



INFLUENCE OF RIPENING CONDITIONS ON SURVIVAL OF *BRUCELLA MELITENSIS* IN TRADITIONAL LIGHVAN CHEESE (EWE MILK CHEESE)

Mir-Hassan Moosavy¹, Nassim Shavisi¹, Ehsan Mostafavi², Amir Mohammad Mortazavian³✉, Hamid Sayevand⁴, Sara Sohrabvandi⁵, Nasim Khorshidian⁵

¹Department of Food Hygiene and Aquatics, University of Tabriz, Tabriz, Iran

² Department of Epidemiology, Pasteur Institute of Iran, Tehran, P.O. Box 13169-43551, Iran

³Department of Food Science and Technology, National Nutrition and Food Technology Research Institute, Faculty of Nutrition Sciences and Food Technology, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

⁴Food and Drug Administration, Ministry of Health and Medical Education, Tehran, Iran

⁵Department of Food Technology Research, National Nutrition and Food Technology Research Institute, Faculty of Nutrition Sciences, Food Science and Technology, Shahid Beheshti University of Medical Sciences, P.O. Box 19395-4741, Tehran, Iran.

✉ mortazvn@sbmu.ac.ir

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ABSTRACT

In developing countries, brucellosis is a reported and in most of cases, consumption of raw milk and traditional cheeses contaminated with *Brucella* spp., especially *B. melitensis*, is the main cause of disease. The aim of this study was to evaluate the effects of ripening conditions (ripening temperatures: 4, 9 and 14°C and salt concentrations: 8, 12 and 15%) on survival of *B. melitensis* in traditional Lighvan cheese (a typical Iranian brine-ripened cheese) manufactured with raw ewe's milk during 150 days of ripening. Results showed that the viable counts of *B. melitensis* changed significantly ($p < 0.01$) as a function of storage temperature. *B. melitensis* survived significantly better at 4°C and 9°C than 14°C ($p < 0.01$). All of salt concentrations (8, 12 or 15% NaCl) significantly ($p < 0.001$) affected the inactivation of pathogen. *B. melitensis* had been completely eliminated at the end of ripening period (150 days). Our findings indicated that the using of hurdle technology (the two limiting factor, namely temperature and salt concentration), is a powerful tool to eliminate *B. melitensis* in Lighvan cheese after at least 5 months of ripening.
