PHYSICOCHEMICAL CHARACTERISTICS OF PORK SAUSAGE PRODUCED WITH DEFATTED RICE BRAN


Brazil is the major producer of rice outside of Asia while the state of Rio Grande do Sul heads rice production inside the country. Rice bran (RB) is a by-product of rice processing and although it is a nutrients-rich source, especially fiber, minerals and protein, its use in human feeding still is restricted. Thus, meat products could be an option to introduce RB in population diet. This study aimed to evaluate physicochemical characteristics of pork sausage produced with defatted RB. RB was added to pork sausage (118.29±11.27g, n=3) in concentrations of 0 (control), 1, 2 and 3% replacing TSP (the non-meat protein commonly used in meat products). Protein, fat, fiber, ashes and moisture content, as well as, water activity (aw) were evaluated in raw pork sausages by recommended methods. RB addition to sausages did not cause significant differences (p≤0.05 by Duncan test) in protein (min=18.27±0.63 and max=19.46±0.90%), fat (min=7.8±0.14 and max=8.23±0.97%), fiber (min=1.83±0.28 and max=2.89±0.77%), ash (min=3.07±0.24 and max=3.43±0.029%), moisture (min=58.48±5.55 and max=64.93±0.91%) and aw (min=0.9629±0.00072 and max=0.9652±0.00028) when compared to control (100% of PTS). These results are in agreement with previous reports where TSP was replaced by non-meat proteins, such as whey protein concentrate. The present study shows that replacement of PTS by defatted RB did not change physicochemical characteristics of pork sausages, indicating the possibility of TPS replacement by RB without prejudice in sausage composition. Furthermore, RB use would be economically favorable since RB is a low value by-product.