

- Follow the prompts on each of the LCD. Load empty 1.5mL vials onto each module if you have not already done so.
- Press down on each of the needle levers to start the bleach protocol.
- The fluidics station will begin the protocol and begin to empty the lines and perform the cleaning cycles using bleach solution.
- After approximately 30 minutes, the LCD will prompt you when the bleach cycle is over and the rinse cycle about to begin.

The Rinse Cycle

Once the bleach cycle has finished, the second part of the protocol is a rinse step. This step is essential to remove all traces of bleach from the system. Failure to complete this step can result in damaged arrays.

- Follow the prompts on the LCD for each module. Lift up on the needle levers and remove the bleach vials. Load clean, empty vials onto each module.
- Remove the three wash and water lines from the bleach bottle and transfer them to the DI water bottle.

At this step, you need not be concerned regarding the bleach that remains in the lines.



- Press down on the needle levers to begin the rinse cycle. The fluidics station will empty the lines and rinse the needles.
- When the rinse has finished after approximately one hour, the fluidics station will bring the temperature back to 25°C and drain the lines with air. The LCD display will read CLEANING DONE.
- Discard the vials employed for the bleach protocol.
- Please consider the following recommendations after you have completed the bleach protocol.

If you are:	Affymetrix recommends you do this:
Planning to use the system immediately	After running the bleach protocol, remove the DI water supply used in the rinse phase and install the appropriate reagents for use in your next staining and washing protocol (including fresh DI water). Perform a prime protocol without loading your probe arrays. Failure to run a prime protocol will result in irreparable damage to the loaded hybridized probe arrays.
Not planning to use the system immediately	Since the system is already well purged with water, you need not run an additional shutdown protocol. Just remove the old DI water bottle and replace it with a fresh bottle.
Not planning to use the system for an extended period of time (longer than one week)	Remove the DI water and perform a "dry" protocol shutdown. This will remove most of the water from the system and prevent unwanted microbial growth in the supply lines. Also, remove the pump tubing from the peristaltic pump rollers.

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VERSION A

Bleach Protocol for the Affymetrix
GeneChip® Fluidics Station 450/250

Quick Reference Card

This card provides you with a protocol for cleaning your Fluidics Station 450/250.



The Fluidics Station Bleach Protocol

Affymetrix recommends a weekly cleaning protocol for the fluidics station. This protocol uses commonly purchased sodium hypochlorite bleach.

Affymetrix designed this protocol to eliminate any residual SAPE-antibody complex that may be present in the fluidics station tubing and needles. The protocol runs a bleach solution through the system followed by a rinse cycle with deionized (DI) water. This protocol takes approximately one hour and forty minutes to complete. **Affymetrix recommends running this protocol weekly.** You can find the current version of the protocol at

www.affymetrix.com/support/technical/fluidics_scripts.affx

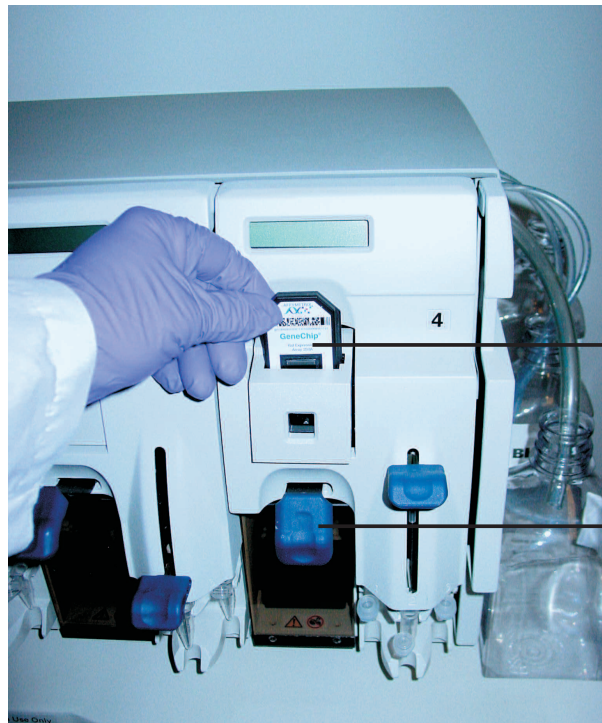
The bleach protocol requires approximately **one liter** of DI water and requires **500mL** of the 0.525% sodium hypochlorite solution for each fluidics station.

To avoid carryover, or cross contamination, from the bleach protocol, Affymetrix recommends the use of dedicated bottles for bleach and DI water. You can obtain additional bottles from Affymetrix.

Part Number	Description
400118	Media Bottle, SQ, 500mL
400119	Media Bottle, SQ, 1000mL

Bleach Cleaning Procedure

1. Remove any probe array cartridge from the fluidics station and engage the washblock.



1. Open door by flipping down the cartridge lever
2. Remove cartridges (if any)
3. Engage washblock by flipping up the cartridge lever.

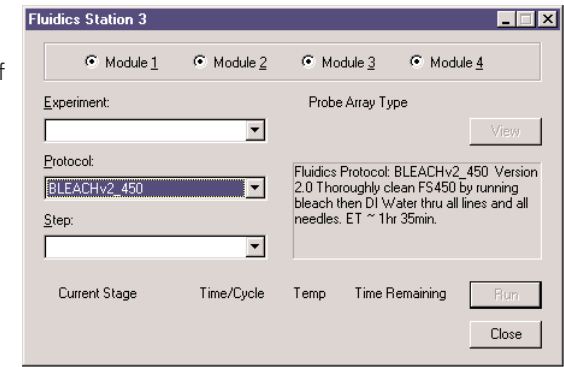
2. Prepare 500mL of 0.525% sodium hypochlorite solution using deionized water. Follow these directions to make 500mL of bleach.
In a 1 liter plastic or glass graduated cylinder combine 43.75mL of commercial bleach (such as Clorox® bleach, which is 6% sodium hypochlorite) with 456.25mL of DI H₂O, mix well.
Pour the solution into a 500mL plastic bottle, and place the plastic bottle on fluidics station.

The shelf life of the bleach solution is 24 hours. After this period, you must prepare a fresh solution.



3. On the fluidics place an empty one liter waste bottle, a 500mL bottle of bleach and a one liter bottle of DI water. Insert the waste line into the waste bottle.
4. Immerse all three wash and water lines of the fluidics station into the 500mL of bleach solution. **DO NOT IMMERS THE WASTE LINE INTO THE BLEACH.**

5. Open GCOS, Microarray Suite or the current version of the Affymetrix control software. **Click Run → Fluidics...** from the menu. Alternatively, click the down arrow Protocol list on the toolbar. The protocol window appears.



6. Choose the current bleach protocol (in the current example, select **BLEACHv2_450**) for each of the respective modules in the Protocol drop-down list. Select all four modules, 1 to 4, and click **Run**.

Note: The fluidics station will not start the bleach protocol until you close the washblock and press down on the needle lever.

Caution: The temperature will ramp up to 50°C.

