



Mercury Passive Sampler Standard Operating Procedures

Purpose

We are trying to determine how much mercury is in the air in the Arctic by using this new Passive Air Sampler (PASs). The PASs are designed to absorb mercury so that we can determine how much is in the air. With this information we can determine if levels of mercury in the air are going up or down.

In the kit (pail) are 3 PASs: 1) the 2x "**Sample**" PAS is installed on a post, fence or bracket to sample the air for 3 months and 2) The "**Blank**" PAS is included and is treated like the sample, but not left out to sample the air.

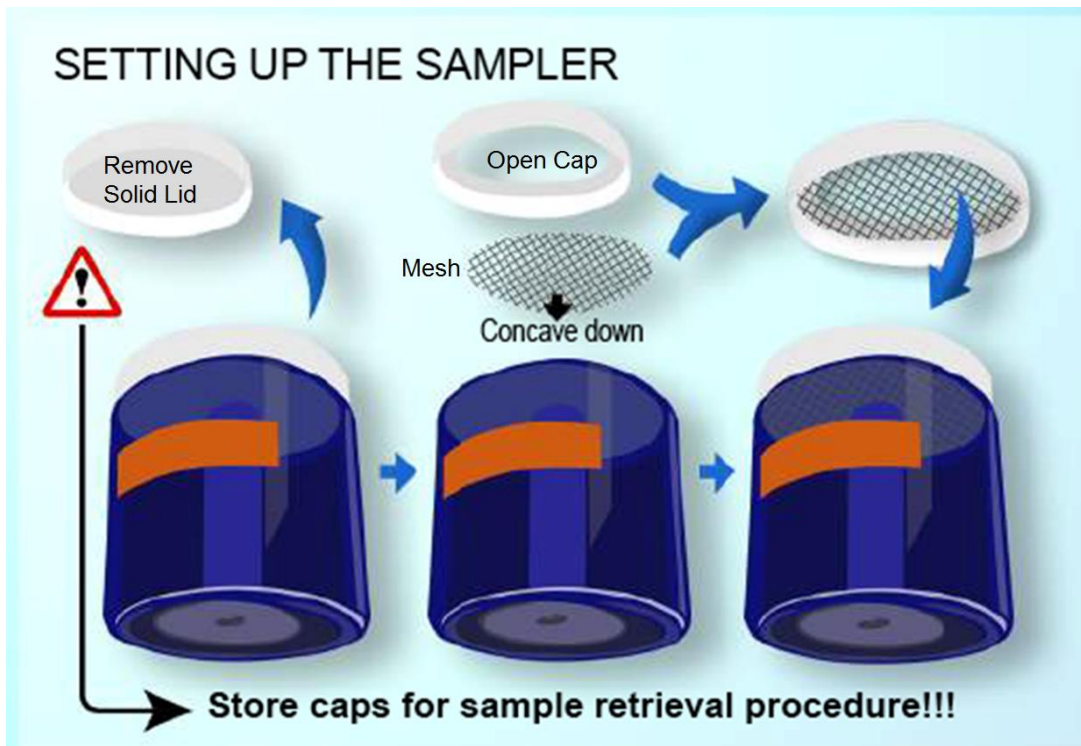
The **Sample** PAS is placed in a downward direction on the post to sample the air and the **Blank** PAS is handled like the Sample PAS where it is brought out, briefly exposed to the air and then sealed up again.

Check that your kit is complete:

- ✓ 3 blue samplers in ziploc bags
- ✓ 3 open caps and 3 screens
- ✓ 4 zip-ties, 2 H clips
- ✓ 1 metal bracket
- ✓ 1 roll of yellow tape
- ✓ 2 pair of nitrile gloves
- ✓ Instructions
- ✓ Sharpie

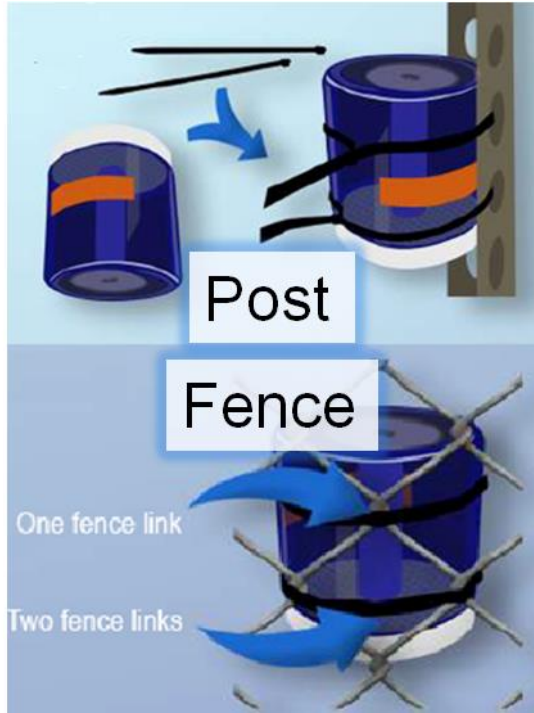
Prepare the Blank and Sample PAS

- Put on provided nitrile gloves
- Remove all 3 PASs from Ziploc bags (retain ziploc bags)
- Remove the tape from around lids of all 3 containers
- Remove the lids from both **Sample** and **Blank** PASs
- Replace the lids on both the **Sample** and **Blank** PAS with the open cap and black mesh (the curve of the mesh should face into the sample container)
- Label the *Start Time* and *Site* on the **Sample** and **Blank** with a permanent marker



Installing the Sample PAS

- Install the **Sample** PAS on a post, fence or structure using the provided zip-ties. Several zip-ties can be used to get around a large diameter post if necessary. Install the H-Clip if necessary to keep the **Sample** PAS pointed downward using 2 zipties (Method 1)
- Alternatively, the **Sample** PASs can be attached to the metal bracket using the zip-ties available in the kit. The zip-ties can be used to get the metal bracket around a post, fence or other structure. The side of the metal bracket with the two circles can be used to hold the **Sample** PASs as the bottom of the sampler has a small plastic screw where the lid of the screw can be removed and re-attached after the screw is put through the circle in the metal bracket. The lid of the sampler will be facing the ground (Method 2)
- Put the solid lid from the **Sample** back in ziploc for safe keeping until the sampler is changed
- Take a picture of the final installation



Method 1: Without Metal Bracket



Method 2: Use of Metal Bracket



What to do with the Blank PAS

- Bring the **Blank** PAS with you when you install the **Sample** PAS but do not install it on the post
- Re-install the solid lid back on **Blank** and tighten lid (very tight, loose lids can lead to contamination!) Lightly stretch some tape around lid, and return to double ziploc bag
- Store **Blank** PAS in pail with lid closed tightly to keep clean

Takedown

- Put on provided nitrile gloves
- Cut cable tie to release the PAS sampler
- Label the *Sampler Off* date and time on the **Sample** PAS with sharpie marker
- Remove open cap and screen
- Open Ziploc bag, replace original solid cap and tighten the lid (please ensure you really tighten it up, loose caps lead to contamination!)
- Lightly stretch some provided tape around **Sample** lid, and seal in double ziploc bag
- Put the remaining open cap and screen in the pail
- Place return shipment label on outside of pail, and tightly close red lid
- Ship pail using your usual methods for return shipments – a Purolator form has been included for you. Please fill out sender information and sign
- Thank you for your help with this project!!

Contact Information

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