

NUTRITIONAL AND FUNCTIONAL PROPERTIES OF BLACK CUMIN (NIGELLA SATIVA) SEED PROTEIN PRODUCTS

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ABSTRACT

The proximate chemical composition in-vitro digestibility and functional properties of black cumin defatted flour (DF), protein concentrate (PC) and protein isolate (PI) were investigated. PI and PC had high protein content and low carbohydrates than full fat flour and DF . Black cumin protein products were a good source of essential amino acid except for sulfur containing amino acid. PI showed high in-vitro digestibility than DF and PC. The solubility at different pH compared to soybean protein isolate (SPI) revealed that black cumin protein product had minimum solubility at pH 5.0 while that of SPI was at pH 4.0 . SPI absorbed significantly higher amount of water than DF,PC and PI, whereas DF and PC absorbed high quantities of oil than PI and SPI. DF and PI showed high emulsion capacity and stability than PC and SPI. DF formed stronger and more stable foam than the other samples.