



Detecting Salmonella with AeroCollect® - optimize production with simple samples and quick results

- > **Simple sampling** - an air sample with AeroCollect® is simpler and considerably less time consuming to handle for the staff at the farm compared to boot swabs.
- > **Quick test results** - the air sample from AeroCollect® can be processed within as little as 1-2 hours in a lab compared to traditional testing which takes days to cultivate and process.
- > **Closer monitoring of Salmonella in herds** - with simple sampling and quick results comes the prospect of increased monitoring, improved production management and a minimized number of recalls.
- > **Improved traceability** - with an air sample it is possible to collect samples in areas with no animals in order to trace an outbreak or decide how far the it spreads in the surroundings.
- > **Problem free shipping** - with an air sample there is no risk of leakages during the delivery of the sample to the lab.

Cohen's
kappa value
= 0.86

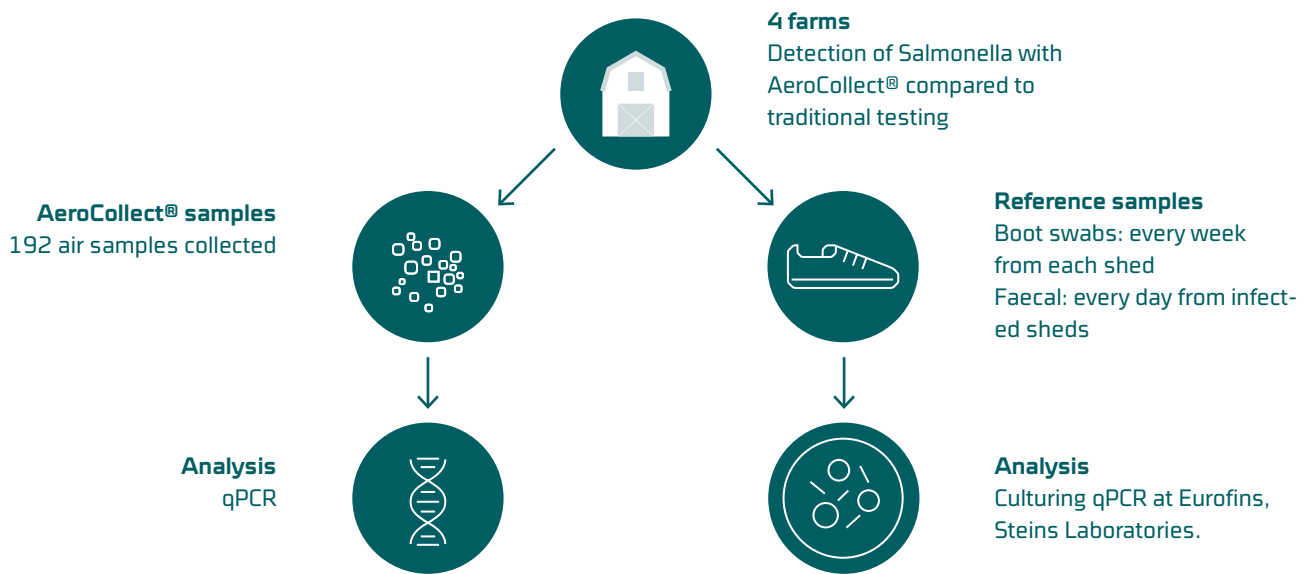
Detection of Salmonella with AeroCollect® compared to traditional testing

FORCE Technology in cooperation with Aarhus University Foulum has conducted a validation study in accordance with the guidelines for validating microbiological alternative methods against reference methods as described in the harmonized Standard by NordVal. This ensures that the validation study follows the guidelines described in EN ISO 16140-02:2016.

The study was carried out as a blinded controlled infection study at Aarhus University Foulum. Four houses of chickens were included in the study, two of those were infected with low and high dosage of Salmonella respectively, and a total of 191 tests were collected with AeroCollect®. 86 percent of those had an identical result compared boot swabs collected according to the current standard in the study. The rate of agreement between the two test methods constitutes a "good agreement" according to the ISO-standard.

Total number of samples		192
Positive agreement:	PA	119
Negative Agreement	NA	60
False Positive	FP	0
False Negative	FN	12

Accredited by



The process from sample collection to result



When should testing with AeroCollect® take place?

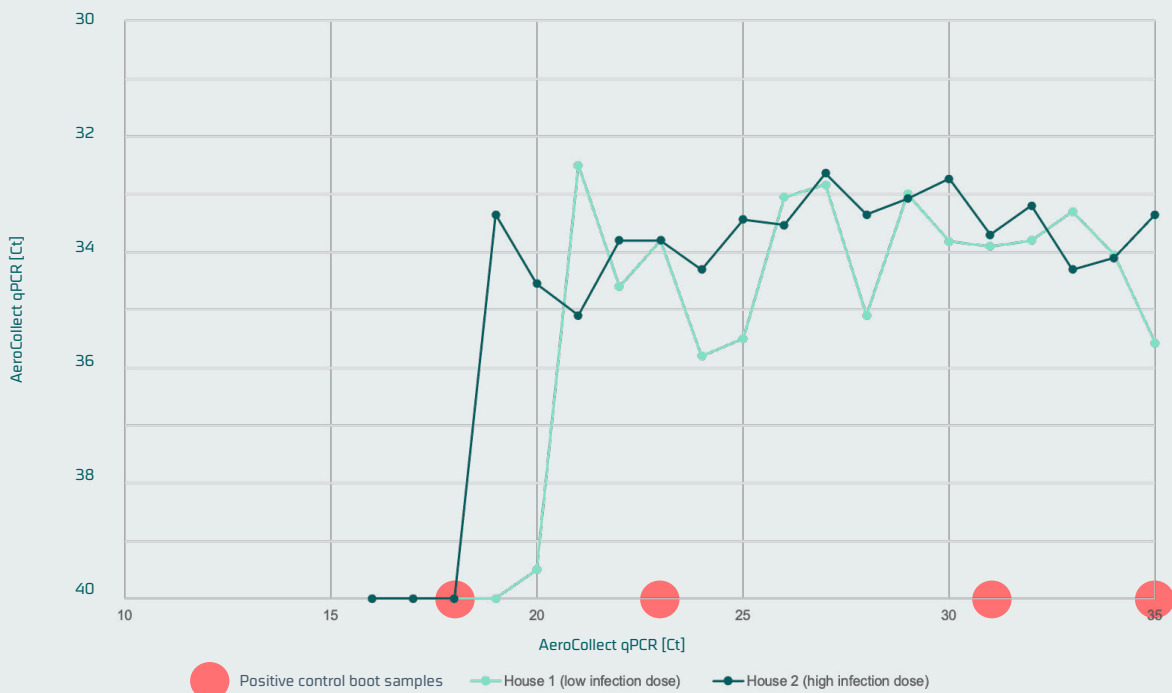
AeroCollect® allows for frequent testing and quick results providing better monitoring of Salmonella in herds. This allows for early detection which provides the best basis for adapting the production accordingly as well as production management in general.

By testing for Salmonella in broilers near the day of slaughter and in laying hens continuously the risk of undiscovered Salmonella and subsequent recalls is minimized, and production is optimized.

Be aware that national regulation may set specific requirements for the type of testing prior to slaughter e.g., boot swabs.

Validation study

Results from controlled blinded infection study with salmonella typhimurium. The study was conducted in two positive houses and two negative control houses each occupied by 200 traditional ross 308 broilers inserted directly from hatchery. All samples collected from negative control broilers was negative (data not shown). All broilers in the positive control houses were orally infected with salmonella typhimurium at day 15. The plot shows the Ct value from the qPCR analysis of the AeroCollect® samples collected on a daily basis starting from day 16. In the plot also the status of the corresponding reference boot samples are indicated (boot samples were collected from each house at age: 18, 23, 31 and 35).



Would you like to learn more about what AeroCollect® can do for you and your company?

Contact us at
+45 43 25 14 00
aerocollect@force.dk
or visit aerocollect.dk