

## A molecular survey for detection of *Mycoplasma bovis* in bovine bulk milk samples of dairy farms in Hamedan, Iran

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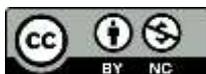
### Abstract

Mastitis is a well-recognized and costly disease of dairy cattle. *Mycoplasma bovis* is one of the most important causal agents of mastitis in dairy cows. In respect to the importance of mastitis caused by *Mycoplasma*, the objective of the present study was to evaluate of presence of *M. bovis* in bulk milk of dairy cattle farms of Hamedan province, Iran. For this purpose, a total of 125 bovine bulk tank milk samples were collected from 31 dairy farms of Hamedan, Iran. After that, California Mastitis Test (CMT) and Somatic Cell Count (SCC) were done on the milk samples. Then using DNA extraction kit, the total DNA was extracted from each sample. The PCR followed by nested PCR (nPCR) was performed for specific detection of *M. bovis*. Based on PCR for genus detection, totally, 19 out of 125 (15.2%) bulk tank milk samples were contaminated with *Mycoplasma* spp. In addition, 11 samples (8.8 %) were contaminated by *M. bovis* based on nested PCR results. Moreover, the results showed that 26 of 125 bulk milk samples (20.8 %) and 102 of 125 bulk milk samples (81.6 %) have high rate score by CMT and SCC, respectively. Statistical analysis showed a positive correlation between CMT and SCC results. In the present study, the presence of *M. bovis* in the bulk tank milk samples suggests that more hygiene practices are required to avoid transmitting this pathogen among dairy cow herds of Hamadan region. According to the presence of *Mycoplasma* in bulk tanks of this region, the present study suggested that the frequency of *Mycoplasma* contamination in individual cows be determined.

**Key words:** Mastitis, *Mycoplasma*, Bulk tank milk, Cow, Hamedan

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