

## عنوان مقاله:

Physicochemical, Textural, and Sensory Evaluation of Reduced Fat Gluten- Free Biscuit Prepared with Inulin and Resistant Dextrin Prebiotic

## محل انتشار:

مجله علوم و فناوری کشاورزی، دوره 20، شماره 4 (سال: 1397)

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## خلاصه مقاله:

The aim of this study was to evaluate the effects of inulin (IN) and resistant dextrin (RD) as fat replacer and prebiotic on gluten-free biscuit and its dough. To make the gluten-free biscuits, we used rice flour, corn flour and corn starch in the proportion of ۳:۱:۱, respectively. The influence of prebiotics on the dough properties was studied via texture profile analysis including firmness, cohesiveness, adhesiveness, gumminess and springiness. Biscuit quality was assessed by spreading behavior, texture and surface characteristics, chemical properties, and sensory evaluation. Compared to the control, a significant increase in firmness (۱۷.۰۴ N to ۵۲.۸۵ N), cohesiveness (۰.۴۹ to ۰.۶۵) and gumminess (۸.۴۵ N to ۳۲.۷۱ N) of dough (except RD۲۵) was observed when substitution percent of fibers increased. Adhesiveness and springiness did not have significant changes. Enhancing of fat replacement percentage caused significant changes compared to the control in hardness (۹.۶۰ to ۲۴.۵۲ N) and L\* (۵۸.۷۹ to ۵۶.۹۴), a\* (۸.۹۹ to ۹.۷۱), water activity (۰.۲۲۵ to ۰.۰۹۶), moisture (۴.۹۷% to ۴.۱۲%), total fat (۱۲.۶۵% to ۳.۹۰%), peroxide index (۱.۸۹ to ۰.۹۰ meq/kg), fiber (۲.۰۲% to ۹.۵۱%), carbohydrate (۷۶.۴۹% to ۸۴.۶۳%), and calorie (۴۴۳.۳۸ to ۳۹۶.۵۲ Kcal). The consumers did not find significant differences in acceptability between the control biscuits and the biscuits with ۲۵% of fat replaced by RD and IN except color and flavor that were better than the control. Gluten-free biscuits containing IN۲۵ and RD۲۵ were similar to the control biscuits, and they could have additional health benefits derived from IN and RD presence.

## کلمات کلیدی:

Baking quality, Celiac, Prebiotic, Low fat Biscuit, Texture analyzer, بیسکویت، فاقد گلوتن، اینولین، دکسترین مقاوم بافت، کیفیت، حسی

