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Influence of Oat and Green Pea Flour on the Properties of an Extruded Product

Sajad Ahmad Wani, Amir Gull and Nawaz Ahmad Ganie

Student, Department of Food Engineering and Technology,
Sant Longowal Institute of Engineering and Technology
E-mail: sajad04@outlook.com, sajadwani12@gmail.com

Abstract—*Extruded product was prepared using oats and dried green pea flour. A central composite rotatable design of response surface methodology was used to study the effects. Addition of oat flour (OF, 16 to 45 %) and dried green pea flour (DGPF, 8 to 22 %) on the physical and functional characteristics of extruded products based on composite flour were studied. Second order polynomial equation was used to describe the effect of OF and DGPF on lateral expansion (LE), bulk density (BD), water solubility index (WSI), water absorption index (WAI) and hardness (HD). It was found that OF and DGPF showed decreased effect on LE while increased effect on BD and HD. On increasing OF and DGPF, WAI increased. Numerical optimization resulted in 42 % OF and 8 % DGPF to produce acceptable extrudates. The results suggest that oats and dried green pea flour can be extruded with rice flour and corn flour into an acceptable snack food.*

Keywords*: Oat, pea, extrusion, functional properties, optimization.*

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