

EFFECT OF BREAD FLOUR FORTIFICATION WITH ZINC ON THE RHEOLOGICAL PROPERTIES AND BREAD MAKING CHARACTERISTICS.

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ABSTRACT

Low extraction rate flour which is distributed in food ration was fortified with zinc oxide to a level of 40 mg zinc / kg flour. It was found that this level of fortification did not affect the chemical composition of flour as for percentage of protein 9.81%, fat 1.29%, ash 0.91%, fiber 1.2%, wet gluten 31% compared to (10.21, 1.27, 0.94, 1.4 and 31)% for the fortified flour respectively. Falling number was 504 sec compared to 490 sec after fortification, sedimentation value difference as well 19, 17 ml, maximum viscosity was significantly higher, in fortified flour (1106 B.U) compared to 990 B.U for the control. Farinograph readings indicated higher percentage for water absorption, arrival time, development time and stability period (65%, 1.8 min, 6.5 min, 7.6 min) respectively for fortified flour compared to (62.9%, 1.7 min, 3.8 min, 4.7 min) in the control flour. Extensograph results revealed elevation in dough extension after fortification. Sensory evaluation of the fortified bread revealed no significant differences with the unfortified bread.

Key words :Supplementation , zinc, wheat flour.