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The effect of rice, potato, corn and tapioca starches on the quality of gluten-free bread

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There is a high demand for good quality gluten-free products (1). The removal of gluten causes difficulties in producing acceptable bread as there is no network present to trap the carbon dioxide produced by yeast (2). By incorporating a mixture of starches, instead of just one, improvements might be seen on the quality of the gluten free products (3). Six different formulations were produced utilising various level of rice, potato, corn and tapioca starches. The amount of salt (1%), yeast (0.2%) shortening (0.7%) water (45%) remained the same in each formulation. The ingredients were mixed, proofed 85% relative humidity, 30°C, baked 200°C for 45 min and stored at 17°C for one and four days. Texture, crumb structure, crust and volume of samples were analysed.

The crumb presenting the most uniform cell structure was GF4 and demonstrated that mixture of experimental flours can improve the quality of the gluten bread. Further developments can be done to improve the texture of the GF4.

Biography

Anita Setarehnejad is a Lecturer in Food Science and Technology at Cardiff Metropolitan University.

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