

Topic: Plant and nut-based flours and development of bakery products and pasta

Lentil-based snack: development and nutritious properties

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Legume grains provide not only a unique nutrient profile essential for good human health, such as protein, fiber, carbohydrates, fatty acids, minerals, vitamins, and phenolic compounds, but they also provide excellent environmental benefits. Besides, they adapt to contemporary food patterns, like flexitarian, vegetarian, vegan, and gluten-free. However, legume consumption continues to be less than desired, opening new opportunities for different intake alternatives. Furthermore, due to agriculture growth and unbalanced animal consumption the food industry aims to increase and diversify alternative protein formulations. Amongst the legumes, lentils have a fast-cooking time, high arginine, antioxidant flavonoids, and a low glycemic index which helps avoid peaks in blood glucose, improving metabolic control, and recent epidemiological studies suggest that they may help combat cardiovascular disease and diabetes mellitus, both with high prevalence worldwide. Based on this knowledge, we developed a muffin in which commercial oatmeal was partially substituted with lentil flour. The nutritional value of the snack was evaluated, and it was also performed microbiological analyses. The lentil-based muffin had higher protein and fiber and lower carbohydrate content compared to the oatmeal-based muffin. The aim of these muffins is that they are suitable for all consumers, including diabetics. This project seeks to be a central element in the promotion of one of the oldest grain legumes, contributing to an increase in its consumption and consequent commercial valorization.

Keywords: Legumes; lentil; health benefits; muffin.