Evaluation of changes in the chemical and rheological characteristics of Ras cheeseduring ripening

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Abstract: Principal Component Analysis (PCA) was used to evaluate changes in chemical and rheological properties of Egyptian Ras cheese during ripening period (30, 60 and 90 days). Canonical Correlation Analysis (CCA) was also used to determine the relationship between chemical and rheological data. The PCA describe three groups of cheese samples including 30, 60, and 90 days aged cheeses according to the chemical and rheological changes during the ripening period. The PC_1 separated 30 days cheeses that characterized by higher moisture content, pH and cohesiveness values from samples (90 days cheese) that had highest WSN/TN, firmness, chewiness and gumminess values. The PC_2 distinguished the cheese 60 days aged that characterized by highest fat and protein contents. On the other hand, CCA results showed that strong correlations were found between the chemical and rheological results.

Keywords: Ras cheese ripening, chemical, rheological properties, principle component analysis, canonical correlation analysis.

r the final aroma and taste of RCFC samples were developed.