

Effect of Nisin on post-processing acidification of curd produced by controlled fermentation of *Streptococcus lactis*, *Streptococcus cremoris* and *Lactobacillus bulgaricus*

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Nisin is a polycyclic antibacterial peptide which used as a preservative in cheese. It is a bacteriocin effective against many Gram-positive organisms including lactic acid bacteria. Hence, the present work was undertaken to assess the effect of Nisin on post-processing acidification and the lactic acid bacteria population of curd. Curd was prepared using freeze dried curd starter cultures and was divided in to three groups. 0.015% (w/v) of Nisin and 1000 mg/Kg of Potassium Sorbate (E 202) were added to two parts separately while the remaining part was kept without adding any preservatives (control). Curd samples were analyzed for lactic acid bacteria population, titratable acidity and pH for 10 days period while storing at 4°C. Incorporation of Nisin in to curd reduced ($P < 0.05$) the lactic acid bacteria population than the control (curd without any preservative) by 1.27 log CFU/mL at day 01 of refrigerated storage. Nisin incorporated curd samples showed slightly higher ($P > 0.05$) pH and lower Titratable acidity than the curd without any preservatives (control) at day 1 of refrigerated storage. Therefore, this study revealed that Nisin can reduce the post-processing acidification of curd than Potassium Sorbate upon refrigerated storage up to 10 days.

Key words: Curd, Nisin, Potassium Sorbate the post-processing acidification

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