

## Cleaning protocol for KNAUER LightGuide Flow cells

**Preliminary note:** KNAUER recommends to carry out this cleaning procedure at regular intervals (every two weeks) when using acetonitrile-containing eluents in order to extend the life of the flow cells.

- Materials:**
- Potassium hydroxide (pellets)
  - Hydrogen peroxide solution (30%)
  - Water (MilliQ)
  - A syringe with Luer Lock adapter for UNF 10/32 threading (Volume: at least 5 ml)
  - Waste tube
  - Hole plug

- Production of the cleaning solution:**
- 5.7 g of potassium hydroxide are carefully dissolved while stirring in 10 ml of water under heat generation.
  - The solution is added slowly with 6 ml of 30% hydrogen peroxide solution while stirring (heat and gas evolution).
  - The resulting solution is finally mixed with 10 ml of water and used directly for cleaning.
  - The cleaning solution should always be freshly prepared for cleaning to ensure an optimum cleaning performance.

- Cleaning procedure:**
1. For cleaning, the flow cell may need to be rinsed with water beforehand. The flow cell must not contain any residues of organic solvents!
  2. A syringe with Luer Lock adapter is filled with at least 5 ml of the cleaning solution and connected to the inlet port of the flow cell.
  3. The outlet port of the flow cell is connected to a waste tube and connected to a waste container.
  4. Slowly and carefully flush the flow cell with the cleaning solution.
  5. Remove the waste tube from the flow cell and close the port with a hole plug.
  6. Remove the syringe from the inlet port and close it with a hole plug as well.
  7. Leave the cleaning solution in the flow cell for at least 2 hours. For a more extensive cleaning, it is recommended to let the cleaning solution work overnight for at least 12 hours.
  8. After the exposure time, remove the hole plugs, fill a Luer Lock syringe with at least 5 ml of water and connect it to the inlet port. Install the waste tube again at the outlet port.

9. Slowly and carefully flush the flow cell with water. Then install the flow cell in the system and flush with water for 15 minutes at a flow of 1 ml/min.
10. Check the light intensity via the diagnostic function. The intensity at 220 nm should be at least 3500 ADC counts. If necessary repeat the cleaning steps 2 to 9 and check the light intensity at 220 nm again .