

Comparison of the quality characteristics of smoked cheeses available in the retail market

Summary

The purpose of the research was to compare selected physicochemical and sensory properties of smoked cheeses from different producers available in the retail market. The research material comprised 30 samples of smoked cheese purchased in hypermarkets in the city of Olsztyn. Immediately after purchase, they were transported to the laboratory for quantitative and qualitative analyses. The data obtained indicated that the smoked cheeses differed significantly in terms of water and salt content, active and titratable acidity, and shear force. The products of brand A had the highest water content and the lowest pH, while the brand C cheeses had the lowest NaCl content, total acidity, and shear force. The products differed significantly in the colour parameters of the surface and cross-section. Brand A cheeses had the lightest surface, while the brand B and C products had higher values for red colour and the yellowness index (YI). The surfaces of the cheeses from producer A were the yellowest, with the highest saturation, hue, and whiteness index. The cross-section of brand A and B cheeses had significantly higher values for lightness and red tristimulus compared to brand C. The cross-section of cheeses from producer A had the highest values for yellow colour, chroma, and the yellowness index (YI), while the colour of the cross-section of brand C cheese was darker and less saturated, with the lowest levels of red and yellow. The samples from manufacturers A and B had a desirable colour. The brand B cheese received the highest scores for the external appearance of the cross-section as well as for structure and consistency, with a homogeneous, firm and tender texture. The brand C samples had the strongest and most perceptible saltiness, which contributed to their lowest taste rating by the sensory panel.

KEY WORDS: smoked cheese, physicochemical properties, colour profile, sensory quality