

Filtering onboard the Namao

Materials

1. 4 – empty Petri dishes for blanks
2. Filter unit
3. tweezers
4. DROW bottle
5. Red squeeze bottle with DROW
6. **For each sample:** 4 – empty Petri dishes
Susp P vial
1 – TSS filter
1 – anion bottle
2 – fecal coliform filters
1 – Suspended silica (polycarbonate membrane)

Method

1. Fill out sample ID sheet
2. Label petri dishes and anion bottles
 - a. At the beginning of each run, 2 blank samples will be filtered, one is for suspended C/N and the other is for suspended P
 - b. For each sample, there will be a suspended C/N, chlorophyll and suspended silica in petri dishes, a pre combusted TSS filter paper and a Suspended P vial
 - c. For each sample there is also one anion bottle
 - d. There will also be two fecal coliform filters for Anne Adkins
3. All Petri dishes are labelled with sample ID (either C/N, Chl, Susp Si or TSS), W number, the date, and after the sample is filtered onto the paper, the volume,
4. Suspended P vials are labelled with the W number and the volume only
5. Anion bottles are labelled with the W number ONLY

Filtering

1. Ensure the filter unit is attached to the 1 L flask.
2. Place one GF/C filter paper onto the bottom of the magnetic filter unit, then replace the cup top
3. Filter the two blank samples first. For each sample, pour 100 ml of distilled water onto the filter paper

Samples

1. While still attached to the glass bottle, place a new GF/C filter paper into the unit.
2. Pour 100 mL of distilled water through filter paper
3. Ensure sample is firmly capped, shake vigorously and pour 100 mL onto filter paper
4. Using tweezers, fold in half and place in Suspended P vial
5. Reattach system with the **fecal coliform filter paper (STERILE forceps technique is necessary!)**
6. Re-shake sample and pour 50 (nearshore stations) to 100 ml (offshore stations) onto filter paper.
7. Repeat fecal coliform filtration
8. Reattach system with a new GF/C filter paper
9. Re-shake sample and pour 100 mL onto filter paper
10. Remove filter paper and place into C/N Petri dish
11. Repeat sample filtration using the suspended silica filter paper.
12. Remove filter cup system and place into current sample anion bottle
13. **From the TSS Petri dish**, remove filter paper and place onto magnet filter paper holder
14. Replace cup, shake sample and pour 50 mL onto filter paper
15. Remove paper, place into TSS Petri dish
Note: You **must** use a pre combusted and weighed TSS filter paper for this. If there are no more, the TSS must be filtered at the FWI
16. Rinse filter cup and place a new GF/C filter paper onto holder
17. Shake sample vigorously and filter 100 mL
18. Remove filter paper and place into Chl petri dish

Cleanup

1. Ensure all samples are labelled with the W number, date and volume.
2. Place all Petri dish lids under Petri dishes and place all Petri dishes into desiccator
3. Evacuate desiccator and leave samples for a few hours or overnight
4. When dry, replace lids on Petri dishes and group according to sample type (C/N etc.) and in numerical order
5. Place all glassware in 5% hydrochloric acid tub and leave to soak overnight or for a few hours
6. Replace all sample bottles in fridge
7. After glassware has finished soaking in HCL tub, remove using rubber gloves, rinse twice with distilled water and leave to dry in drying rack.