

## Supplementary

### Understanding the application of emulsion system for bacterial encapsulation and temperature-modulated release

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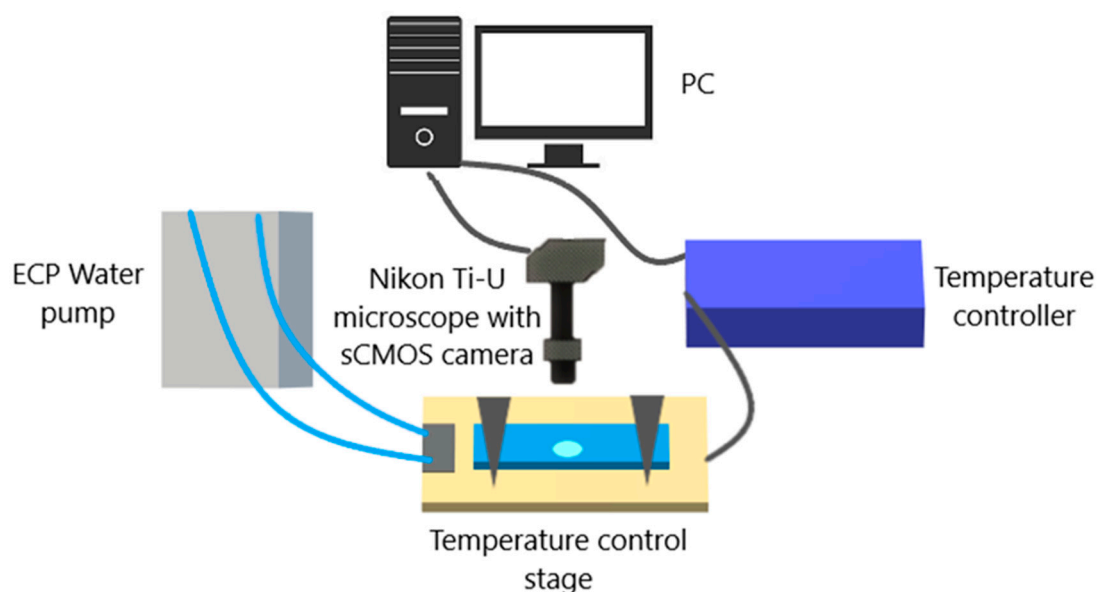


Figure S1 Microscopic observation of emulsion destabilization with the change in temperature. Sample of the emulsion was placed on a glass slide and placed on a temperature-controlled stage at 25°C. The temperature of the stage was then reduced to -25°C that freezes the sample and was kept at that temperature for 10 minutes. The temperature of the stage was then increased to 25°C in order to thaw the sample. Photomicrographs of the sample were taken with every temperature change, from 25°C (initial) to -25°C (cooling), 5°C (heating) and back to 25°C (thawed). The temperature of the stage was maintained with ECP water pump.

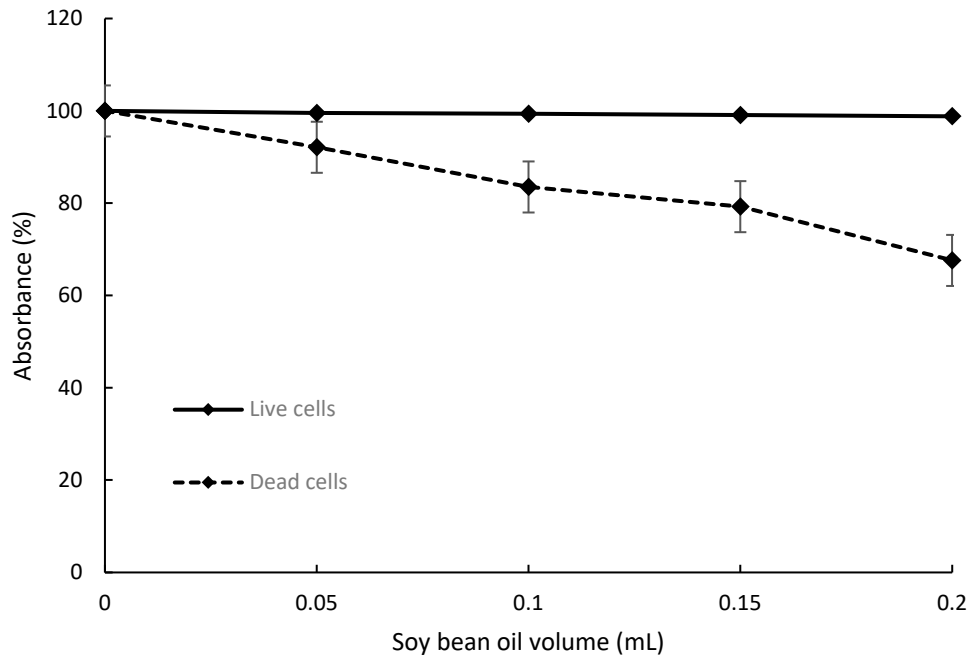


Figure S2 The bacterial adherence to soybean oil assay for live and dead *E. coli*-GFP at different soybean oil volume (mL). Bars represent mean  $\pm$  SEM taken from 3 independent experiments (N=3). Higher absorbance values (%) indicate lower affinity towards the oil phase (live cells) while lower absorbance values (%) indicate higher affinity towards the oil phase (dead cells).