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Effects of nisin and natamycin on microbiological and physicochemical qualities of meatball supplied from Yildizeli, Sivas

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Meatball is known as the most sensitive food product towards microbiological spoilage because of its physical and chemical properties. Meat and meat products have the biggest ratio as 70% among food-borne diseases. Nisin and natamycin are natural compounds that intended of inhibition of microorganisms. Especially natamycin is patented antibiotics for promising to carcass decontamination and an alternative to chemicals like trisodium phosphate and chloride. Farming and meat industry are important daily breads for country public. In these sectors, neglecting of hygiene and standards were suspected and this was determined as research subject and detected. Samples that were included antimicrobials at different ratios were analyzed in 0, 5, 10 and 15 days. Structural changes of samples were examined during storage period. In this project, meatball samples whose quality criteria were defined and which were supplied from Yildizeli the district of Sivas, were analyzed physicochemical and microbiologically after adding nisin and natamycin at different ratios. Both nisin and natamycin were added to meatball samples in concentration to 0 (control group), 2.5 and 5.0 g/kg. Moisture, ash, fat, pH, microbiological analyses and sensory properties of the all samples were evaluated. While any physically or chemically differences were not identified between all samples, sensory property values of control group and nisin added group were the same. Study showed that the results were acceptable for the use of these antimicrobials in meatball and were increased the shelf life of meatballs.

Biography

Emre Hastaoglu has completed his Master's from Hacettepe University and continues his PhD studies at Hacettepe University. Currently, he is a Lecturer in Food Technology program at Cumhuriyet University, Turkey.

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