
Scientific Interpretive Summary

Preliminary study on *Campylobacter* recovery from poultry carcasses

In recent times New Zealand has experienced high human campylobacteriosis notification rates. Surveys and trials have been carried out to better understand the extent to which various food sources may contribute to these rates and how these rates can be reduced. This survey was undertaken to improve NZFSA's understanding of the effectiveness of rinsates to remove *Campylobacter* from poultry carcasses. The rinsate method described in the National Microbiological Database (NMD) was of particular interest.

The initial work consisted of taking 10 consecutive rinsates on 8 carcasses from individual carcasses to evaluate how the counts would change for these consecutive samples. The sampling was carried out at the NMD position on the dressing chain but prior to the application of acidified sodium chlorite (if applied). The birds were derived from flocks that were considered to be positive for *Campylobacter*.

With the exception of one bird, no *Campylobacter* organisms or very small numbers were isolated from the birds at the various consecutive rinses. Generally if *Campylobacter* was isolated at the first rinsate, the next rinsates would have a smaller number or no *Campylobacter* would be isolated. One carcass was quite different in the sense that all nine consecutive rinsates had considerably higher counts than the first rinsate.

The second trial was carried out at an earlier position on the dressing chain in order to get birds with higher counts of *Campylobacter*. Ten carcasses were included in this trial, utilizing an initial rinsate followed by the combination of a cavity rinsate and a skin and cavity tissue homogenate. The initial rinsates contained 77 % - 92 % of the total number of *Campylobacter* removed from the carcasses. A small part of the each carcass (estimated at 5 – 8% of the surface area) could not be included in this second component for practical reasons and consequently the recovery achieved by the first rinsate would be somewhat less.

This preliminary study suggests that the NMD provides a reasonable tool to monitor the hygienic performance of dressing. However more work is required to better understand the role adhesion of *Campylobacter* plays in underestimating the number of organisms on carcasses and any subsequent impact on public health. It should be noted that the underestimate itself is not necessarily problematic for a monitoring system provided the underestimate is consistent over time.