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Development of Probiotic Edible Film Coated Extruded Food Product

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Abstract : In view of exploiting the health benefits of probiotic yeast S.boulardii NCDC 363 and make it available in the form of non-dairy food products, study was undertaken. In this, probiotic yeast S.boulardii NCDC 363 was incorporated in the edible film made from sodium alginate (SA), whey protein concentrate (WPC) and glycerol (50%). Response surface methodology was used to optimize process variables such as; concentration of SA (0.25-0.75%), WPC (1-2%) and temperature (70-80°C) and also to investigate effect of these process variables on viability of probiotic yeast and hardness when applied as an edible coat on extruded food products. Accelerated storage stability of optimized probiotic extruded food products samples was determined at 38 C and 90% RH. The optimized products were packed in high-density polyethylene (HDPE) and aluminum laminated polyethylene (ALP) pouches at 38°C and relative humidity maintained was 90%. It was observed that product stored in ALP had better stability in terms of moisture absorption, hardness and viability.

Keywords : probiotic yeast, extruded food product, WPC, RSM
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