Preservation of Coconut Toddy Sediments as a Leavening Agent for Bakery Products

Authors : B. R. Madushan, S. B. Navaratne, I. Wickramasinge

Abstract : Toddy sediment (TS) was cultured in a PDA medium to determine initial yeast load, and also it was undergone sun, shade, solar, dehumidified cold air (DCA) and hot air oven (at 400, 500 and 60oC) drying with a view to preserve viability of yeast. Thereafter, this study was conducted according to two factor factorial design in order to determine best preservation method. Therein the dried TS from the best drying method was taken and divided into two portions. One portion was mixed with 3: 7 ratio of TS: rice flour and the mixture was divided in to two again. While one portion was kept under in house condition the other was in a refrigerator. Same procedure was followed to the rest portion of TS too but it was at the same ratio of corn flour. All treatments were vacuum packed in triple laminate pouches and the best preservation method was determined in terms of leavening index (LI). The TS obtained from the best preservation method was used to make foods (bread and hopper) and organoleptic properties of it were evaluated against same of ordinary foods using sensory panel with a five point hedonic scale. Results revealed that yeast load or fresh TS was 58×106 CFU/g. The best drying method in preserving viability of yeast was DCA because LI of this treatment (96%) is higher than that of other three treatments. Organoleptic properties of foods prepared from best preservation method are as same as ordinary foods according to Duo trio test.

Keywords : biological leavening agent, coconut toddy, fermentation, yeast
Conference Title : ICFAB 2015 : 17th International Conference on Food and Agricultural Biotechnology
Conference Location : New York, USA
Conference Dates : June 04-05, 2015