CARPATHIAN JOURNAL OF FOOD SCIENCE AND TECHNOLOGY

journal homepage: **http://chimie-biologie.ubm.ro/carpathian_journal/index.html**

THE RIPENING CONDITION EFFECT ON THE MAIN TEXTURAL PROPERTIES OF CASCAVAL CHEESE

Sergiu Pădureţ[1] ✉

[1]*Faculty of Food Engineering, Stefan cel Mare University of Suceava, 13 University Str., 720229 Suceava, Romania*

✉ *sergiu.paduret@fia.usv.ro*

https://doi.org/10.34302/crpjfst/2023.15.3.17

Article history:
Received: March 28 2023
Accepted: September 17 2023

Keywords:
Cascaval;
Hardness under load;
Relaxation;
Modulus of deformability.

ABSTRACT

The textural characteristics represent a significant property used to distinguish various cheese types and are considered by the consumer as a determinant factor of acceptability and overall quality and preferences. Consequently, the main idea of the current research was to study the textural properties of Cascaval cheese during different ripening conditions and in accordance with the main chemical composition. The highest hardness under load was recorded by the unpacked ripened Cascaval samples, which also recorded the highest values for total mechanical work. The recoverable energy determined as the work of elastic deformation ranges from 0.19 to $0.31 \cdot 10^{-3}$ Joules, the highest values registered and the most resilient samples being represented by the ripened unpacked Cascaval. According to Pearson correlation results the modulus of deformability, hardness under load, total mechanical work, relaxation, and relaxation work positively influenced the TPA gumminess ($p < 0.01$, $p < 0.05$). It was also found that the texture parameters resulting from the application of the stress-relaxation method showed more correlations with the chemical composition of the tested samples compared to the TPA method, therefore the stress-relaxation method can be a more powerful tool in the evaluation of Cascaval cheese texture characteristics.