# DNA Extraction

Before DNA extraction, phages should be at a sufficiently high concentration and should be filtered and free from bacteria.

## From Phages

- Add 10 µL DNAse I and 100 µL of 10 x DNAse buffer to up to 500 µL of prepared phage sample and incubate at 37 °C for 1h
- Inactivate DNAse I at 65 °C for 30 mins
- Add 40 µL of proteinase K (20mg/mL) and incubate for 1h at 55 °C
- Incubate at -80 ºC for 30 min
- Incubate at 70 ºC for 30 min
- add up to 600uL of cold 100% ethanol to the tube and incubate overnight at -80 °C or -20°C
    - 100% ethanol should be kept at -20 °C before use
    - Sample can also be incubated at -20 °C
- Centrifuge the tubes at 16000-1800xg at 4 °C for 1h
- Remove the supernatant and resuspend the pellet in 100 µL of TE buffer
- Purify the extracted DNA using ZYMO kit
    - Genomic DNA Clean & Concentrator
    - Use kit protocol as described
- Measure DNA concentration
    - If using nanodrop, record the ratios as well as the concentration
    - Qubit is more accurate