

β-carbonate rich noodles: Optimization and development using response surface methodology

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The objective of this work is to develop β -carotene rich noodles using response surface methodology. In this study the carrot pomace powder (10-30%), wheat flour (50-70%) and guar gum (0.1% to 0.3%) as independent variables were optimized using RSM. The β - carotene, Bulk density, Water absorption index, Water solubility index, and Sensory characteristics were measured as responses. In the experimental design, 20 different combinations were produced and were studied to know the effect of independent variables on responses. The optimized value of carrot pomace powder, wheat flour, and guar gum were obtained as 70 g, 30 g and 0.10 g, respectively. The beta carotene, bulk density, water absorption index, water solubility index, and sensory characteristics were found 4.609 mg, 0.5498 g/cm³, 8.55 g/g, 81% and 6.3, respectively.

Key Words: β-carotene, noodles, carrot pomace powder, RSM, optimization

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