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## Simple drop cast method for enumeration of bacteriophages.

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### Highlights:

- Phage enumeration of multiple phage dilutions were performed on single agar plate.
- Single layered agar without any supplementation was used instead of double layered agar or supplementation media.
- Drop cast method can be used to isolate, enumerate, visualize and identify phages.
- Drop cast methods present cost effective and simple technique over conventional present methods.

### Abstract

Phage enumeration is a basic prerequisite for application of phages in industrial, medical and other processes. Double layer agar (DLA) plaque assay is the classical method employed for isolation, detection as well as enumeration of phage particles in a solution. However, DLA method is considered cumbersome due to its specific temperature requirements and need for one petriplate with two agar layers for each phage sample. We are proposing a drop cast method for enumeration of phages which is comparatively easier and cost effective than classical DLA method as single layer of agar without any specific temperature condition is required. Added advantage of this method is that 7-10 dilutions of phage suspension can be enumerated on a single agar plate in contrast to one dilution per plate as required in DLA method. Although standard deviation in phage count was higher in the proposed method than DLA method, still drop cast method provided first-approximation phage titer which can be further validated by DLA method for more accuracy. Hence, the present method can be considered reliable, easy and cost effective for determining approximate phage count in an unknown phage suspension.

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