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EVALUATION OF EDIBLE FILM BASED ON MILK PROTEIN FOR RAS CHEESE COATING. BY

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ABSTRACT

The aim of this study was to investigate the edible films prepared from different types of buffalo's milk protein using sorbitol as plasticizer and applied for Ras cheese coating, whether by dipping or packaging, in relation to its quality attributes during ripening. Eight Ras cheese samples were manufactured and dipped or packaged by different types of edible coating solutions or films prepared from buffalo's total milk protein (TMP), some of which containing different preservatives. Control Ras cheese were neither dipped nor packaged with any film or wax, while one of other cheese treatment was coated by paraffin wax. The other treatments were either dipped or packaged whether with TMP containing or not preservatives, namely 0.1% of mixture of nisin+natamycin (1:1) or potassium sorbate+natamycin at the same level and ratio. The obtained results revealed that, the coating of Ras cheese with TMP edible film led relatively to reduce the rate of cheese moisture loss and hence the salt in water phase remained in the ranges those encouraged the growth of lactic acid bacteria to develop more acidity and hence enhanced the ripening rate as explained from the determined ripening indices (Soluble nitrogen and Total volatile fatty acids). That has indeed reflected in the relative cheese weight stability during ripening. The presence of preservatives in the film kept cheese under microbiological control according to the yeast and moulds count. Organoleptically, the cheese coated with TMP persevered with potassium sorbate+natamycin whether by dipping or packaging gained the highest sensory scores.

The forgoing results led to conclude that, Ras cheese could be hold its weight during ripening period besides improve its marketing quality when coated with edible film based on milk protein especially persevered with 0.1 % of mixture of potassium sorbate+natamycin (1:1).

Key words: Buffalo's milk protein, Total milk proteinates, Edible film