Characterization of pea processing waste

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Fruits and vegetables processing industries produce massive waste that possess environmental problems due to their volume, but the by-products like peels and seeds has been recognized as potential source of bioactive compounds, thereof food processing waste may be used to develop the functional food products. The present study focused on the preservation of pea pod by drying at 60°C for 5 hours and nutritional characterization of powder. Pea pod powder was rich in fiber (45 g/100 g), bioactive components (84% inhibition of DPPH and 1.07 g/100 g GAE total phenols) and minerals (calcium 6.032 mg/g; phosphorus 1.623 mg/g). Amino acid composition of powder was also analyzed using GC-MS and it was observed that all amino acids were present in significant concentration but phenylalanine (14.80%), histidine (14.80%) and tyrosine (36.30%) were slightly higher. Sugars, proteins and ascorbic acid were found in considerable amount, but powder also contained small amount of anti-nutritional factors (saponins 1.068 mg/g; tannins 0.095 mg/g). Pea peel powder exhibited good water absorption capacity, water solubility and swelling power. Due to its nutritional and functional properties, it could be incorporated into certain food products to enhance their nutritional value.

Biography

Harinderjeet Kaur Bhullar is pursuing PhD in Food Technology from Punjab Agricultural University, Ludhiana. She is currently working on the utilization of pea processing waste in food products.