PATsmart™ ZipChip®

Best Care Practices

The following guidelines have been developed to help customers get the most out of their PATsmart™ ZipChip® interfaces.

Handling ZipChip

- Always wear gloves when handling ZipChip
- Avoid touching the exposed glass at the ESI corner of the ZipChip

Background Electrolyte (BGE)

Always follow our guidelines for preparing and using BGE. Using excessively old BGE can damage chips due to changes in pH and electrical conductivity.

- Switching to a new type of BGE: The ZipChip must be dried prior to use with the new BGE.

Warning: Failure to empty and dry the channels of the ZipChip may result in a mixture of BGE types in the channels. This will result in inconsistent performance and can damage the ZipChip

- Switching to a new preparation of the same BGE:
    - If the old preparation of the BGE is older than its recommended lifetime, indicated on the BGE preparation instructions:
        - Rinse and dry the ZipChip
        - Prime the autosampler with the fresh BGE
        - Prime a fully dried ZipChip
    - If the old BGE is 24 hours old or less:
        - Load a bottle of the freshly prepared BGE
        - Refresh the BGE in the wells of the primed ZipChip two times

Post-Analysis Recommendations

It is good practice to make sure the chip is as clean as possible before drying it. Therefore, we recommend always running a blank sample and including a BGE refresh at the end of a set of experiments.

If running out of the single analysis tab performing a BGE Refresh and Sample Well Rinse functions should be done manually.

Drying Your ZipChip After Use

1. Remove BGE from the wells of the chip using a pipet
2. Fully dry the wells of the chip using a nitrogen gun or canned air
3. Place chip in Drydock and follow Drydock instructions to fully dry the chip

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.

ZipChip Best Care Practices

Storing Your ZipChip After Drying

Once your ZipChip has been dried it can be stored for later use. Recommended storage for a ZipChip is to store them well side down in their original package or in an alternate container where dust or other particles cannot settle into the wells or on the corner of the chip.

Warning: Dust or debris on a ZipChip can contaminate the ZipChip Interface and clog the fluid lines

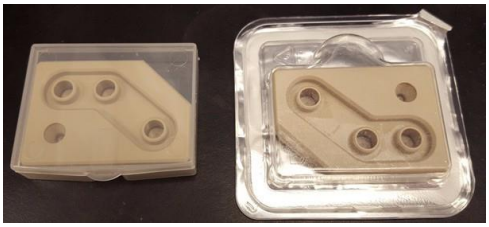

Figure 1. ZipChip Stored for Future Use

Storing Your ZipChip After Drying

When planning to use a ZipChip after storing it is beneficial to blow off any possible dust or particulate matter from the wells and corner of the chip. This can be done using a nitrogen gun or canned air.

After priming a chip which has been dried and stored there may occasionally be unstable electrospray. If encountered, the edges of the electrospray emitter corner can be gently wiped with a dry lint-free cloth (Ex. TechniCloth). Figure 2 indicates the direction to wipe the edges of the chip.

Warning: Wiping into electrospray corner could result in damage to the chip and blockage of the channel.

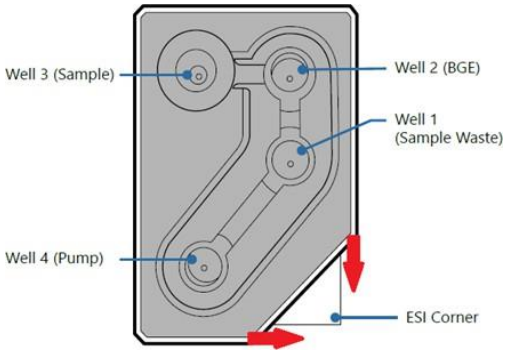

Figure 2. Direction to Wipe Chip Corner

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