ISOLATION AND IDENTIFICATION OF THERMOPHILIC CAMPYLOBACTER SPP. 
BY PCR-RFLP IN BROILER FLOCKS

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Summary. The aim of the present work was to isolate and identify thermophilic Campylobacter spp. in broiler 
flocks using Polymerase Chain Reaction based Restriction Fragment Length Polymorphism (PCR- RFLP) method. 
Forty cloacal samples were taken and examined from four randomly selected poultry flocks in different poultry farms in 
Lithuania. Thermophilic Campylobacter spp. were isolated by both direct inoculation on mCCDA selective medium 
and by selective enrichment in Bolton enrichment broth. The results of our study showed that all four examined poultry 
flocks were contaminated with Campylobacter spp. Using PCR assay amplification of 491 bp amplicon of a highly 
polymorphic part of the 23S rRNA gene out of 40 broiler cloacal samples examined Campylobacter spp. were detected 
and confirmed in 37 samples (92.5 %). After subsequent digestion of the PCR products with restriction enzymes AluI 
and TspEI, C. jejuni was identified in 32 (86.5 %) and C. coli in 5 (13.5 %) out of 37 isolates. Three broiler flocks of 
four examined were contaminated only with C. jejuni and one flock carried out mixed infection with C. jejuni and C. 
coli. To our knowledge, this is the first report of thermophilic Campylobacter isolation and identification from broilers 
in Lithuania. The results obtained in present study could serve for future surveillance on Campylobacter bacteria.

Key words: Campylobacter spp., broilers, PCR-RFLP, identification.