Contamination of turkey carcasses by thermotolerant species of *Campylobacter* during postslaughter processing

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Abstract

Ample literature data indicate explicitly that the major source of alimentary infections induced by *Campylobacter* spp. is poultry meat and its products. The undertaken research was aimed at determining the level of contamination of turkey carcasses during selected stages of postslaughter processing. Analyses were conducted on 200 turkey carcasses that were examined in 10 experimental series. In each series, 5 carcasses were analyzed at the selected stages of processing, i.e.: after defeathering, evisceration, washing and chilling. Swabs were collected from each carcass from 20 cm² skin surface at the area of neck, steak and wall of the body cavity. Out of 550 samples of swabs from the skin surface and wall of the body cavity, 385 isolates were classified as *Campylobacter* – positive, which constituted 70% of the samples. Out of 100 analyzed swabs collected from the carcasses after defeathering, 73 (73%) were found to contain *Campylobacter* species. In turn, the presence of this pathogen was confirmed in 122 (81.33%) out of 150 swabs collected after evisceration, in 106 (70.66%) swabs collected after washing and in 84 (56%) swabs collected after chilling.

Key words: *Campylobacter* spp., turkey carcasses, contamination, processing

Introduction

*Campylobacter* spp. are one of the key etiological factors of gastroenteric infections in humans that manifest themselves as food poisonings, usually proceeding with symptoms of diarrhoea. Another significant source of these bacteria is claimed to be the alimentary tract of wild and domesticated animals, of fowls in particular. Investigations conducted by Allos (2001) indicate that 50% – 70% of foodborne infections induced by *Campylobacter* spp. result from the consumption of meat and poultry giblets. This disturbing situation is due to considerable contamination of carcasses by *Campylobacter* spp. during processing, which affects the contamination level of poultry meat and products, and poses a severe risk to human health.

Starting in the 1980s, *Campylobacter* spp. began to outdo *Salmonella* spp. in epidemiological statistics of such industrialized countries as England, Ireland, Scandinavian countries or USA (Altecruse et al. 1999). In the United States, the annual number of cases of campylobacteriosis reaches 10 per 1000 citizens. In England and Wales, that number accounts for 11, whereas in the Netherlands for as much as 18 – 23 people. In Sweden, *Campylobacter* spp. are isolated from 11%