



*"Advanced SOLUTIONS for
Physiology Teaching and Research"*



Tech Note

Cleaning the iWorx FH-300 Spirometer Flowhead

Every time a subject uses a spirometer, he or she should use a clean spirometer flowhead and clean tubing to prevent the transmission of respiratory infections from subject to subject. Use gloves while cleaning flowheads and tubing.

Start the cleaning process by disconnecting the tubing from the flowhead. Immerse the flowhead and tubing completely in a pan containing a 5% bleach solution for 5-10 minutes. Periodically, agitate the flowhead while it is submerged in the cleaning solution; swish it back and forth in the cleaning solution for 10-15 seconds every minute. After agitating the flowhead each minute, lift the tubing from the pan and let the tubing drain. Replace the tubing in the pan, so that it fills with cleaning solution and soaks for another minute.

At the end of the cleaning period, remove the flowhead and tubing from the pan of cleaning solution. Set them on some paper towels to drain as you put on clean gloves. Rinse the flowhead and the tubing with deionized water at least 6 times. Use a squirt bottle of deionized water to rinse the lumen of the tubing and the crevices inside the flowhead. Drain the final rinse water from the flowhead and the tubing by setting them on some fresh paper towels.

For the flowhead to function properly, the flowhead and its tubing must be dry. Water on the screen in the flowhead or in the tubes impairs airflow. To dry the tubing and the flowhead more rapidly, use a can of compressed air to blow any moisture from these items. If your laboratory has a compressed air system, do not use it unless the system has a filter to remove the oil that condenses in the air lines. Finally, to insure there is no moisture in the flowhead, dry the flowhead with a hair dryer. Reassemble the flowhead and tubing, and attach them to the spirometer.

Do not clean the flowhead with alcohol. Alcohol crazes plastic and causes the flowhead to disintegrate. A well-cleaned and maintained plastic flowhead can last for years.

While disposable, electrostatic bacterial filters can be used on flowheads, they do not guarantee the removal of respiratory viruses from the air entering the flowhead. Most users purchase a second flowhead (Part Number: A-FH-300) for each station so a clean flowhead is available for the next subject, as the other flowhead is being cleaned and dried. The whole cleaning process usually takes 20 minutes.

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