

11.4 Instructions for cleaning the Nafion and sample collection tube

11.4.1 Required accessories

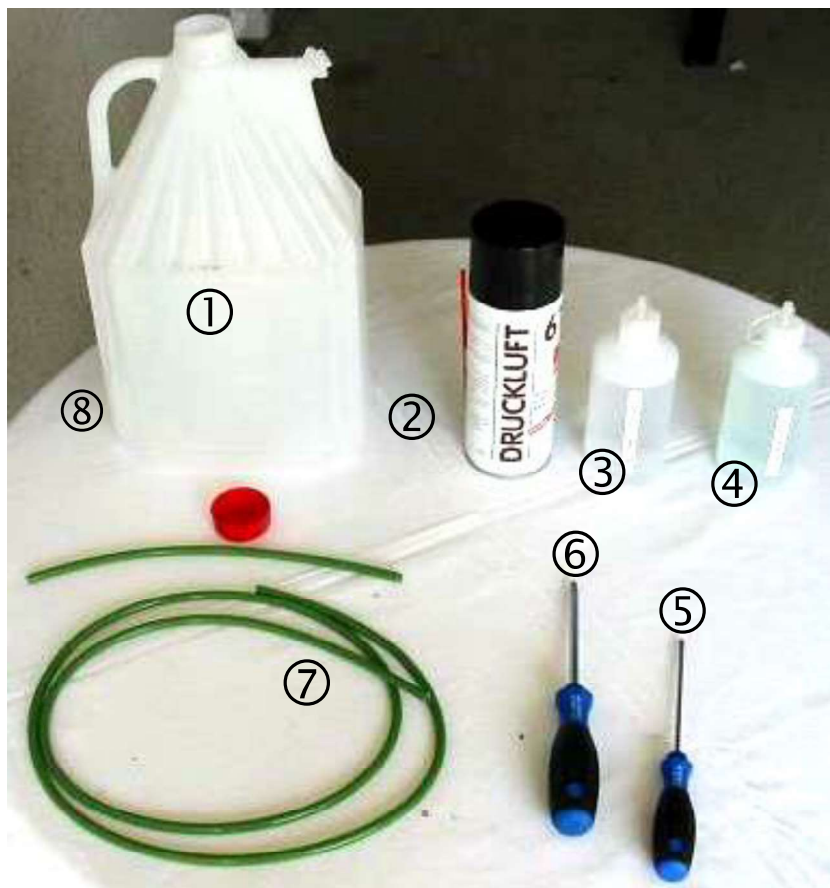


Figure 11-1: Accessories for Nafion cleaning

- ① – Container to catch dirty water
- ② – Spray can with particle-free compressed air
- ③ – Plastic bottle 2 for distilled water
- ④ – Plastic bottle 1 for soap solution
- ⑤ – Screwdriver to install the sample collection head and sample collection tube
- ⑥ – Screwdriver to install the 19 rack EDM 180
- ⑦ – Long silicone hose for the sample collection tube discharge
- ⑧ – Short silicone hose for the sample collection tube intake

11.4.2 Steps for Nafion cleaning

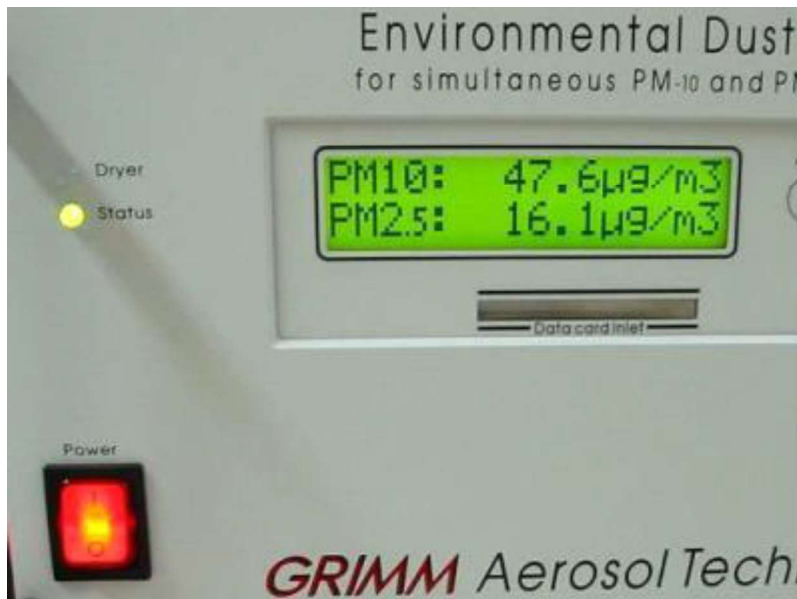


Figure 11-2: Turning off the device.



Figure 11-3: Disconnecting the device from the mains network

Put the device in standby mode.
Turn the device off using the main switch (Power).

Disconnect the device from the mains network by pulling the mains cable.



Figure 11-4: Moving the lift

Open the door in the front plate and pull the lift lever forward to the stop.



Figure 11-5: Pulling the lift lever down and sliding it in to the stop

The pull the lever all the way down and, in the bottom position, slide it all the way in.



Figure 11-7: Removing the four screws from the front cover and taking the EDM 180 out of the container rack

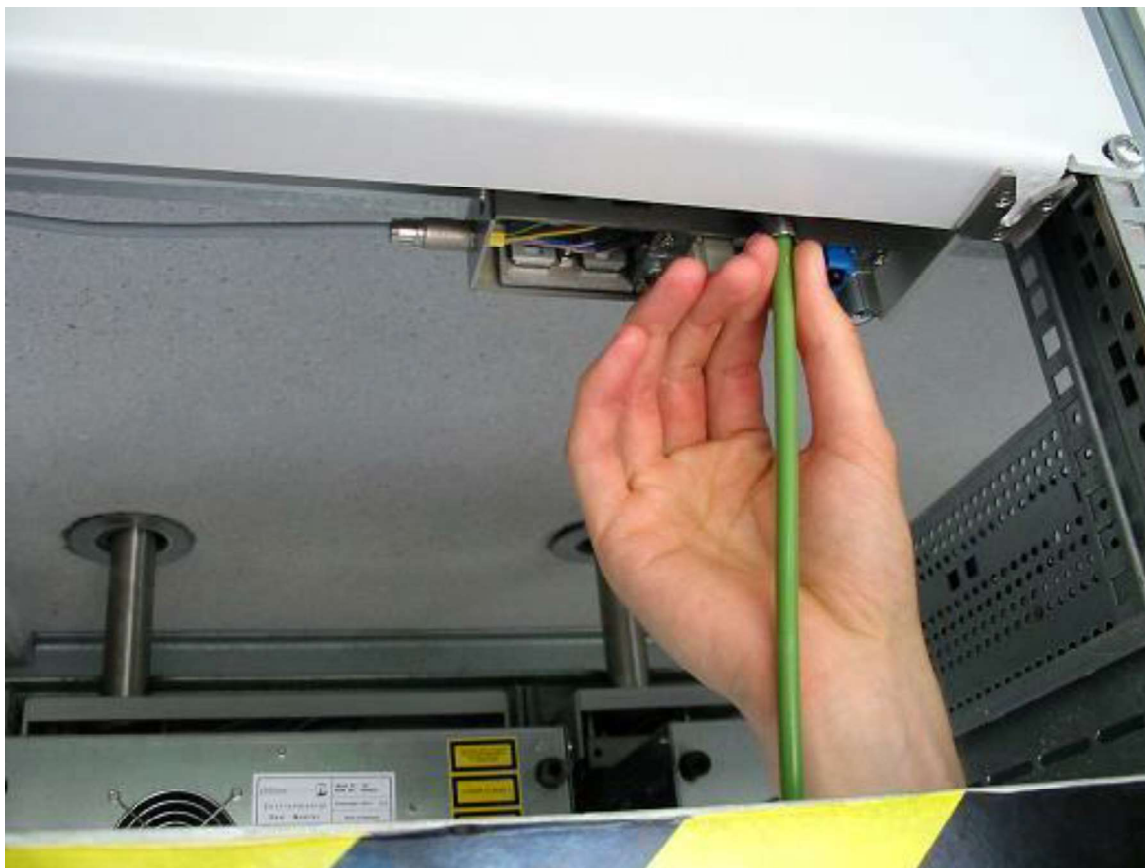


Figure 11-6: Connecting the long silicone hose ⑦ to the inner tube of the sample collection tube on the discharge side

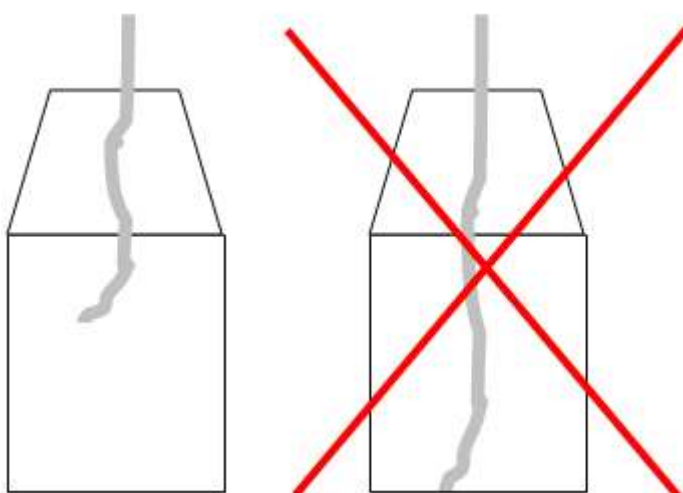


Figure 11-8: Inserting the hose into the collection container – NOT to the container bottom



Figure 11-9: Removing the screws securing the sample collection head



Figure 11-10: Pulling the head off the sample collection tube with a combined twisting and pushing motion

NOTE: Do NOT grasp the top of the sample collection head to pull it off.



Figure 11-11: Filling the bottle ① with soap solution

Mixing the soap solution:

Mix 2 drops of dish detergent with 100 ml water.

Briefly shake the soap solution and fill it into the sample collection head from below.

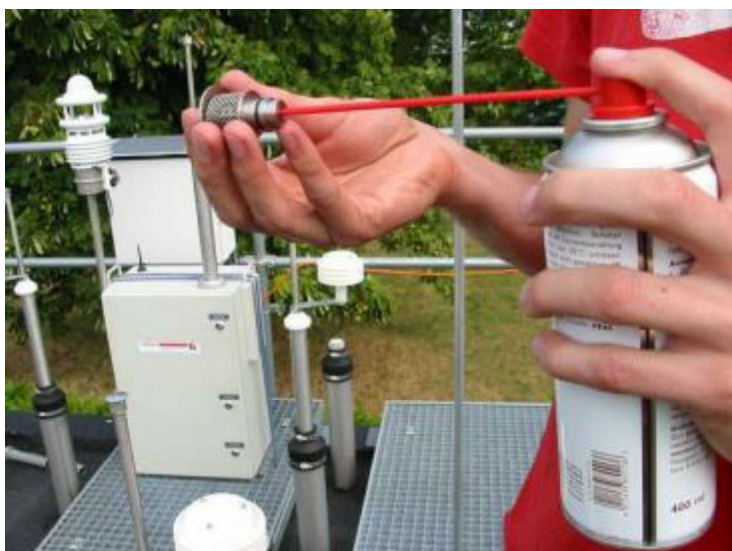
NOTE: No metal particles or contaminants/foreign bodies in the water!



Figure 11-12: Using a bottle ② to rinse the sample collection head

Fill the bottle ② with distilled water and use it to rinse the sample collection head.

NOTE: No metal particles or contaminants/foreign bodies in the water!



Remove residual water with a compressed air spray can
Attention: Use the spray can at a MAXIMUM angle of 30°.



Figure 11-13: Blowing out the sample collection head with compressed air

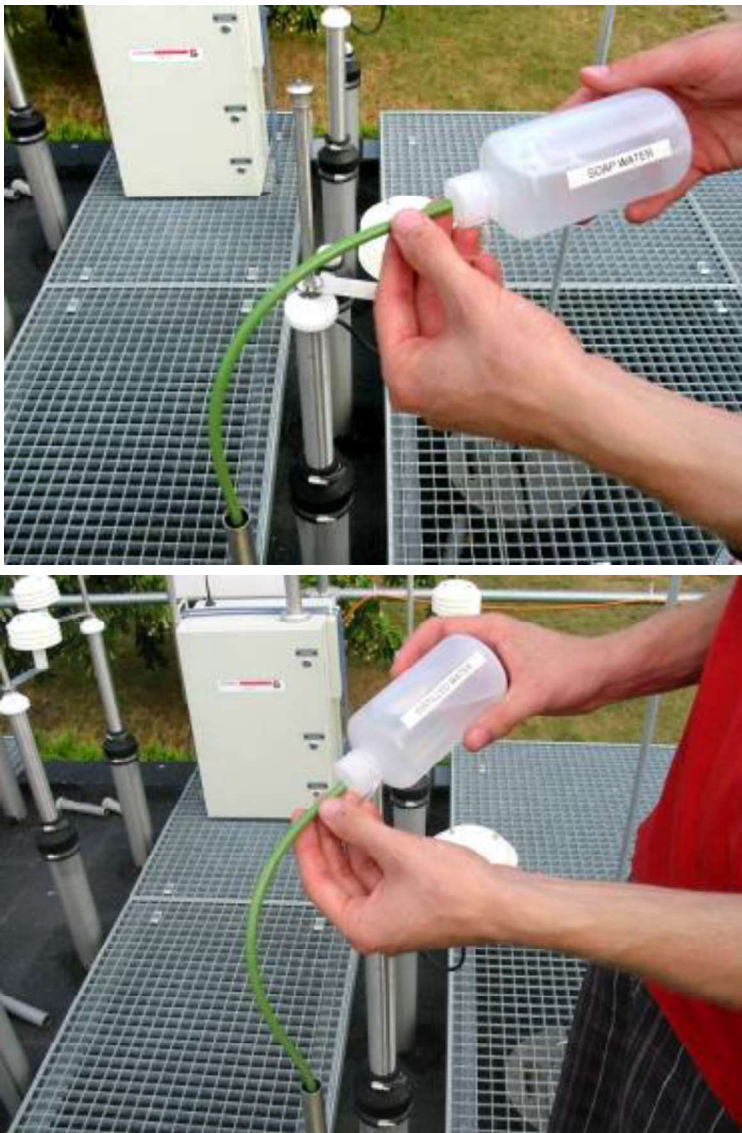


Figure 11-15: Rinsing the sample collection tube

Mixing the soap solution:

Mix 2 drops of dish detergent with 100 ml water and shake briefly.

Fill the bottle ① with soap solution, connect the silicone hose to the inner tube of the sample collection tube at the intake side, connect it to the bottle and clean the sample collection tube with soap solution.

NOTE: No metal particles or contaminants/foreign bodies in the water!

Remove the bottle ① with soap solution

Fill the bottle ② with distilled water and connect the short silicone hose to the bottle.

Rinse the sample collection tube with distilled water. Attention: No metal particles or contaminants/foreign bodies in the water!



Figure 11-16: Blowing out the sample collection tube with compressed air

Remove the bottle ②.

Connect the compressed air spray can to the hose and blow out residual water.

Attention: Use the spray can at a MAXIMUM angle of 30°.

Remove the spray can and hose.

Install the head of the sample collection tube with a combination turning and pushing motion (turning motion protects the O-ring of the sample collection tube head against damage).

NOTE: The hole in the sample collection tube and the hole in the sample collection head have to be in one axis for installation .

NOTE: Do NOT touch the top of the sample collection head for installation!

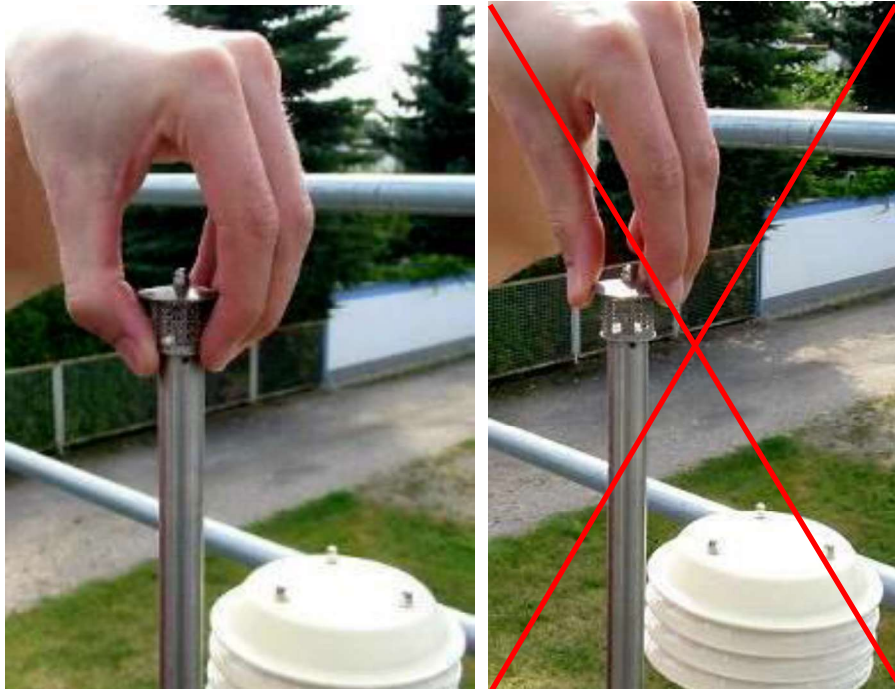


Figure 11-17: Installing the sample collection head



Figure 11-19: Installing the sample collection head



Figure 11-18: Removing the long silicone hose and collection container



Figure 11-21: Sliding the EDM 180 into the container rack and mounting it with four screws

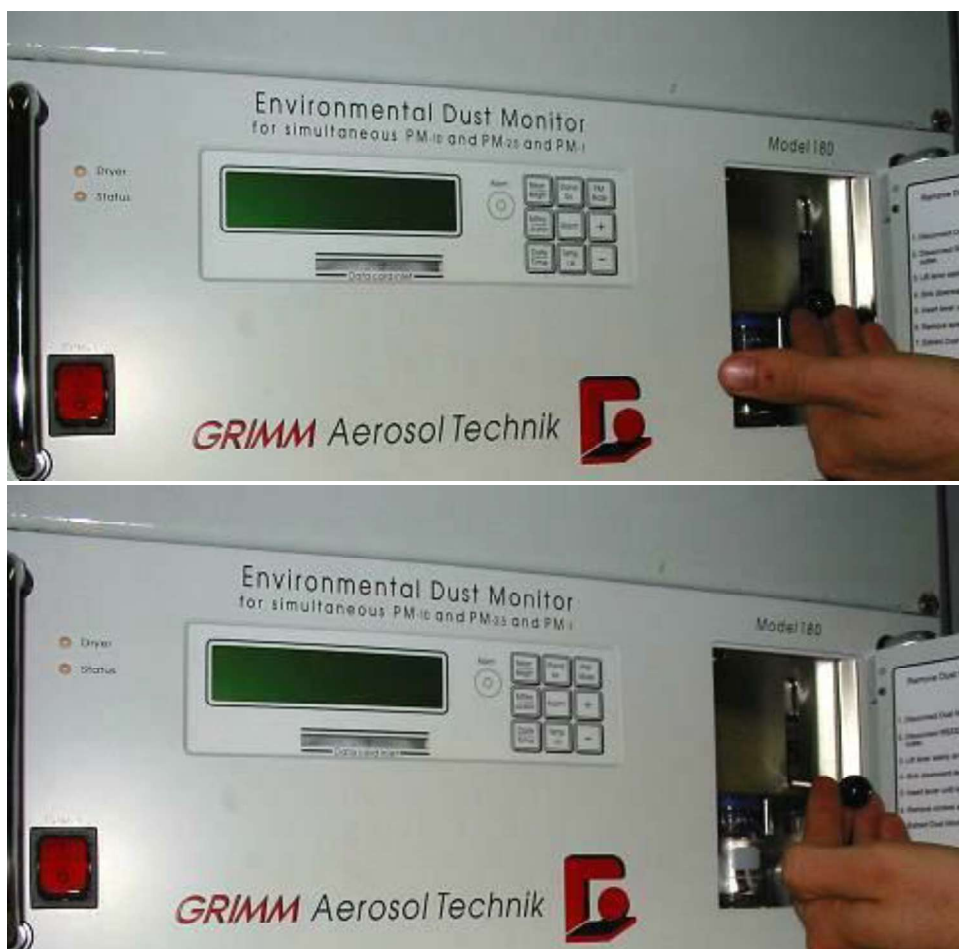


Figure 11-20: Pulling the lift lever in the bottom position all the way forward



Figure 11-23: Pushing the lift lever all the way up



Figure 11-22: Pushing the lift lever in to the stop and closing the door



Figure 11-24: Connecting the mains cable



Figure 11-25: Turning on the EDM 180

11.4.3 Final drying



Figure 11-26: Switching on the EDM 180 and waiting for the filter query

Press the **{Temp/r.H.}** button

Press the {-} button (turn on the vacuum pump)

Wait 5 minutes, letting the vacuum pump run

Press the {-} button (turn the vacuum pump off)

Then set the EDM 180 to measuring mode and discard the measurements during the first 30 minutes, since the measured values may be distorted depending on the sensor values for the relative humidity due to remaining moisture in the sample collection tube.