NUTRITIONAL AND FUNCTIONAL EVALUATION OF A MILLET (*Panicum milliaceum*) AND ZARAGOZA (*Phaseolus lunatus*) COMPOSED FLOUR

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The term composite flour was created in 1964 by FAO when it recognized the need to seek a solution for countries that do not produce wheat. The present study had five purposes: 1) To characterize the physical-chemical properties of millet and zaragoza, 2) To develop a flour composed by millet (*Panicum milliaceum*) flour PMF and Zaragoza (*Phaseolus lunatus*) flour PLF, 3) To determine the composite flour physical-chemical properties, 4) To evaluate the "in vitro" digestibility of the composite flour, 5) To assess the functional properties of the composite flour. The qualitative of response surface methodology was applied to determine the PLF/PMF combination. The best PLF/PMF combination was 75%:25% respectively; the content (on wet basis) of this mixture was 20.62% of protein, 2.89% of lipids and 60.16% of carbohydrates, it also had a pH of 6.6 and an acidity of 0.0324%. The "in vitro" test showed a 87,97% of protein digestibility, and the following functional properties were evaluated: swellability in 118.33% (27°C), water holding capacity of 10 ml/g, absorption lipid index of 4ml/g; foam expansion capacity of 35.64%. The minimum gelling capacity was 14% unstable presence gel with 12%, a bulk density of 0.28 g/ml. Sensory evaluation with respect to color resulted in a score of: not clear not dark; pleasant odor and texture somewhat thick. The results indicated that the composite flour can be recommended in developing products that require properties as those studied and also as an ingredient in the development of new products.