Campylobacter proficiency testing scheme for food laboratories testing for industry

Area of research interest: Foodborne pathogens
Study duration: 2019-01-01
Project code: FS101219
Conducted by: Public Health England

Background

Campylobacter is the most prevalent cause of bacterial gastroenteritis in the UK, with 63,873 laboratory-confirmed cases in 2017 in England and Wales. Up to 80% of cases are associated with raw poultry meat.

The FSA has played a key role in the reduction of the numbers of Camplyobacter found in fresh poultry. Since its introduction in 2014/15, the Campylobacter retail survey has noted a reduction in the numbers of Campylobacter each year in fresh, whole, chilled, UK chickens sold at retail, and the major retailers now publish data from their own testing. The data from this scheme will help the FSA to assure the quality of testing performed on their behalf by food laboratories. The scheme will also be offered to food laboratories performing such testing on behalf of other areas of industry, for completeness of data and to recognise other areas for improvement. The data produced by this scheme will allow participants to monitor their own performance and allow the agency to monitor the performance of all participants. The agency may then identify the need for further support to under-performing participants.

Objective and Approach

The scheme will run over 3 years, with 6 distributions per year. Each distribution will contain 1 sample for Campylobacter spp. detection and 2 samples for enumeration. The samples consist of freeze-dried matrices containing Campylobacter. Samples for detection may not always contain Campylobacter, and may also contain other background organisms/microflora. The samples will be homogeneity and stability tested by the Food and Environmental Proficiency Testing Unit (FEPTU) at Public Health England prior to distribution. Transit of the specimens will be temperature logged. The freeze-dried samples will be reconstituted by the participating laboratory according to protocols set by FEPTU, prior to testing by in-house methods. Each participating laboratory will enter their results into a secure website, stating which method has been used for testing. Participants will be scored against a known value/range, and provided with a Z-score and PHE score. The Z-score represents how far the participant’s result deviates from the median value and is commonly used for PT schemes. The PHE score allows the participants to monitor their performance over time. At the end of each distribution, individual laboratories receive a report on their performance for that distribution as well as their performance over all distributions. FEPTU will provide expert advice for participants upon request, and will provide repeat specimens for test failures, to provide training opportunities for participating laboratories.