



# Survival of *Campylobacter jejuni* on chicken skin

A process hygiene criterion for *Campylobacter* in broiler carcasses was introduced in the EU legislation the 1st of January 2018. An investigation showed that exceeding the maximum legislative limits of temperature and/or time may lead to lower numbers of *Campylobacter* on chicken skin.

## INTRODUCTION

Since the 1st of January 2018, poultry slaughterhouses have an obligation to sample broiler carcasses after chilling to verify the compliance with the process hygiene criterion for *Campylobacter* according to Regulation (EC) No 2073/2005. The aim of this study was to investigate the effect of exceeding the maximum legislative limits of temperature (8 °C) and/or time between sampling and start of analysis (48 hours) on the survival of *Campylobacter jejuni* on chicken skin.

## METHOD

Portions of 10 g chicken skin were inoculated with a mix of three different strains of *C. jejuni*. The inoculated samples were stored aerobically at 8 °C or 15 °C. The counts of *Campylobacter* spp. were determined according to ISO 10272-2:2017 in five samples before storage and five samples after storage at temperatures of 8 °C or 15 °C for 24, 48, 72, 96 and 120 hours. The experiment was repeated twice, resulting in totally 110 samples analysed.

## RESULTS

The mean *Campylobacter* level in chicken skin stored at 8 °C decreased from an initial of 3.68 to 3.07 log cfu/g after 72 hours, but did not decrease further. During storage at 15 °C, the decrease was larger and continued for at least 120 hours. The mean levels were 2.85 and 2.35 log cfu/g after 72 and 120 hours, respectively.

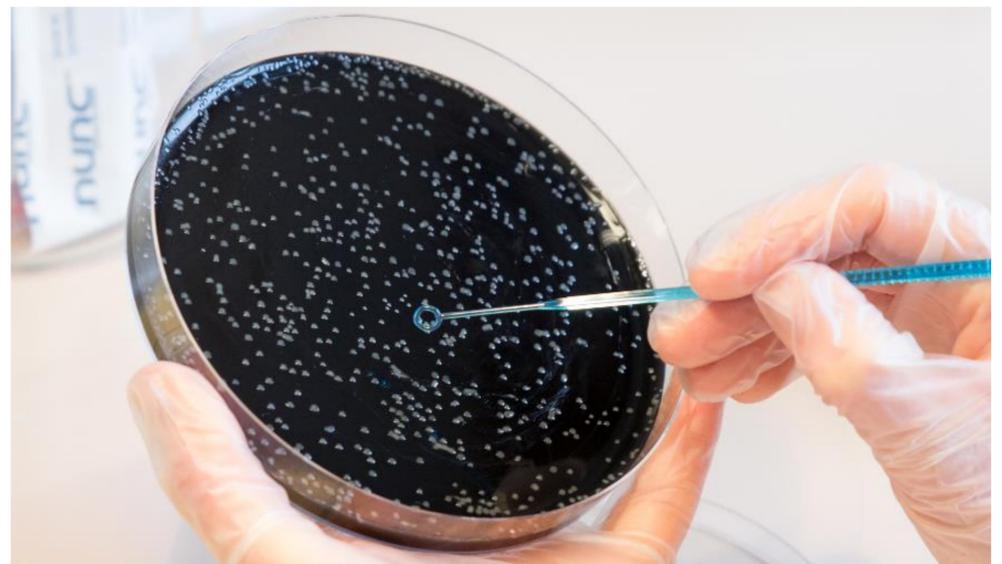
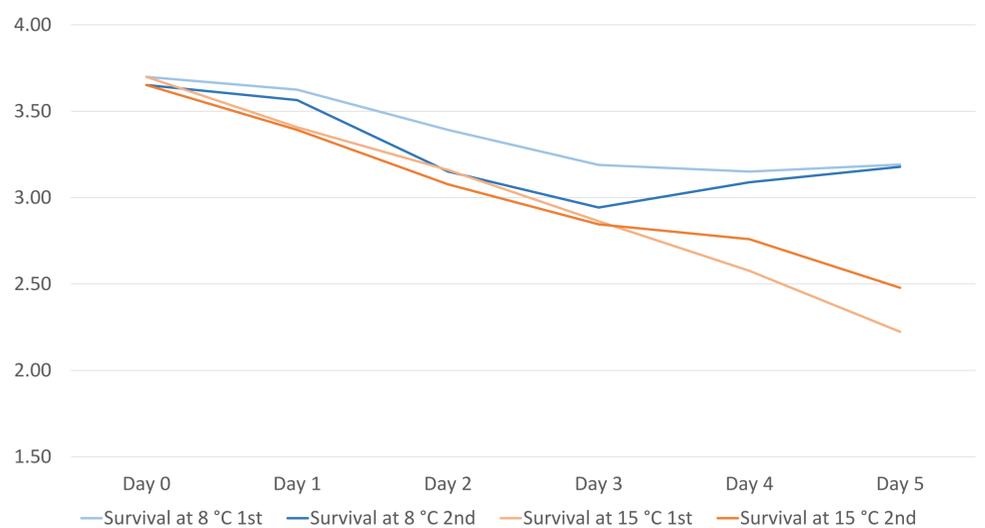
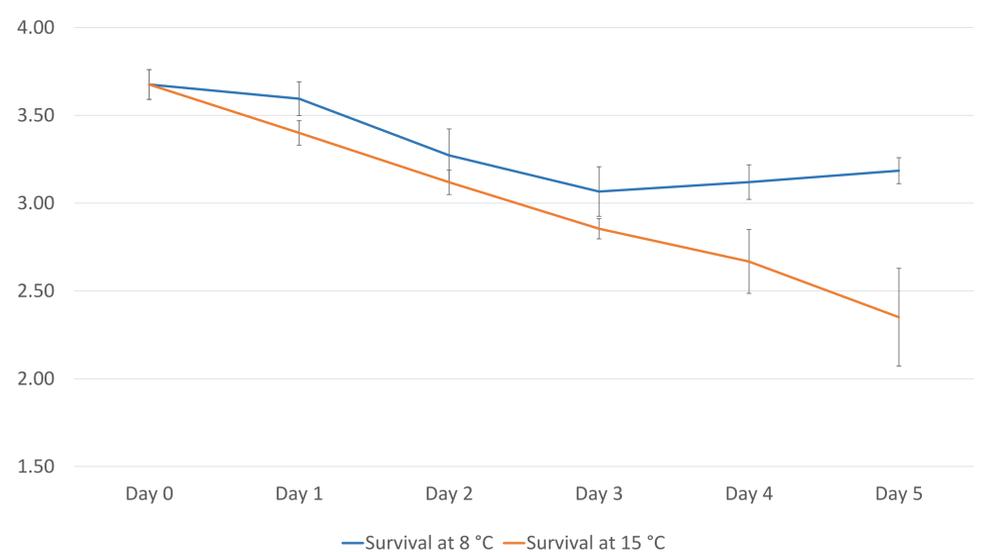


Photo: L. Svensson

**Figure 1.** Counts of *Campylobacter* spp. on chicken skin stored at 8 °C and 15 °C, mean values per experiment (performed during May and June 2018, respectively).



**Figure 2.** Counts of *Campylobacter* spp. on chicken skin stored at 8 °C and 15 °C, mean values from two experiments. Vertical bars show standard deviations.



## CONCLUSION

Deviations from the maximum transport temperature or time stated in the legislation may lead to lower numbers of *Campylobacter* on chicken skin.