



ABSTRACT

Orange is a tropical fruit used in the juice industry, yielding important quantities of by products. The objective of this work was to obtain a dietary fiber-rich orange bagasse product (DFROBP), evaluate its chemical composition and its use in the preparation of a bakery product (muffin). Muffins containing two different levels of DFROBP were studied regarding chemical composition, *in vitro* starch digestibility, predicted glyceamic index and acceptability in a sensory test. DFROBP showed low fat and high dietary fiber contents. The soluble and insoluble dietary fiber fractions were balanced, which is of importance for the health beneficial effects of fiber sources. DFROBP-containing muffins showed the same rapidly digestible starch content as the reference muffin, whilst the slowly digestible starch level increased with the addition of DFROBP. However, the resistant starch content decreased when DFROBP increased in the muffin. The addition of DFROBP to muffin decreased the predicted glyceamic index, but no difference was found between the muffins prepared with the two DFROBP levels. The sensory score did not show difference between control muffin and that added with 10% of DFROBP. The addition of DFROBP to bakery products can be an alternative for people requiring low glyceamic response.

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