Brazilian wheat milling – relationships among protein, ash and RVA data from selected streams of an industrial diagram

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Wheat processing for production of white flour involves several steps of milling and sieving. Different applications of wheat flour require specific physical and chemical properties, especially related with color, dough/batter rheology, and protein level among others. In the present paper streams from an industrial process milling a blend (70 : 30) of Brazilian and Argentinean wheat (*Triticum aestivum*) were collected and evaluated for protein and ash content as well as for a selected viscoamylographic parameter named stirring number in order to understand the behavior of South American blended wheat milled in Brazil. Protein and ash content were measured by the Kjeldhal method and muffle furnace at 550 °C/6 h, respectively, and the Rapid Visco Analyzer (RVA) analysis was carried out following the stirring number profile of the RVA’s Thermocline for Windows software, i.e., three minutes at 95 °C and spindle speed at 160 rpm. The values found for these three parameters for the different milled fractions showed correlations between protein content and final viscosity (-0.851), ash content and final viscosity (-0.893) and protein and ash content (0.917), suggesting that higher bran contents are associated with decreasing in stirring number values and increasing in both protein and ash contents. The different fractions from the industrial wheat milling showed a behavior that made it possible to conclude that the three studied parameters were closely linked to each other and should be considered as important process control indicators.