

DNA extraction from coastal beach sand/sediment (Bolhuis and Stal)

All samples consisted of a 3 mm top layer from coastal beach sand/sediment located at the northern side of the Dutch barrier island of Schiermonnikoog. Samples were frozen under liquid nitrogen, transported to the lab and stored at -80°C until use.

DNA was extracted from 1 gram of each sample at using the MoBio UltraClean™ Soil DNA Isolation Kit following the supplier's protocol, without any modifications.

MoBIO Protocol (For maximum yields)

1. To the 2ml Bead Solution tubes provided, add 1gm of soil sample.
2. Gently vortex to mix.
3. Add 60µl of Solution S1 and invert several times or vortex briefly.
4. Add 200µl of Solution IRS (Inhibitor Removal Solution).
5. Secure bead tubes horizontally using the Mo Bio Vortex Adapter tube holder for the vortex and vortex at maximum speed for 10 minutes.
6. Centrifuge tubes at 10,000 x g for 30 seconds.
7. Transfer the supernatant to a clean microcentrifuge tube (between 400 to 450µl)
8. Add 250µl of Solution S2 and vortex for 5 sec. Incubate 4°C for 5 min.
9. Centrifuge the tubes for 1 minute at 10,000 x g.
10. Avoiding the pellet, transfer entire volume of supernatant to a clean microcentrifuge tube.
11. Add 1.3ml of Solution S3 to the supernatant (careful, volume touches rim of tube) and vortex for 5sec.
12. Load approximately 700µl onto a spin filter and centrifuge at 10,000 x g for 1 minute. Discard the flow through, add the remaining supernatant to the spin filter, and centrifuge at 10,000 x g for 1 minute. Repeat until all supernatant has passed through the spin filter.
13. Add 300µl of Solution S4 and centrifuge for 30 seconds at 10,000 x g.
14. Discard the flow through.
15. Centrifuge again for 1 minute.
16. Carefully place spin filter in a new clean tube.
17. Add 50µl of Solution S5 to the center of the white filter membrane.
18. Centrifuge for 30 seconds.
19. Discard the spin filter. DNA in the tube is now application ready.
20. Storing DNA frozen (-20°C) until use.