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# **Czech J. Food Sci.**

**Navrátilová P.,  
Vyhnálková J., Vorlová**

L., Šerapková J.:

# A plate diffusion method for detecting fluoroquinolone residues in raw cow's milk

Czech J. Food Sci., 32 (2014): 260-264

The plate diffusion method is a reference method in the Czech Republic for determination of residues of antimicrobial agents in raw materials and foodstuffs of animal origin. A new method using the *E. coli* strain ATCC 11303 for the detection of fluoroquinolones was introduced in 2008. The aim of this study was to determine the detection capability ( $CC\beta$ ) of this modified method using this *E. coli* strain for selected fluoroquinolones registered in the Czech Republic for treating diseases in cattle – danofloxacin, marbofloxacin, ciprofloxacin, enrofloxacin, and flumequine. When comparing the maximum residue limits for individual fluoroquinolones and the  $CC\beta$  values

determined, we can state that the method displays very good sensitivity to ciprofloxacin and enrofloxacin (20 and 40  $\mu\text{g/l}$ ), marbofloxacin (70  $\mu\text{g/l}$ ), and danofloxacin (30  $\mu\text{g/l}$ ). The  $\text{CC}\beta$  of the method for flumequine was not found in concentrations  $\leq$  MRL. The method did not display sensitivity to flumequine even in a concentration equal to twelve times the MRL.

### **Keywords:**

residues; milk; quinolones;  
microbiological method

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