

Summary of the MSc. thesis No., Faculty of Veterinary Medicine, Urmia University.

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**Title: Isolation and identification of *Salmonella* in turkey fecal samples of Piranshahr region by culture and Nested-PCR**

**Summary:**

The present study was conducted to determine the amount of *Salmonella* contamination in turkey feces samples collected from turkey breeding centers in Piranshahr region (West Azerbaijan province). A total of 100 stool samples were randomly collected from turkey breeding centers. Stool samples were collected seasonally during 2022. The samples were transferred to the laboratory under sterile conditions on ice. First, the samples were cultured in XLD and SS agar culture media for diagnosis based on biochemical tests. In the next step, the presence of *Salmonella* bacteria in the samples was confirmed based on gram staining and biochemical tests (such as TSI, indole, citrate and urea). In the second step, the positive samples were tested with PCR test based on *16SrRNA* gene for final confirmation. The results showed that based on culture and biochemical diagnosis, 15 samples (15%) were infected with *Salmonella* bacteria. Also, 15 positive samples (15%) were positive based on the nested-PCR method. The obtained results showed that examining the *16SrRNA* gene using PCR technique and specific primers can be an alternative method with high speed and accuracy and relatively low cost for the detection of *Salmonella* bacteria among bird feces samples. Considering that the prevalence of salmonella infections among birds and poultry is relatively high, it is particularly important to identify these infections with high speed and accuracy. This study showed that examining the *16SrRNA* gene using nested-PCR method can be effective in this field.

Keyword: *Salmonella*, turkey, Fecal, Piranshahr, Nested-PCR