PATsmart™ ZipChip®

Drydock Installation and Use

The DryDock is a standalone unit for simple, reliable, and consistent drying of PATsmart™ ZipChip® cartridges between experiments. The DryDock functions by blowing nitrogen through the microfluidic channels to fully dry the ZipChip cartridge when changing background electrolyte conditions or storage. The Drydock includes an internal regulator which converts the inlet pressure from the nitrogen source to the appropriate pressure for drying the ZipChip cartridge. Use of the DryDock ensures reliable performance of the ZipChip cartridges after periods of long-term storage.

DryDock Installation

1. Ensure you have a clean, dry high purity nitrogen source regulated to 100 ±10 psig.
2. Turn off flow of nitrogen from your nitrogen source while setting up the DryDock.
3. Connect the DryDock to the regulated nitrogen source using ¼" O.D. plastic tubing. Insert the ¼" tubing from the nitrogen source into the port on the back-right corner of the DryDock (see Figure 2 for location).
4. Ensure the blue valve on the DryDock is in the "OFF" position.
5. Turn on the flow from the nitrogen source and ensure all connections are secure. The DryDock is now ready to be used.

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DryDock Use Instructions

1. Vacuum or pipette the excess liquid from the wells (wells 2,3, and 4) of the ZipChip cartridge.
2. Use a pipette to rinse the waste well (well 1) three times with 125 uL of LCMS grade water.
3. After removing the bulk of the liquid use compressed nitrogen/air to blow out any remaining BGE droplets from the chip wells.

   Warning: If excess liquid has not been removed from the ZipChip cartridge prior to using the DryDock the chip will not be properly prepared for storage. This could result in damage to the ZipChip cartridge and poor performance when next used.

   Warning: Excess liquid in the wells could cause damage to the DryDock system.

4. Check that gas is flowing by turning the blue nob to the “ON” position without a chip installed. If gas is not flowing, check the source gas and ensure the supply valve is opened.
5. With the DryDock in the “OFF” position, rotate door latch counterclockwise to open the door.
6. Insert the ZipChip cartridge, as shown in Figure 3 and press down firmly.

7. Close the door and rotate the door latch clockwise to secure the door.
8. Rotate the blue valve counterclockwise to the “ON” position.
9. Dry the chip for at least 30 minutes.
10. Rotate the blue valve clockwise to the “OFF” position.
11. Rotate the latch counterclockwise to open the door and remove dry ZipChip for storage.

For 24/7/365 Customer Support
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