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Manal Khider*, Mahmoud A. Mailam, Fathia A. Yassin, and Wedad A. Metry. **Incorporation of Different Cheese Slurries into Retentate of Ultrafiltrated White Soft Cheese for Enhancing Flavor and Quality Improvement.** *Egyptian Journal of Chemistry*, Vol. 65, No. 4 pp. 747 - 759 (2022. DOI: 10.21608/EJCHEM.2021.96192.4508

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Abstract

One of the most important criteria in any type of cheese is its flavor and texture, which consequently affect its quality, consumer choice and acceptance. The ultra-filtrated (UF) white soft cheese is one of the very popular cheese types in the Mediterranean region. This type of cheese has some properties that do not meet the consumer preferences because of the lack in its flavor and also the texture is not spreadable. So this study aimed to improve the quality and enhancing the flavor of UF-white soft cheese by incorporating different cheese slurries into the prepared retentate for UF-white cheese making and compared with UF- cheese control. The slurries of pickled Domiatti, Roquefort or Mish cheeses were incorporated separately into the cheese retentate with different levels (6, 9 or 12%). Chemical, microbiological, rheological and sensory properties of all resultant UF-white cheese treatments and control were studied during the cold storage at $6\pm 1^{\circ}\text{C}$. The results showed high values for acidity, total nitrogen, water soluble nitrogen, total volatile fatty acids, salt, ash, fat and total solids in cheese treatments comparing with control during the storage period. Rheological parameters in all cheese treatments were decreased during storage period. The flavor and texture of UF-white soft cheese treatments were improved by using the different cheese slurries. The favorite slurry type was registered for Domiatti cheese, in all added levels as it shows the highest total scores for sensory evaluation along the storage period comparing to other treatments and control.

Keywords: Cheese slurry; Pickled Domiatti cheese; Flavor; Mish cheese; Retentate; Roquefort cheese; Ultra-filtrated white soft cheese.