

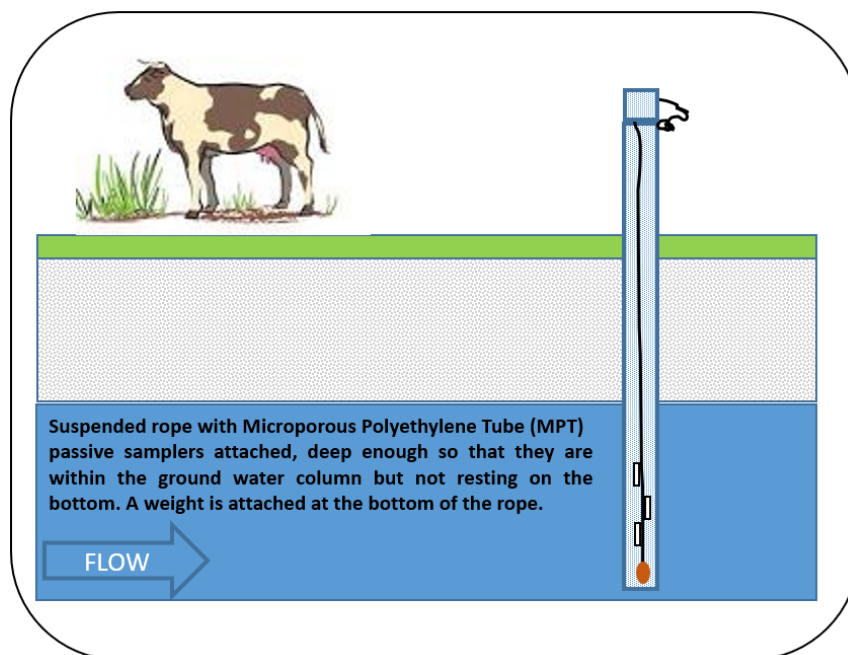
## Deployment Guide

# Microporous Polyethylene Tube (MPT) Passive Sampling deployment procedure for monitoring of per- and poly-fluoroalkyl substances (PFAS) in Ground Water

### Equipment Required

The following items will be required in the field by deployment staff:

1. Container/cooler bag with deployment equipment (Deployment Container)
  - a. Microporous Polyethylene passive sampling (MPTs) devices (at least 2 replicates per deployment period)
  - b. MPT passive sampler filed blanks
  - c. Chain or fisherman weights
2. Rope (nylon) and/or chain for deployment. Ensuring the length is sufficient for the deployment scenario. If a chain is not used a weight will be required (e.g., fisherman's weight) to keep the MPT passive sampler submerged in the water column
3. Sampling gloves suitable for PFAS sampling
4. Cable ties
5. Stanley knife and/or scissors to cut cable ties
6. Permanent marker/pen
7. Field sampling Chain of Custody (CoC) sheet
8. Large biosafety waste bag and cable ties for disposal of any waste items (cable ties, used gloves, tubing parts etc.)
9. Star pickets and orange safety mesh as required to mark and secure the deployment site
10. Laminated signage
11. 1x 20L plastic drum filled with purified MilliQ water for rinsing of equipment



**Figure 1:** Deployment diagram showing rope/ chain containing MPT passive sampling devices (triplicates) and a weight deployed in a bore hole. Make sure samplers are deployed in a position where they will be

continuously submerged, ideally in the middle of the water column. *Secure the deployment rope/chain to the bore hole housing firmly.*

## Deployment Instructions

1. Wear powder-free gloves when handling samplers. Please DO NOT wear hand lotions, perfumes, insect repellent or powdered gloves. Suitable gloves are provided with your field kit.
2. Remove the deployment rope/chain from the Deployment Container/cooler bag. Secure the deployment rope to the permanent structure above the sampling bore/well location, aiming to site the samplers in the middle of the water column. **They should remain submerged in all reasonable flow conditions but not rest on the bottom.** Figure 1 shows suggested deployment techniques.
3. Gently REMOVE the passive samplers from the plastic containers (see **Figure 2**) and discard the purified water from inside the holder. Place the plastic holder in the Deployment Container/bag for the respective site for when samplers are retrieved.
4. Attach the MPT passive samplers to the desired location on the deployment rope/ chain using cable ties secured firmly (after testing the rope length and deployment position). Check all cable ties are firmly secured to the deployment rope/chain.
5. Lower the complete set of samplers into the well.
6. Keep Field blank passive sampler containers inside the deployment bag. Nothing should be done to field blanks as their purpose is to determine any contamination from sampling procedures only.
7. **This is very important:** Record your **deployment and retrieval site name, time and dates** on the **Deployment Chain of Custody** form.
8. Collect all sampling equipment and place any sampling waste (e.g., disposable bailers, loose tubing, cable ties, ropes, chains used gloves etc.) in the 'Biohazard waste bag' in your sampling pack and, unless otherwise instructed, return all waste to the laboratory for safe disposal.
9. Secure the sampling location by placing star picket fencing (x4) and orange safety mesh around the bore hole pole/ location.
10. Attach laminated signage with information about the sampling and contact details to sampling bore hole with a cable tie.



**Figure 2:** Photo of replicate MPT passive samplers secured to deployment rope.

## Retrieval Instructions

1. Ensure you have the appropriate Deployment Container/Cooler bag when retrieving samplers.
2. Remove the rope/chain containing samplers from the water, shaking to remove excess water and adhering suspended solids.
3. CUT THE PASSIVE SAMPLERS off the rope / chain.
4. Place passive sampler devices (at least 2x replicates) back into the LABELLED passive sampling container (**Figure 3**), with ice bricks and/or store them in a cold room or freezer until transport to the laboratory for extraction and analysis.
5. Field blank MPT passive samplers should be returned to the laboratory for analysis alongside deployed samplers.
6. Record retrieval time and date on the Chain of Custody deployment record.
7. Place the bagged and labelled ropes/chains in bag for disposal/re-use.
8. Collect all sampling equipment and place any sampling waste (loose tubing, cable ties, ropes, chain, used gloves etc.) in the 'Biohazard waste bag' in your sampling pack and, unless otherwise instructed, return all waste to the laboratory for safe disposal.
9. Collect all containment equipment (picket fencing and mesh) and any other equipment used.
10. Make sure the site is left clean with no waste items left behind.



**Figure 3:** MPT passive samplers removed and placed in container for return.

## Contact Details

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