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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.