Application of TRiMiCri for the evaluation of risk based microbiological criteria for Campylobacter on broiler meat

A potential solution for the reduction of consumer exposure to Campylobacter is establishing a microbiological criterion (MC) for Campylobacter on broiler meat. In the present study the freely available software tool TRiMiCri was applied to evaluate risk-based microbiological criteria by two approaches: the traditional one that implies a microbiological limit (ML-MC) and the second one which is based on the relative risk estimate (RRL-MC). A baseline risk was estimated based on the Belgian baseline data, whereas the data for the evaluated batches were Campylobacter counts from 28 Campylobacter positive batches sampled in six Belgian slaughterhouses. Results showed that approximately 60% of Campylobacter positive batches did not comply with ML criteria based on the n = 5, m = 1000 and c = 0 for ML-MC and equivalently for RRL criteria when RRcrit = 1. As expected, the less stringent MCs decreased the percentages of non-compliance (NC) but they are less effective, as reflected in increased minimum relative residual risks (MRRRs). When the Belgian baseline is used, more batches are found to be compliant than when the Danish baseline provided by TRiMiCri is used. Based on this, the application of microbiological criteria for Campylobacter in the EU is discussed. TRiMiCri provides user friendly software to evaluate the available data and can help risk managers in establishing risk based microbiological criteria for Campylobacter in broiler meat.