease; soy protein; pea protein; transglutaminase

1. Introduction

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