

Development of a User Friendly Bread Improver for Bakery Industry

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Abstract

Wheat flour dough was prepared by mixing 3 % (w/w) and distilled water 60 % (w/w) was subjected to two factor factorial designs with three variables- amount of leavening agent, period of fermentation and method of drying, at two levels. The dough was divided into two and each was mixed with 1% and 3% yeast. These two were further divided into two again and one of each was subjected for 3 and 6h fermentation. All dough portions were chilled using ice cubicles. Chilled dough portions were divided into two and each was dried with sensible heating and cooling with dehumidifying at 100⁰C and 8⁰C respectively. All treatments were replicated thrice. 2% of dry treatments were incorporated with the commercial bread recipe to measure leavening time and leavening efficiency. The best treatment, was selected in terms of leavening time and leavening efficiency, was used to make bread and compared bulk density and pH value with ordinary bread.

Results revealed that treatments, 1% yeast, 6h fermentation, cooling with dehumidifying drying was shown least leavening time, highest leavening efficiency and low bulk density, 90 minutes, 48% and 0.10 g¹cm⁻³ respectively as against 180 minutes, and 0.125 g¹cm⁻³ of ordinary bread. pH values of the treatment was remained within the regulatory requirements of 5.2-6.0

Keywords: amylases, bread improver, bulk density, cooling with dehumidifying, leavening index