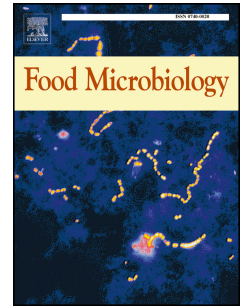


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Characterization of *Campylobacter* species in Spanish retail from different fresh chicken products and their antimicrobial resistance

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1 **Title: Characterization of *Campylobacter* species in Spanish retail from**
2 **different fresh chicken products and their antimicrobial resistance.**

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12 **Abstract**

13 Contaminated chicken products have been recognized as the primary vehicles of *Campylobacter*
14 transmission to human. Pulsed-field gel electrophoresis (PFGE) and antimicrobial resistance of
15 *Campylobacter* isolates from fresh chicken products at retail were studied. A total of 512 samples
16 including: thigh, breast, marinated and minced chicken were purchased from different retail stores.
17 Half of the samples were packed and the other half were unpacked. The 39.4 % of the samples were
18 *Campylobacter* positive; being unpacked chicken products (45.3 %) more contaminated than
19 packed chicken (33.6 %). PFGE typing showed a high diversity among isolates; clustering 204
20 isolates into 76 PFGE types: 55 clusters of *C. jejuni*, 19 of *C. coli* and 2 of *C. lari*. *C. coli* genotypes
21 showed higher resistance than other *Campylobacter* species. Although modified atmosphere
22 packaging can reduce the prevalence of *Campylobacter* spp., it does not avoid their presence in at
23 least 33.6 % of packed chicken products analyzed. Some pulsotypes might persist in the processing
24 plant or butcher shops environment for longer than previously thought. More stringent control
25 measures are needed in previous steps of the chicken food chain, in order to avoid the presence of
26 *Campylobacter* spp. strains at retail that can compromise consumer's safety.

27 **Keywords:** *Campylobacter* spp., PFGE, antibiotic resistance, persistence.

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