Real-Time PCR using a PCR Microchip with Integrated Thermal System and Polymer Waveguides for the Detection of Campylobacter jejuni

A novel real-time PCR microchip platform with integrated thermal system and polymer waveguides has been developed. By using the integrated optical system of the real-time PCR chip, cadF – a virulence gene of Campylobacter jejuni, could specifically be detected. Two different DNA binding dyes, SYTOX Orange and TO-PRO-3, were added to the PCR mixture to realize the real-time PCR. The presented approach shows reliable real-time quantitative information of the PCR amplification of the targeted gene.

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