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Subscription

Czech J. Food Sci.

Simonová J.,
Vázlerová M.,

Steinhauserová I.: Detection of pathogenic *Yersinia enterocolitica* serotype O:3 by biochemical, serological, and PCR methods

Czech J. Food Sci., 25 (2007): 214-220

In this study, the pathogenic *Y. enterocolitica* of serotype O:3 was monitored. The serotype is widely spread in Europe and has been linked to human yersiniosis. For the detection of pathogenic strains were used biochemical and serological methods as well as PCR methods based on the identification of virulence genes (*ail*, *rfbC*, *ystA*, *yadA*, *virF*). The occurrence of *Y. enterocolitica* O:3 strains was monitored in slaughter animals from a number of farms in the Czech Republic. A total of 3748 samples were collected coming from pigs (1388), cattle (633), poultry (902), and slaughter facilities (825). Fifty-two *Y. enterocolitica* O:3 isolates were identified by

biochemical and serologic methods, and 53 *Y. enterocolitica* O:3 isolates were identified by PCR methods (46 isolates from pigs, 2 isolates from poultry, 3 isolates from cattle, and 2 isolates from a poultry slaughtering facility). All isolates o *Y. enterocolitica* O:3 carried genes *ail* and *rfbC*, 83% isolates carried gene *ystA* 79% isolates carried gene *yadA* and 49% isolates carried gene *virF*. The use of PCR methods based on the identificatior of *ail* and *rfbC* genes provides for a sufficiently specific identification of pathogenic *Y. enterocolitica* O:3 strains with optimum time consumption compared to biochemical and serological methods. It is not recommendable to use