

Poster Abstracts

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LARGE IMPACT OF CAMPYLOBACTER STRAIN AND FOOD MATRIX ON LOD50 RESULT

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Abstract Content: Campylobacteriosis is the most commonly reported zoonosis in the EU and the occurrence of *Campylobacter* in broiler meat remains high. The detection of this pathogen in food is hampered due to abundant growth of extended-spectrum β -lactamase (ESBL)-producing *Enterobacteriaceae* during enrichment, which makes it hard to successfully isolate *Campylobacter*. Therefore, in the current, revised ISO protocol (ISO 10272-1; 2016), next to Bolton Broth (BB), Preston Broth (PB) is prescribed as enrichment broth to inhibit competitive flora in samples with suspected high levels of background flora such as ESBLs. To validate this revised ISO-protocol, an Inter Laboratory Study (ILS) was performed using four matrices: frozen spinach, minced meat, raw milk and chicken skin. Each matrix was inoculated with a different strain of *C. jejuni* or *C. coli* and the results were expressed as LOD₅₀ (Level of Detection) which is the concentration for which the probability of detection is 50%.

To check the influence of strains' characteristics on the results of the ILS, in this study we tested the enrichment procedures for spinach, minced meat, milk and chicken skin with each of the strains used in the ILS according to the ISO-protocol. The LOD₅₀ of all strains tested in spinach was about 0.7 cfu/sample which complies with the ILS-results and which is also the theoretical value. Results for the other food products, however, showed a large variation of LOD₅₀ between strains in the same matrix and also with the same strain in different matrices. One strain resulted in significantly higher LOD₅₀ results than the other strains used.

In conclusion: care should be taken to extrapolate the ILS results to other strains and strain *C. jejuni* WDCM 00156 may not be the best choice to use as reference strain.

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