

Effect of high hydrostatic pressures and milk pasteurization on yogurt quality

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The objective of this work was to study the effect on physicochemical, rheological and sensory parameters of a yogurt made with milk treated at high hydrostatic pressure compared to a yogurt made with pasteurized milk.

For this purpose, churra sheep's milk was collected and divided into two batches with their replicas. One batch underwent high hydrostatic pressure treatment (600MPa, 6 minutes at 20 ° C) and the second batch underwent a pasteurization procedure (92 ° C, 5 minutes).

Fermentation was carried out at 42 ° C by inoculating a combined *Lactobacillus bulgaricus* and *Streptococcus thermophilus* ferment.

Treatment with high hydrostatic pressure significantly ($p < 0.05$) affected the fat content, dry extract, also influencing the color parameter * b.

Likewise, the yogurts made with milk treated at high pressure did not show significant differences at the level of the texture parameters, except for adhesiveness, with respect to the yogurts made with pasteurized milk.

At the rheological level, both treatments showed a predominantly elastic behavior with higher values for elastic modulus (G'), viscous modulus (G'') and apparent viscosity in the yogurts that used pasteurized milk.

Sensory analysis using a trained panel members resulted in significant differences ($p < 0.05$) in filancia, creaminess, flavor and global preference where the high pressure batches received the best scores.

In conclusion, the treatment exerted significant differences, being the yogurts made with milk treated with high hydrostatic pressure the best evaluated in the sensory analysis.

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