

# Microbiology rapid confirmation services

## *Salmonella* Confirmation by Real Time Polymerase Chain Reaction (qPCR)



### Introduction

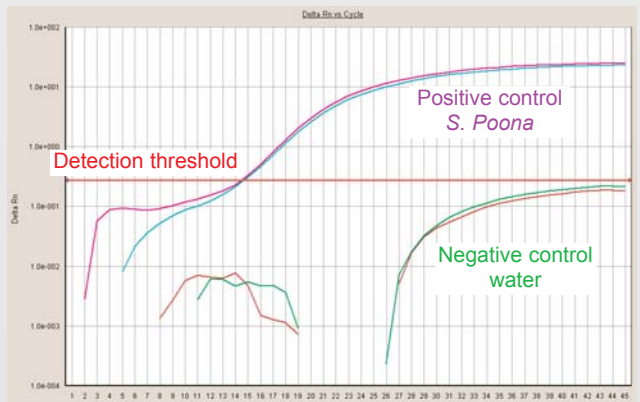
qPCR is a molecular based assay, which allows fast confirmation of organisms of interest such as the pathogen *Salmonella*. Results can assist in rapid identification of food safety issues to allow timely preventative or corrective actions to be taken such as quarantining or recalling products. Biochemical confirmation is time consuming and can often involve subjective interpretation, whereas molecular based assays provide definitive answers quickly, with the potential to give same-day results, which can be critical for perishable products such as fresh produce.



### Test details

The test involves using small DNA fragments (primers and a probe) which recognise a unique sequence specific to the target organism. During PCR, the regions between these primers are replicated (amplified) exponentially, resulting in fluorescence as the probe is degraded. As the concentration of the target sequence increases, the intensity of the fluorescence recorded by the instrument rises above the threshold of detection. An example of the typical curves expected for the *Salmonella* qPCR confirmation is shown overleaf in Figure 1. The *Salmonella* ser Poona positive control (pink/blue) shows an increase in fluorescence above the threshold, whereas the water negative control (green/orange) remains below the threshold, shown in red. **Our PCR confirmation service uses a validated real time assay which is able to provide results in 4h for urgent isolates.**

Figure 1: Typical curves for positive and negative results for the *Salmonella* PCR confirmation assay.



## Format of results

The results are typically displayed in table format, indicating whether or not the target of interest, e.g. *Salmonella enterica* specific fragment, has been detected.

Analysis type	Test Details	Identification	Comment
<i>Salmonella enterica</i> - specific PCR assay	Taqman® <i>Salmonella enterica</i> detection kit	The <i>Salmonella enterica</i> - specific fragment was detected	None

We offer additional tests for tracking sources of contamination (refer to our brochure and factsheets on rep PCR analysis and RiboPrinter analysis for further details)



## Contacts

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