

THE INCIDENCE OF E. COLI O157-H7 IN BROILER CARCASSES IN SLAUGHTERHOUSES AND AT THE RETAIL SHOPS IN TIRANA WITH FOOD SYSTEM TEST

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Abstract

The successful identification of risks at their early inception (emerging risks) is at the heart of public health and environmental protection. Escherichia Coli is one of the major contaminants of foods and also one of the major representatives of foodborne pathogens. The primary habitat of Escherichia coli is the vertebrate gut, where it is the predominant aerobic organism, living in symbiosis with its host. VTEC (verocytotoxin-producing Escherichia coli) is one of the major foodborne pathogens. According to EFSA report 2015 (published on 28 January), there has been 6043 confirmed cases from verocytotoxigenic Escherichia coli in 2014 from which 922 cases of human infection resulted in hospitalization and 13 cases were fatal. Human infection cases from broiler meat were 502,634 in the same EFSA report 2015, thus indicating broiler meat as an important source of foodborne diseases. To the knowledge of the authors there has not been yet an investigation on the incidence of VTEC E.coli in the broiler carcasses in Albania. 48 samples of broiler carcasses have been investigated from 2 important slaughterhouses and retail shops from Tirana in order to assess the contamination with E.coli O157:H7 with Food system (Validated ISO 16140). The presence of *E. coli* and *E. coli* O157 is shown by the red to blue color change of the well 7-ESC and by the formation of a pink-red coloring following the addition of Kovac's reagent into the well 8-IND. From 48 samples 15 samples resulted positive for E.coli O157-H7 (31.2%). More specifically there were 16.7% (2/12) positive samples collected at the slaughterhouse of operator A and 58.3% (7/12) of samples from the same operator collected at the retail shops in Tirana. The samples collected at the slaughterhouse of operator B resulted 25% (3/12) positive for E.coli O157:H and samples collected from the same operator at the retail shops resulted 25% (3/12) positive for E.coli O157:H7.

Keywords: *Carcasses broiler, Pathogen, E coli, Microorganisms, Vero toxin, Food-borne outbreaks*