

## Instructions for collecting DIC/DOC samples for isotopic ( $\delta^{13}\text{C}$ ) and quantitative (ppm C) analysis via TOC-IRMS

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We store water samples (without airspace) in ICHEM 200 series 40-ml borosilicate glass vials with open-top 0.125" septum-lined caps (Fisher Scientific Cat # 05719102). We use B-D 60-ml latex-free SlipTip syringes (Fisher Scientific Cat # 1482343) to collect water samples from rivers, streams, lakes, etc., and then filter samples through a 0.7- $\mu\text{m}$  pre-combusted Whatman GFF series glass-fiber filter (Fisher Scientific Cat # 0987471) mounted in a Millipore Swinnex 47-mm filter assembly (Millipore Cat # SX0004700). A 0.5-ml saturated solution of mercuric chloride ( $\text{HgCl}_2$ ) is added to the vial prior to the addition of the sample to terminate microbial activity.

Depending on your filtering apparatus, you may need to modify the following set of instructions to fit your equipment.

1. Rinse 60-ml syringe and filter assembly with sample water (3x).
2. Unscrew filter assembly and insert a 0.7- $\mu\text{m}$  filter. Lightly wet filter with water to hold filter in place while closing assembly.
3. Label ICHEM vial with appropriate information (site, plot, date, etc.).
4. Open vial and add 0.5 ml of saturated mercuric chloride solution. USE GLOVES.
5. Fill syringe with sample water and filter water through filter assembly. Discard sample (3x).
6. Fill syringe again and transfer water through filter assembly into ICHEM vial until water begins to overflow vial. Cap tightly without airspace.
7. Repeat steps 1-6 with each new sample.
8. Refrigerate vials (4°C) as soon as possible after collection. DO NOT FREEZE.