Summary of findings – Chinese-style roast duck

This project set out to monitor the changes in specific bacterial populations during the preparation and processing of Chinese-style roast duck. The results have provided DHS with information for the establishment of critical control points in the process.

Sixty three (63) ducks, comprising 45 raw ducks at various stages of processing, 9 ducks immediately after roasting and 9 ducks at retail (restaurant and take-away outlets) were sampled along with 3 brines/marinades. These samples were taken on three separate days over 3 weeks and analysed for the Standard Plate Count (SPC), Coagulase positive staphylococci (CPS), and coliforms, *E. coli*, *Campylobacter* and *Salmonella*.

The project findings were:

- No bacterial growth was observed in the dipping brine using the standard procedure of this food premise.
- Raw ducks were regularly contaminated with low numbers of CPS, but their numbers did not increase during preparation for roasting.
- The dipping process, undertaken just prior to the hanging of the ducks, lowered the numbers of the SPC, CPS, coliforms and *E. coli* present on the ducks. It was ineffective in removing all pathogens - *Campylobacter* and *Salmonella* were detected in some ducks post-dipping.
- The six hour hanging process, post dipping, caused little change in the bacterial numbers.
- The ducks sampled immediately after roasting had lower bacterial loads than that of the raw ducks, but an increased load was observed in roasted ducks sampled from the restaurant and take-away outlets.

It was concluded that:

- The brine is not expected to pose any risk to the overall process.
- Potential contamination by CPS is a hazard that must be considered in monitoring compliance to the food safety template.
- The dipping process reduced bacterial loads on the ducks, but was ineffective in removing all pathogens.
- Roasting provided an effective kill step for all the bacterial parameters tested.
The critical control step in the preparation of roast duck for sale is the roasting process but bacterial numbers may increase between roasting and retail, either as a result of regrowth or recontamination. These findings emphasise the importance of maintaining good hygienic practices throughout the processing, cooking and later storage and transport of these products.