

Work instruction Number 1215

Page 1 of 5

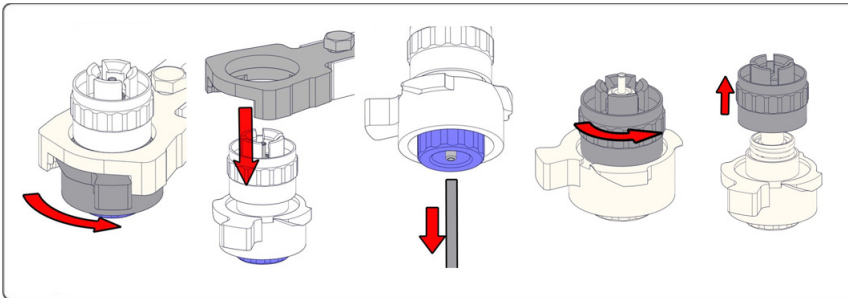
Purpose: Maintenance level 4

Safety: Bio Hazard area

Instrument: Instrument

Revision: 004, 2024

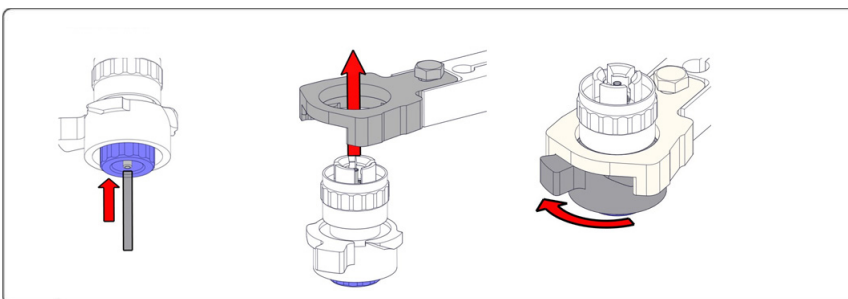
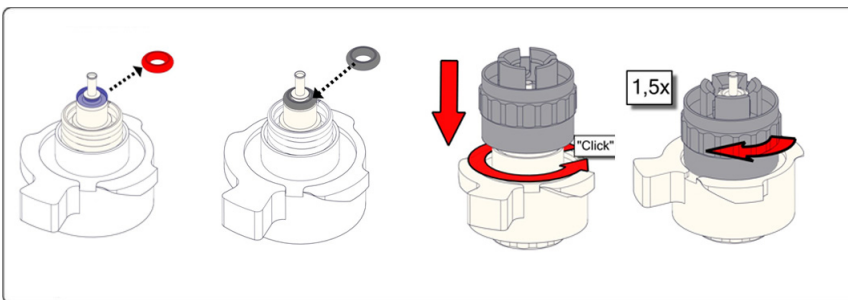
Clean Fill nozzle and exchange O-ring Fill Nozzle



Clean fill nozzle

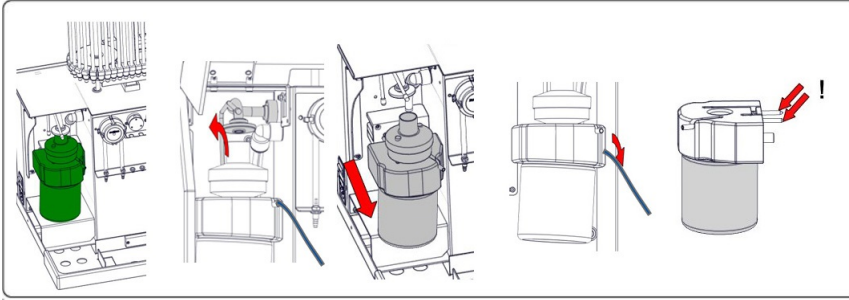
The use of a toothbrush and detergent is recommended.

- Carefully scrub the fill nozzle inner part.
- Use a tissue to dry the fill nozzle.

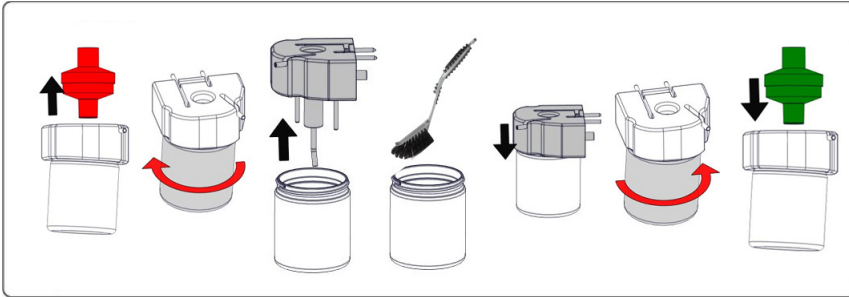


Clean waste separator and exchange filters

Removing

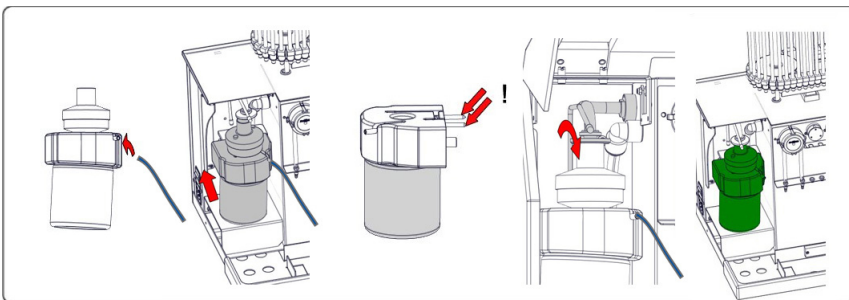


Cleaning



- A. Clean all parts with hot water and a brush.
- B. Use some acid free vaseline on the screw-thread of the glass jar, the top rim of the glass jar, the O-ring for the HEPA filter and the black PVC pipe on the back.

Replacing



- C. If applicable replace the bacterial HEPA filter (For Maintenance Level 4: Exchange filter QWL040002)

On waste bottle (If used):

Exchange bacterial filter **QWL040001** on the waste bottle assembly.

Exchange Rinse and Saline tube assembly

New rinse pump tube assembly **ESRI090902**.



New saline pump tube assembly **ESRI090903**



New tube replacement:

1. Open left cover.
2. Pull pump tube slightly downwards and at the same time towards the front of the unit to release the tube out of the pump plate holder.
3. Remove the old tube from the peristaltic pump rotor.
4. Disconnect the tubing at both ends of the tube connectors.
5. Connect new tubing to both ends of the connectors.
6. Place one end of the tube in the pump plate holder.
7. Pull the new tube over the peristaltic pump rotor.
8. Pull pump tube slightly downwards and at the same time towards the back of the Instrument.

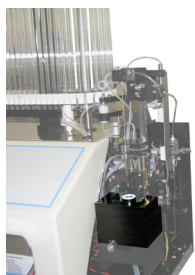
Fill and clean

For Software version 6.12.1 and up:

Starrsed Cleaning Agent preparation Instrument Compact: Fill and clean:

This cycle takes about 90 minutes.

1. Fill the clean adapter EHST110907 with hot de-ionized water. (+/- 100 ml, 80 °C)
2. Add 10 ml Starrsed Cleaning Agent (QRR 010905) to the hot water in the adapter.
3. Place the cap on the adapter and mix well.
4. Put the adapter with cleaning solution on the lower tube holder.
5. Select **Maintenance** tab, **Prime/Clean**, button **Fill and clean**.



For software versions up to 6.10.1:

For instruments <04-2017 - S/N 052054 (delivered with Adapter 150ml):

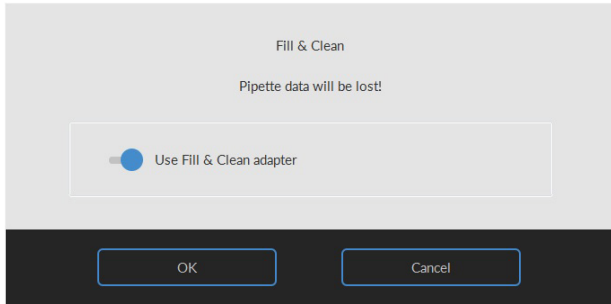
1. Fill the clean adapter EHST110907 with hot de-ionized water. (+/- 130 ml, 80 °C)
2. Add 13 ml Starrsed Cleaning Agent (QRR 010905) to the hot water in the adapter.

For instruments >04-2017 - S/N 052054 (delivered with Adapter 170ml):

1. Fill the clean adapter EHST110907 with hot de-ionized water. (+/- 150 ml, 80 °C)
2. Add 15 ml Starrsed Cleaning Agent (QRR 010905) to the hot water in the adapter.

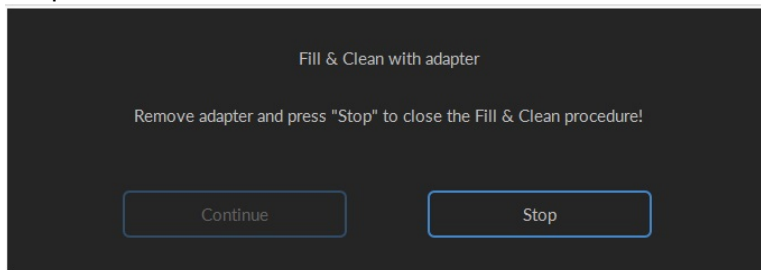
For all instruments with software versions up to 6.10.1:

1. Place the cap on the adapter and mix well.
2. Put the adapter with cleaning solution on the lower tube holder.
3. Select **Maintenance** tab, **Prime/Clean**, button **Fill and clean**.



Start Fill and clean procedure:

1. Select button **OK**.
2. The needle goes down and the process is started.
3. When all the pipettes are filled, the needle goes back to the home position.
4. In software version 6.12.1 and up: After the Fill & clean process is finished, a notification is given to stop the procedure.



5. Remove the adapter from the needle assembly and press "Stop".

The instrument is ready for normal operation.

Sensor Check

Vacuum pressure check

- Go to tab **Maintenance** -> **Check sensor**. Select **Check Flow sensor** box.
Flow: **0980** ± 60 Abs: **0320** ±10
If the flow is not in range there might be a blockage in the vacuum flow line to the flow sensor.

Fill Stop sensor check

- Go to tab **Maintenance** -> **Check sensor**. Select **Check Fill stop sensor** box.
Fill stop sensor FS 90..**140**..165

Diluter Start sensor check

- Go to tab **Maintenance** -> **Check sensor**. Select **Diluter start sensor** box.
Diluter start sensor 400-**550**-700

Measure sensor check

- Go to tab **Maintenance** -> **Check sensor**. Select **Check measure sensor** box.
Measure sensor MS **50** ±10

Temperature sensor check

- Go to tab **Maintenance** -> **Check sensor**. Select **Check Temperature sensor** box.
Temperature sensor TS [Room temperature]

Diluent flow sensor check

- Go to tab **Maintenance** -> **Check sensor**. Select **Check Diluent flow sensor** box.
Press test. When test is finished, signal Down and signal Up must be green.

Separator check

- Go to tab **Maintenance** -> **Check sensor**. Select **Check Separator sensor** box.
Separator sensor <200 **600** >700

Inspect or replace sample probe or outer needle

Check needle condition. If necessary replace the sample probe or outer needle.

Check and cleaning

Prepare disinfectant: (if not already prepared).

This disinfectant is for cleaning of all external parts that are exposed to blood.

- Go to tab **[Maintenance]** and perform the **[End-of-day wash]** procedure.
- Check system for leakage.
 - Inspect the peristaltic pump tubes and connections for leaks.
 - Check that liquid does not run back after the pumps have stopped.
- Clean the outer needle with disinfectant
- Check tubing from the syringe for trapped air bubbles.
- Check Diluent syringe for trapped air bubbles.
- If trapped air bubbles are found, go to tab **[Maintenance]**, click button **[Prime / Clean]** and perform the **[Prime Diluent/Diluter]** function.
- Wipe outer surface and stainless steel plate below the pipettes with disinfectant.
- Check (or replace if needed) two drip trays (ESRI010318)