EFFECT OF MODIFIED STARCH IN REDUCED-FAT MINAS FRESH CHEESE

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The addition of fat substitutes is one of alternatives to improve quality of low-fat cheeses. Among the substitutes, starch is widely used because of its low cost and easy application. This research studied the effect of different types of modified starch on syneresis, appearance and physicochemical characteristics of reduced-fat Minas fresh cheese. Four treatments were performed: Full-fat control cheese (CC) and low-fat cheeses with addition of modified starches from different sources: potato (PSC), corn (CSC) and waxy maize (WSC). Moisture, fat, fat in dry matter, ash, protein, salt, acidity, syneresis and appearance were evaluated. CC presented the lowest protein content (13.75%) probably due to its higher fat content. As expected, the cheeses with starch addition can be considered “light cheeses” because all of them presented, at least, 25% less fat content in dry matter compared to full-fat cheese. Cheeses with starch addition showed acidity statistically equal (p < 0.05) among them and were less acid than CC, possibly influenced by the higher moisture content of these cheeses when compared to control. This higher moisture is desired for light cheeses, however, for PSC and CSC, this percentage was excessive (69.51% and 69.71%, respectively) affecting its appearance for being more soft and exudative than ideal (27.62 and 28.24% of syneresis, respectively), while WSC (67.64% of moisture; 23.31% of syneresis) showed a similar appearance to CC (61.02% of moisture; 19.20% of syneresis). The treatment WSC showed potential application in reduced-fat Minas fresh cheese and was considered the closest to the full-fat control.

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