

# CamCon

## *Campylobacter* control - novel approaches in primary poultry production

### **Deliverable 3.1.4. Identification of a suitable semi-automated technology allowing semi-continuous monitoring of airborne *Campylobacter***

Deliverable was due and delivered Month 24 – a revised version was delivered Month 30.

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#### General comments

The inventor of the integrated lab-on-chip (ILOC) technology platform, Ilochip A/S, went bankrupt during the preparation for the CamCon project. We managed to transfer the intellectual property rights to another Danish company, Delta A/S. However, the priorities of Delta A/S shifted towards clinical point-of-care diagnostics and further development of the ILOC technology and air sampling was therefore not made. Technical problems with the equipment, available, experienced during the project resulted in the exclusion of this technology platform from the project. Altogether, this resulted in a re-planning of the work in WP3. Hence, the feasibility of air sampling was validated and the deliverables met as reported below using the Sartorius AirPort MD8 (Sartorius Stedim Biotech GmbH) technology along with conventional boot sock sampling.

A total of four flocks of broilers were followed as planned. Yet, one of the flocks was slaughtered ahead of time due to *Salmonella* infections and another two became *Campylobacter*-positive too late during their life course to allow comprehensive analyses. It means that the data on size distribution in relation to production systems and quantities of airborne *Campylobacter* in relation to size distribution of airborne particle is insufficient for publication. The data from two flocks are reported below and are to be compiled with data achieved from ongoing studies in Poland for publication.

#### Identification of a suitable semi-automated technology allowing semi-continuous monitoring of airborne *Campylobacter*

We were unable to pursue semi-automated technology platforms alternative to the ILOC technology and at present cannot suggest feasible alternatives. However, the Sartorius AirPort MD8 (Sartorius Stedim Biotech GmbH) technology using gelatin filters is a most reliable and user friendly method for sampling on location and subsequent analyses of the filters at the laboratory.