

Effect of fortification of freeze dried Blueberry powder to gluten free flour made snack products in terms of its antioxidant, sensory and textural properties

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Two products muffins and cookies tried, considering an important part of a daily breakfast. Quinoa flour used mainly here as gluten free flour with Rice flour. Since one of our previous studies established that substitution of 50% Rice flour with Teff flour (both gluten free) produces nutritionally acceptable gluten free muffin, a combination of Quinoa and Teff flour tried in the recipe for muffin and cookies. Products fortified with freeze dried Blueberry powder, which contains vitamin C and E, phenolics and anthocyanins. Shelf life expected to be high compared with traditional muffins/cookies fortified with Blueberry fruit itself, hypothesized because of the antioxidative properties of Blueberry without disturbing the nutritive value. A study was conducted to know the changes in texture, moisture content and water activity due to fortification of freeze dried blueberry powder for both the products. Studies were also made to observe the changes in Antioxidant properties due to fortification. Baking reduces Antioxidant properties for both the products. A 9-point Hedonic scale was used to perform Sensory analysis. Microbiological growth recorded after three months storage. No microbial growth was observed for freeze dried blueberry powder fortified products as expected.

Keywords: Gluten free flour, antioxidant properties, muffins and cookies.

Biography

Sikha Bhaduri is presently in CUNY School of public health in Hunter College, NY. She received her Ph.D. in Food Technology and Biochemical Engineering from Jadavpur University of India followed by Post-doctoral training in Cell and Molecular Biology, Physiology from SUNY Downstate and SUNY Stonybrook.