

# DNA Processing

## Aims of the experiment

Phenol-chloroform precipitation is used to separate nucleic acids from our homemade extract for investigating the quantity of DNA or RNA presented.

## Materials

- PhaseGel tube
- Phenol-chloroform Isomethylethanol for DNA/RNA
- Chloroform
- 3M Sodium-Acetate
- 100% Ethanol at -80°C
- Nuclease-free H<sub>2</sub>O
- 1.5ml micro-centrifuge tube

## Procedure

1. Centrifuge the required PhaseGel tubes at 16,000 rcf for 5 minutes.
2. Add 100µl extract sample into the gel tubes.
3. Add equal volume of Phenol-Chloroform-Isomethylethanol for DNA/RNA depends on the type of nucleic acids that would like to obtain.
4. Centrifuge at 16,000 rcf at RT for 5 minutes.
5. Add 100µl Chloroform.
6. Centrifuge at 16,000 rcf at RT for 5 minutes.
7. Transfer supernatant (aqueous phase above gel) into a 1.5ml micro-centrifuge tube.
8. Add 10µl 3M Na-Acetate and 330µl 100% Ethanol.
9. Vortex thoroughly and incubate at -80°C for 1 hour.
10. Centrifuge at 16,000 rcf at 4°C for 30 minutes.
11. Remove supernatant and lyophilize the sample by using spinning-concentrator until there is no visible moisture.
12. Dissolve the pellets in 37µl nuclease-free H<sub>2</sub>O.
13. Check the DNA/RNA concentration with NanoDrop, dilute if necessary.
14. Store the sample at -20°C.