

Development of an innovative laminated dough with half-fat content

Sérgio Sousa¹, Marta Coelho¹, Kritika Adlakha¹, Ana Martins², Marta Correia¹, Ana Pimenta¹, Maria João Monteiro¹, Paula Teixeira¹, Ana Gomes¹, Manuela Pintado^{1*}

¹Universidade Católica Portuguesa, CBQF - Centro de Biotecnologia e Química Fina – Laboratório Associado, Escola Superior de Biotecnologia, Rua Diogo Botelho 1327, 4169-005 Porto, Portugal

²CELESTE ACTUAL S.A., Rua dos Estoleiros, Polvoreira | 4835-163 Guimarães, Portugal

* mpintado@ucp.pt

Consumers' awareness regarding the health impact of dietary intake has significantly increased. Hence, they present serious concerns regarding the nutritional value and health-related features of the food products comprised in their everyday diet. In this sense, the distinct sectors of the food industry have searched for, and developed, products with increasingly balanced nutritional profiles, which include, among others, reduced- or low-fat products/formulations. One such industry is the baking industry, which offers a vast array of distinct products, and in which efforts have been undertaken to reformulate the traditional recipes to manufacture healthier products. The aim of the present work was to develop an innovative laminated dough, since in the traditional formulation butter (fat) represents 34% of the total amount of ingredients. In the new formulation, the fat content would be significantly reduced, while the products manufactured with such dough would maintain the sensorial and technological properties of the ones produced with the conventional dough. With that objective, half of the butter utilized in the traditional laminated dough recipe/formulation was substituted by a mixture of acacia gum and wheat fibre. The doughs were assessed regarding the texture and colour, as well as nutritional profile, after baking. Concerning the texture, results showed that the hardness of the baked novel laminated dough was similar to that of the manufactured utilizing the conventional ingredients. Regarding the colour, although visually the developed dough looked less "bright", the CIELAB spatial coordinates (namely, L*, a*, and b*) showed no relevant differences, except for the lightness (L*) on the inside of the baked dough, which was lower in the product manufactured with the novel dough. In terms of nutritional profile, it was significantly enhanced by the decrease of the fat content to half. These findings may be a stepping stone in revolutionizing the bakery industry by developing healthier products, in line with the current consumers' demand.

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