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PHYSICAL AND FUNCTIONAL CHARACTERIZATION OF THE BYPRODUCTS OF THE PROCESS OF OBTAINING PROTEIN CONCENTRATES FROM COMMON BEAN

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Common bean (*Phaseolus vulgaris*) is a legume that has nutritional properties, such as high content of protein, carbohydrates, and minerals. It has been carried out an extraction process to obtain protein concentrates from common bean Azufrado Higuera by wet milling and isoelectric precipitation, to obtain peptides with nutraceutical properties. During the protein concentrates process three by-products (flours) that have not been characterized. The aim of this work is to determinate the physically characterize and the tech-functional protein of by-products obtained in the process of extracting protein concentrates bean Azufrado Higuera. The color of the three by-products have high brightness, two by-products have a suitable particle size are generated to flour, an index of water absorption of 2.13, 2.83 and 0.97 mL water/g of flour milling by-product (SM), the precipitation product of alkaline extraction (SEA) and the by-isoelectric precipitation occurs (SPI), respectively, the valued determinate for oil absorption capacity were 1, 2.06 and 1.33 mL of oil/g of flour to SM, and SPI SEA, respectively. According to foaming, only this property in SPI, indicating that it can be used in making desserts, using SM is recommended and SEA in products where the formation of an emulsion is required is presented, such as sauces, creams, fat analogs. Our results indicate the potential application of by-products as a functional food ingredient.

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