

δD POC and DOC PROCEDURE

EQUIPMENT:

47mm cellulose membrane filter – 0.8µm or 1.2µm pore size
47mm GF/F filter – ashed
153µm prefilter
Filter tower
Spatula
Glass Petri dishes
1L Erlenmeyer flask with side arm
3 300mL BOD bottles
Food dehydrator
1 dram vials with poly-seal caps

REAGENTS:

1N HCl
Acetone

POC

1. Pour water sample through the 153µm prefilter and into another bottle or beaker.
2. Filter the water through the 0.8µm or 1.2µm membrane.
3. When the membrane is full of particles, remove the membrane from the filter tower and place it into a small glass Petri dish. Cover the filter with DI water and scrape the particles off the filter.
4. When the sample has been scraped off the filter, remove the filter and rinse any particles back into the dish.
5. Continue filtering the rest of the water with more filters and scrape them into the same dish.
6. Label the Petri dish with the Isotope ID number, cover it with foil, and place it into the drying oven. Let dry for at least 24 hours or until it is dry.
7. When dry, scrape the sample using a razor blade. Be sure to clean the razor blade and spatula with acetone before using. Place sample into a labeled 1 dram vial. Put vial into sample storage desiccator.

DOC

1. Pour the sample water through the 153µm prefilter and into the 47mm 300mL filter tower, which is attached to a 1L flask with the GF/F filter.
2. Filter between 900-1000 mL of sample. You may have to replace the filter.
3. Rinse each BOD bottle three times with a small amount of filtrate.
4. Fill each BOD bottle to just below the neck with filtrate.
5. Add 3mL of 1N HCl to each BOD bottle.
6. Cap and place each bottle into the fridge.
7. Label a large Petri dish and place it into the food dehydrator
8. Fill the dish with sample and allow it to dry. Continue adding more sample until it is all gone.
9. Place the Petri dish into the drying oven for about an hour before beginning to scrape.
10. Scrape the sample with a razor blade as above and place sample into a labeled 1 dram vial.