

## Comparison of Polymerase Chain Reaction (PCR) and Milk Ring Test (MRT) for Detection of *Brucella* Spp. in Cattle Milk

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**Background & Objectives:** Brucellosis is an important zoonotic disease in human and animals. The prevalence rate of brucellosis is high all over the world and in most countries including Iran the disease is endemic. Milk, raw milk products and the products of infected animals are a major transmission source of infection to human.

**Methods:** In this research, 60 milk samples collected from suspected cattle in different villages of Kurdistan province. MRT carried out on all samples. DNA extracted for all milk samples directly. In order to detect the *Brucella* spp. PCR carried out using B4 and B5 primers on all DNAs.

**Results:** Out of 60 milk samples, 17 were positive in MRT and 20 were positive using PCR (PCR products 223 bp). Five samples were just positive in MRT while were negative using PCR. Also 8 samples were just positive in PCR while were not positive by MRT. However the PCR is a sensitive test for detection of bacteria but can not detect all cases which were positive using MRT. Meanwhile some of samples which were positive using PCR were negative in MRT.

**Conclusion:** Based on the results of this research, in order to detect *Brucella* spp. in milk samples both test (MRT and PCR) recommended to carry simultaneously.

**Keywords:** *Brucella*; Cattle Milk; MRT; PCR

