

## Identification of Anaplasma Species in Sheep of Khouzestan Province by PCR

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**Abstract :** The aim of this study was to determinate the variety of Anaplasma species among sheep of khouzestan province, Iran. From April 2013 to June 2013, a total of 200 blood samples were collected via the jugular vein from healthy sheep (100), randomly. The extracted DNA from blood cells were amplified by Anaplasma-all primers, which amplify an approximately 1468bp DNA fragment from region of 16S rRNA gene from various members of the genus Anaplasma. For raising the test sensivity, the PCR products were amplified with the primers, which were designed from the region flanked by the first primers. The amplified nested PCR product had an expected PCR product with 345 nucleotides in length. In 100 sheep blood samples, 7 samples were Anaplasma spp. positive by first PCR and nested PCR. The results showed that 2 of total 100 blood samples (2%) were A.phagocytophilum positive by specific nested PCR based on 16S rRNA gene. The extracted DNA from positive Anaplasma spp. samples were amplified by Anaplasma ovis specific primers, which amplify an approximately 866bp DNA fragment from region of msp4 gene. 5 out of 100 sheep blood samples (5%) were positive for Anaplasma ovis. This study is the first molecular detection of A. ovis and A.phagocytophilum from sheep in Iran.

**Keywords :** Iran, anaplasma species, sheep, A. ovis, A. phagocytophilum, PCR

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