

BREAD DOUGH RHEOLOGY STUDY BY MONITORING ENERGY PARAMETERS

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Abstract

The operation of kneading dough for bakery is complex, being influenced by many factors, among which we mention the type of flour used, the amount of water added, the kneading temperature, the speed of the mixer's active organs, the duration of kneading, etc. In the kneading process to obtain the dough, a series of physical changes occur in the structure of the protein networks. Through kneading, the rheological properties of the dough change due to the movement of the protein groups, and the amount of gluten that can be washed decreases. In this study we compared the standard method of determining the rheological properties with the farinograph and the direct method using a mixer common in the bakery industry where we monitored the energy parameters to finally determine the farinographic curve. The results obtained on the farinographic curves show that the direct method with the mixer is identical to that obtained by the standard farinographic method, with the mention that the latter must be used initially to calibrate the direct method.

Key words: dough, rheology, mixer, energy parameter