SOLUBLE DIETARY FIBRE ENHANCING LOW SODIUM AND LOW PHOSPHATE MARINATED CHICKEN BREAST MEAT

Natália Manzatti Machado Alencar, Vanessa Cristina Messias, Thalita Silva e Pires, Andrew Piovezan, Giovanna Rosso, José Roberto Santos, Marise Aparecida Rodrigues Pollonio. School of Food Engineering, University of Campinas - UNICAMP, Rua Monteiro Lobato 80, 13083-862 Campinas, São Paulo, Brazil.

Processing of marinated chicken breast meat has received significantly attention by regulatory organs in Brazil because of the need to control water absorption levels in industry scale. These products have been continuously growing in food marketing, food service due their convenience and improved sensory properties that result from new technologic strategies. However, the high levels of sodium and phosphate in brines utilized to marinate chicken breast can avoid health claims in recently scenario. Then, This study investigated the performance of soluble dietary fibres inulin (3.0- 4.5%) and citrus fibre (0.15-0.25%) in marination brines containing 1.0% NaCl and 0.25% sodium tripoliphosphate and .0,1% rosemary extract. 48h after slaughtering, chicken breasts were injected with 20%(w/w) of different brines, with three control brines C1 (1% NaCl + 0.25% PO₄³⁻); C2(1% NaCl + 0.25% PO₄³⁻; 0,1% rosemary extract) and C3 (2% NaCl + 0.5% PO₄³⁻). The marination process performance was determined by cooking weight loss; water holding capacity (WHC), moisture %; water activity (Aw); Warner Bratzler shear force, pH and colour (L*, a*, b*). Cooking weight loss; water holding capacity (WHC), moisture %; Aw; Warner Bratzler shear force, pH values were not influenced by mix of fibers in brines. However, the treatments containing inulin presented lowest cooking weight loss. Inulin also has increased L* values when compared with controls. These results suggest that soluble fibers can be utilized to reduce sodium chloride and phosphate under technological approach.