



Cleaning & Sterilization

Cleaning / descaling the filters:

- 1a Soak filters in a 0.5-1 M NaOH for 30 minutes up to an 1 hour.
- 1b Alternative: use a small 2 liter 40 Hz ultrasonic cleaner, filled with 0.5-1 M NaOH, and clean the filters for approximately 5 minutes. The ultrasonic cleaner will also help descale filters if this becomes necessary.
- 2 Soak / rinse filters in distilled water.
Caution: do not use standard tap water as this typically contains dissolved salts and metals, as this will react to the nickel alloy and cause scaling.
- 3 Sterilize the filters with 70% isopropyl alcohol, either use a spray or submerge the filters completely.
- 4 Let the filters dry in a laminar flow hood.
- 5 Cover the filters with a petri dish lid.

Guidelines when working with the CES:

In order to avoid contamination, always try to work in a laminar flow hood if possible

Contamination:

The source (plates or liquid) can be a suspect of contamination. If this is the case, then the following Cleaning Buffers could/should be used.

Cleaning buffer 50 mL: M9 + Streptomycin + Nystatin –solution :

- 1 Streptomycin stock 100 mg/mL
Add 1 gram of Strep to 10 mL of dH₂O, filter sterilize the solution and store at 4°C
- 2 Nystatin suspension 10 mg/mL
For 50 mL, add 0.5 gram Nystatin in 70% ethanol in dH₂O (Shake before use) store at 4°C
- 3 Prepare 50 mL of sterile M9 buffer
add 50 µL Streptomycin stock 100 mg/mL and 50 µL Nystatin suspension 10 mg/mL
- 4 Transfer the L1's to a 50 mL tube and add 10 mL cleaning buffer, incubate for 5 minutes.

Warning:

If there is 'scaling' NEVER use an acid solution as it will have the potential of damaging the filters. Instead, use a small 40khz ultrasonic cleaning device with a 'general purpose' cleaning solution that has pH of 7 or higher. If not sure just use demi-water with a drop of general-purpose detergent and gently move / tilting the filter for 1 to 2 minutes in the ultrasonic cleaning device. To verify the result check the filter before and after under a microscope.