Smith-Root Self Preserving Filters

Note: Self-preserving filter housings are currently rated to 10 PSI max pressure (20 in.-Hg; 508 mm-Hg). Please program your eDNA Sampler for a 10 PSI pressure threshold.

Step 1
Open a sample packet containing a 47mm self-preserving filter housing and attach the extension tube to the housing. Save the foil pouch for subsequent filter storage.

Step 2
Attach suction tubing to the filter housing and activate pump to begin filtration. **IMPORTANT:** Refer to image (2) and position filter so the white side is facing towards the water body.

Step 3
When "low flow" alarm sounds or target volume is reached, quickly invert the filter housing and elevate it to filter all remaining water in housing and clear the suction line.

IMPORTANT: Allow the pump to run for approximately 20 seconds to air dry the filter membrane. Excess moisture will prevent thorough desiccation and eDNA preservation.

Step 4
Remove the extension tube and discard in an appropriate field waste container.

Step 5
Place the self-preserving filter housing back into the original packaging. Minimise excess moisture on the outside of the filter housing. A light shake can remove water droplets.

Step 6
Reseal the foil pouch with the zip-type sealing strip. The filter housing material will immediately begin preserving the captured eDNA by desiccation.

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EnviroDNA proudly distributes Smith-Root eDNA sampling equipment in Australia.

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Step 7
Label the sample bag and place sample in a field storage container at ambient temperature.

Step 8
Multiple samples can be aggregated and stored at room temperature (70°F, 21°C) until bulk laboratory processing. Current data support 6 months of preservation before DNA extraction.

Courier or drop off to EnviroDNA. Address: Level 1, 95 Albert Street, Brunswick VIC 3056

The following steps are relevant for laboratory analysis only:

Step 9:
Once in the laboratory for DNA extraction, remove the filter housing with the preserved 47mm eDNA membrane from the storage bag.

Step 10
Open the filter housing using the pull-tab and reveal the eDNA filter membrane.

Step 11
The eDNA filter membrane can then be removed from the housing using forceps for DNA extraction. The filter backer will remain stuck to the housing. All elements other than the eDNA filter membrane can then be discarded.

Statement of Biodegradation

Statement of Biodegradation Smith-Root self-preserving filter housings contain a material that is recognised as one of very few synthetic polymers which are water soluble and "inherently" biodegradable in water.

The polymer manufacturer's internal experimental results indicate it is "inherently" biodegradable in water when the degree of hydrolysis is higher than 70 mol%.

- Test method; ISO 14851
- Sludge concentration; 100 mg / L
- Sample concentration; 100 mg / L

In aqueous solution, adapted microorganisms are capable to mineralise the polymer into carbon dioxide and water.

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