Chip Maintenance

Proper daily instrument maintenance and chip cleaning technique have been identified as key factors in maximizing the lifetime of chips. This guide reviews proper procedures for cleaning and handling the chips, and should be used together with the Best Practices Daily Checklist in the LabChip Quick Reference Card (CLS143579) to prevent the introduction of debris into the chip channels.

Best Practices for Handling Chips

Note: *An aspirator fitted with a pipet tip should always be used when cleaning and preparing chips. Steps 14-15 do not apply to Protein Chips*

1. Warm the chip and reagents at room temperature for 20-30 min. Ensure the dye is completely thawed.
2. Ensure that a clean pipet tip has been fitted onto the aspirator.
3. Ensure that fresh, nuclease free, sterile water (Molecular Biology Grade, MilliQ, or equivalent) is available.
4. Aspirate all of the storage buffer from the wells of the chip, including liquid in the small circular indent at the bottom of each well. NOTE: It will not harm the chip to insert the aspirator tip directly into the circular indent.
5. Promptly refill the active chip wells with water.
6. Perform aspiration as in step 4, then repeat step 5.
7. Empty wells again as in step 4, except for well 1 (waste well). Inspect the inside walls of each well and ensure that no droplets of water remain.
8. Add the prepared reagents to the wells as specified in the protocol for the assay. Use a reverse pipetting technique to avoid bubbles and place the tip on the bottom of the well while dispensing.
9. Ensure that the tops of the wells are clean and dry. If necessary, clean the tops of the wells with water and the provided lint-free swab, then dry using the aspirator.
10. Empty well 1 with the aspirator, but do not aspirate the circular indent at the bottom of the well. Well 1 should not be overdried at this point, as it will remain empty until the chip is primed.
11. Clean the chip window with the provided lint-free cloth moistened with 70% Isopropanol.
12. Promptly install the chip on the instrument. Ensure that the sipper is in the buffer tube.
13. When the final run is completed, promptly remove the chip from the instrument.
14. Repeat steps 1-6 above to wash the chip wells.
15. Empty the wells again, then fill each active well with 100 µL of Storage Buffer.
16. For DNA Assay LabChips, place the chip on the instrument and run the wash cycle. Do not repeat the wash cycle without refreshing the contents of the wells.
17. Promptly remove the chip and place back in storage container.
18. Store the chip as recommended in the assay protocol.

See reverse for chip and reagent ordering information.

Chip and Reagent Ordering Information

Protein Chips and Kits

Protein Chips	P/N
High Resolution Protein LabChip	760524
High Resolution Protein 24 LabChip	CLS138951
HT Protein Clear HR LabChip	CLS148695
24 Protein Clear HR LabChip	CLS148696
Protein Express LabChip	760499
Protein Express 24 LabChip	CLS138950

Protein Kits	P/N
Charge Variant Reagent Kit	CLS760670
Glycan Release and Labeling Kit	760523
Glycan Screening Reagent Kit	760525
Low Molecular Weight Reagent Kit	760573
Pico Protein Reagent Kit	760498
Protein Clear HR Reagent Kit	CLS960014
Protein Express Reagent Kit	CLS960008

Nucleic Acid Chips and Kits

Nucleic Acid Chips	P/N
DNA 5K/RNA/CZE LabChip	760435
DNA 5K/RNA/CZE 24 LabChip	CLS138949
Extended Range LabChip	760517
Extended Range 24 LabChip	CLS138948
X-Mark LabChip	CLS144006
X-Mark 24 LabChip	CLS145331

Nucleic Acid Kits	P/N
DNA 1K Reagent Kit	CLS760673
DNA 5K Reagent Kit	CLS760675
DNA 12K Reagent Kit	760569
DNA NGS 3K Reagent Kit	CLS960013
gDNA QC Reagent Kit	CLS760685
HiSens DNA Reagent Kit	CLS760672
Pico RNA Reagent Kit	CLS960012
RNA Reagent Kit	CLS960010

NOTE: *PerkinElmer continually adds new chips and reagents. The tables above may not reflect the most current offerings. To see if additional chips and reagents are available, visit the Resources Tab at* http://www.perkinelmer.com/category/microfluidic-instruments *to download the latest version of this guide.*