

Abstract

The objective of this study was to manufacture an imitation cheese that expands to a crispy product when heated in a microwave oven. Imitation cheese (~18% w/w protein and 60% w/w moisture content) was formulated with varying fat content (10–0%). Fat reduction was achieved by direct replacement with resistant starch to give fat:starch ratios of 1.36, 0.53, 0.3, 0.13, or 0. As fat:starch ratio decreased from 1.36 to 0.13 the degree of expansion did not alter significantly (~100%). However, cheese with no fat exhibited significantly greater expansion (~400%). The force required to puncture the expanded products containing fat was significantly higher than those without fat. Results indicate that imitation cheese containing no fat and functional fibre can be transformed to a crispy product.