Development and Quality Evaluation of Composite Flour Noodles with the Incorporation of Rice Bran and Oat Bran

Baljeet S. Yadav[1], Neelam Kumari[2] and Ritika B.Yadav[3]

[1,2,3]*Department of Food Technology Maharshi Dayanand University, Rohtak (Haryana)-India*
E-mail: [1]baljeetsingh.y@gmail.com

Abstract—*Noodles are one of the convenient foods and have been considered to symbolize long life and good luck in Asian culture. The current trend is to develop composite flours based food products with enhanced nutritional as well as other quality traits adding variety to the food basket. The objective of this study was to develop composite flour noodles and to investigate the cooking and textural quality characteristics of noodles to assess their acceptability. The noodles were prepared using defatted rice bran flour and defatted oat bran flour in different proportions (10, 20 & 30%) separately with refined wheat flour. The composite flours were analyzed for their functional properties. The highest water absorption capacity was reported for defatted rice bran flour and minimum was observed for refined wheat flour. The cooking time of the noodles prepared from defatted oat bran was observed to be lower than that of refined wheat flour noodles and highest cooking time was observed in noodles prepared from defatted rice bran flour. The highest cooking loss (1.74%) was observed in noodles prepared from 30% defatted rice bran flour and lowest cooking loss (1.04%) was observed in noodles prepared from 30% defatted oat bran flour. The highest cooking yield was observed in noodles prepared from 20% defatted oat bran flour. The acceptability of noodle color was best for control sample as well as defatted oat bran noodles. The maximum hardness was observed for cooked noodles prepared with 20% defatted oat bran flour (4717.64 g) and minimum hardness was observed in noodles prepared with 30% defatted oat bran flour (1922.40 g). Based on the analysis of flours and flour blends used in this study it can be concluded that the rice bran flour and oat bran flour could be successfully incorporated into noodle formulations. The incorporation of rice bran flour and oat bran flour could improve the nutritional profile of the noodles by increasing the protein and fibre content.*