Effect of starter cultures on properties of soft white cheese made from camel (Camelus dromedarius) milk - DTU Orbit (04/09/2019)

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This experiment was conducted to investigate the effect of starter cultures on the physicochemical properties, texture, and consumer preferences of soft white cheese (SWC) made from camel (Camelus dromedarius) milk. The experiment was laid out in a completely randomized design with 5 treatments [starter cultures; i.e., 1 thermophilic (STI-12), 2 blended (RST-743 and XPL-2), and 2 mesophilic (R-707 and CHN-22) cultures]. Starter cultures STI-12 and RST-743 were inoculated at 37°C, whereas XPL-2, R-707, and CHN-22 were inoculated at 30°C. Camel milk inoculated using STI-12 and RST-743 cultures resulted in faster acidification than XPL-2, R-707, and CHN-22 cultures. Camel milk SWC made using STI-12 and CHN-22 cultures gave lower pH (4.54) and titratable acidity (0.59), respectively, whereas R-707 culture resulted in high cheese yield (13.44 g/100 g). In addition, high fat (20.91 g/100 g), protein (17.49 g/100 g), total solids (43.44 g/100 g), and ash (2.40 g/100 g) contents were recorded for SWC made from camel milk made using RST-743 culture. Instrumental analysis of cheese texture revealed differences in resistance to deformation in which camel milk SWC made using RST-743 culture gave higher firmness (3.20 N) and brittleness (3.12 N). However, no significant difference was observed among camel milk SWC adhesiveness made using different starter cultures. Consumer preference for appearance, aroma, taste, and overall acceptances of SWC were affected by inoculation of starter cultures. Considering curd firmness, cheese yield, compositional quality, and textures using STI-12, RST-743, and R-707, these cultures were found to be better for the manufacture of camel milk SWC.

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