SF-300X Cell cleaning procedure

The following procedure outlines the approved method for cleaning the SF-300X syringe and observation cell assembly, and should be done as needed to maintain stable data for your SF-300X. In particular, if you observe erratic, irreproducible data it could be due to a plugged mixer, and can be remedied by following this cleaning procedure.

Materials needed:

- Deionized (DI) Water
- 2N NaOH solution
- 2N HCL solution
- Leur Lock syringes to load solutions
- Breaker for waste solutions

Warnings:

- Observe all regulations regarding the storage and disposal of hazardous materials.
- Always use appropriate safety precautions for handling of Acids and Bases to prevent injury.

Procedure (Repeat at least 3 times):

1. Flush drive syringes with DI Water.
    a. With the syringe control valve in the LOAD position fill syringes with DI water.
    b. Open the STOP valve using the KinTek SF program.
    c. Turn syringe valve to FIRE position.
    d. Manually drive the DI water through the cell and into the waste syringe.
    e. Close the STOP valve and empty the waste syringe.
2. Flush system with 2N NaOH solution by forcing it backwards from the waste syringe.
    a. Fill a syringe with the 2N NaOH solution and attach it to the waste collection line.
    b. Open the STOP valve in the SF program.
    c. With the syringe valve in the FIRE position drive solution up through the cell from the waste syringe into the sample syringes.
    d. Allow solution to soak for 5-10 minutes. A timer in the software will alert you when 5 minutes have passed, stating “After a 5 minute delay, the stop valve has been closed”.
    e. Open the STOP valve and manually drive the solution back to the waste syringe.
    f. Empty the waste syringe and reconnect.
3. Flush with DI water (see step 1).
4. Flush system with 2N HCL solution by forcing it backwards from the waste syringe.
    a. Fill a syringe with 2N HCL solution at attach it to the waste collection line.
    b. Open the STOP valve in the SF program.
    c. With the syringe valve in the FIRE position drive solution up through the cell from the waste syringe into the sample syringes.
    d. Allow solution to soak for 5-10 minutes. A timer in the software will alert you when 5 minutes have passed, stating “After a 5 minute delay, the stop valve has been closed”.
    e. Open the STOP valve and manually drive the solution back to the waste syringe.
    f. Empty the waste syringe and reconnect.
5. Flush with DI water (see step 1).