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## Evaluation of the hippurate test as a method for the differentiation between *Campylobacter jejuni* and *Campylobacter coli*

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Pathogens belonging to the genus *Campylobacter* have fastidious growth requirements, making conventional detection and further identification procedures difficult<sup>1</sup>. The aim of the present study was to evaluate the hippurate test as a discriminatory test between *C. jejuni* and *C. coli*. This biochemical test is referred in ISO 10272-1:2006<sup>2</sup> as the method to distinguish *C. jejuni* from *C. coli*: *C. jejuni* gives a positive reaction. The presence of the enzyme hippurate hydrolase is detected by the purple color formed when ninhydrin reagent oxidizes the glycine and benzoic acid produced during hippurate hydrolysis. This test has been considered unreliable in differentiating these two species<sup>3</sup>. Several strains of *Campylobacter* spp. were subjected to the hippurate test. Results of the test were dependent on the technician and, for the same strain and the same technician, different readings were obtained at different times. This finding suggests that hippurate hydrolysis should not be used as the sole criterion for differentiating thermophilic *Campylobacter* species.

1. Wang, G. et al. (2002) *Journal of Clinical Microbiology* **40**:4744-4747.

2. Anonymous (2006) International Standard ISO 10272-1.

3. Nayak, R. et al. (2005) *Molecular and Cellular Probes* **19**:187-193.

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## Viability and preservation of the lytic spectra of *Salmonella* bacteriophages during storage

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Bacteriophages are viruses that specifically infect bacteria. The interest in studying them as alternatives to the use of antibiotics to control bacterial infections has grown fast in the recent years. A question of particular importance is the preservation of their characteristics during storage, namely their viability and the maintenance of their lytic properties. Phages are propagated at conditions optimal for their bacterial hosts, but preservation is rarely designed specifically for the bacteriophages. Recent studies on the matter are scarce and often contradictory. In the present work, a study was accomplished on the maintenance of the viability and of the lytic spectra of six *Salmonella* phages. The bacteriophage stocks were kept under eight different conditions: at room temperature, at 4 °C, -20 °C and -80 °C, with and without glycerol. Four of the bacteriophages were, beyond this, freeze-dried. The maintenance of viability and the preservation of the lytic properties were studied for a period of four months. In all storage conditions, the viability and the lytic spectra were maintained, however a loss of both viability and lytic properties was observed during the storage in the freeze dried state. †