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Czech J. Food Sci.

**Rodríguez-García J.,
Puig A., Salvador A.,**

Funcionality of several cake ingredients: A comprehensive approach

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The roles of some cake ingredients — oil, a leavening agent, and inulin — in the structure and physicochemical properties of batter and cakes were studied in four different formulations. Oil played an important role in the batter stability, due to its contribution to increasing batter viscosity and occluding air during mixing. The addition of the leavening agent was crucial to the final height and sponginess of the cakes. When inulin was used as a fat replacer, the absence of oil caused a decrease in the stability of the batter, where larger air bubbles were occluded. Inulin dispersed uniformly in the batter could create a competition for water with the flour components: gluten was not properly hydrated and some starch granules were not fully incorporated into the matrix. Thus, the development of a

continuous network was disrupted and the cake was shorter and softer; it contained interconnected air cells in the crumb, and was easily crumbled. The structure studies were decisive to understand the physicochemical properties.

Keywords:

fat replacement; inulin; physical properties; structure

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