

Development and Characterization of Wheat Bread with Lupin Flour

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Abstract : The purpose of the present work was to develop an innovative food product with good textural and sensorial characteristics. The product, a new type of bread, was prepared with wheat (90%) and lupin (10%) flours, without the addition of any conservatives. Several experiences were also done to find the most appropriate proportion of lupin flour. The optimized product was characterized considering the rheological, physical-chemical and sensorial properties. The water absorption of wheat flour with 10% of lupin was higher than that of the normal wheat flours, and Wheat Ceres flour presented the lower value, with lower dough development time and high stability time. The breads presented low moisture but a considerable water activity. The density of bread decreased with the introduction of lupin flour. The breads were quite white, and during storage the colour parameters decreased. The lupin flour clearly increased the number of alveolus, but the total area increased significantly just for the Wheat Cerealis bread. The addition of lupin flour increased the hardness and chewiness of breads, but the elasticity did not vary significantly. Lupin bread was sensorially similar to wheat bread produced with WCerealis flour, and the main differences are the crust rugosity, colour and alveolus characteristics.

Keywords : Lupin flour, physical-chemical properties, sensorial analysis, wheat flour

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