

REFERENCE
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Application of an impedimetric technique for the detection of lytic infection of *Salmonella* spp. by specific phages

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The observation of phage plaques during evaluation of the bacteriophage lytic infection cycle by the spot test method on agar plates, takes 24 to 48 hours and involves many manipulations. An impedance monitoring instrument that could provide possibilities to reduce labour, time and material was evaluated as an alternative to this traditional microbiological assay. The procedure utilises the ability of the instrument to detect bacterial growth in samples by measurement of conductivity changes in liquid culture media. The aim of this study was not only to adapt the impedimetric method to detect the lytic infection by *Salmonella*-specific bacteriophages, but also to provide a higher selectivity to this rapid method in detecting *Salmonella* spp. by using specific agents. This short elapsed time method has already been described as a way of detecting phages present in lactic starter cultures by evaluation of the detection time parameter and the percentage of the conductance change^{1,2}. Three bacteriophages and twelve strains of *Salmonella* spp. were tested. Each of the isolates was used to inoculate TSB together with each one of the mentioned phages. The inoculation concentration was between 10⁶ and 10⁷ cfu/ml, at a cell: phage ratio of 1:100. From the sample analyses, based on capacitance measurements at 37 °C, the infection could be detected, by observation of both detection time delay and distinct curve trends.

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