

ISOLATION OF *SALMONELLA ENTERITIDIS* BY SEROLOGICAL AND BIOCHEMICAL METHODS IN EGG SAMPLES, FECES AND POULTRY ORGANS FOR EGG PRODUCTION

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Abstract

Salmonella enteritidis is a group of bacteria that cause typhoid fever, food poisoning, gastroenteritis, enteric fever and other diseases. Humans become infected mainly through contaminated water or food, especially meat, poultry and eggs. *Salmonella enteritidis* and *Salmonella typhimurium* are responsible for over 50% of all human infections in the world. The purpose of this study was to determine the prevalence of the genus *Salmonella enteritidis* in poultry for egg production in Pristina - Kosovo.

In this research, serological and biochemical isolation of bacteria of the genus *Salmonella enteritidis* in eggs, feces and organs from poultry for egg production is done. The study was conducted on private poultry farms in Pristina, Kosovo. Samples from feces, eggs (white, vitellus, and cortex) and organs (liver, spleen, intestines, and cloaca) were subjected to ISO 6579: 2002, the standard method for the detection of *Salmonella enteritidis*. Sampling and transportation of samples collected from private farms and poultry farms is done according to the Codex Alimentarius. Examinations were performed in the second level safety laboratory in microbiological laboratory of Food in the Food and Veterinary Agency, and microbiological laboratory at University for Business and Technology in Kosovo. A total of 64 fecal samples, 61 organ samples and 190 egg samples were tested.

Comparison of the results obtained showed that *Salmonella enteritidis* in a higher percentage was found in fecal samples with 10 strains or expressed in a percentage of 15.6%, while in organs only 2 strains or 3.2% were isolated and in eggs 1 strain of *Salmonella enteritidis* or 0.52% of the total sample tested.

The similar results are found in other researches that has been done in other parts of the world. We can say that rising fast food consumption of poultry products and international trade poses a problem in the spread of *S. enteritidis*.

Key words: *Salmonella enteritidis*, Serological, Biochemical, Samples, strain.