

## Validation of encapsulated T4 phage in simulated gastric fluid (SGF) and Simulated intestinal fluid (SIF)

### Material

- Simulated gastric fluid (SGF): (50 mM NaCl, 3.3 mg \*ml<sup>-1</sup> Pepsin, pH 1 with HCl)
- Simulated intestinal fluid (SIF): (50 mM KH<sub>2</sub>PO<sub>4</sub>, 10 mg\*ml<sup>-1</sup> Pancreatin)
- Microsphere degradation solution (MDS): (0.2 M Na-Citrat, 50 mM Tris, 50 mM NaHCO<sub>3</sub>)
- Encapsulated Phages (EP)
- 50 ml falcon tubes
- 2 ml microcentrifugal tubes

### Methods:

1. Prepare SGF and SIF without Enzymes and preheat to 37 °C
2. Spin down 2X 500 µl of EP, discard supernatant
3. Resuspend Droplets in MDS and incubate in a shaker at room temperature for 10 minutes.
4. Use one tube with degraded capsules for a plaque assay
5. Add Pepsin to SGF and check pH
6. Incubate 500 µl capsules and the other degraded capsules in 50 ml SGF for 1h shaking at 37 °C
7. Take 100 µl of each SGF plaque assay
8. Spin SGF-EF suspension, in the meantime add Pancreatin to SIF
9. Discard supernatant of SGF-EF and resuspend capsules in SIF
10. Take 100 µl sample out SIF/EF suspension and perform a Plaque Assay after 30 min, 60 min, 90 min and 120 min