



































Sample Preparation Procedure

1. Allow Reagent Kit to equilibrate to room temperature (~30min).
2. Ladder preparation
 - a. Dilute 2 μ L of ladder (●) with 8 μ L of EB or TE (Use the same diluent as the sample buffer).
 - b. Add 2 μ L of 6X Sample Buffer (●).
 - c. Vortex sample to mix. Spin down.
3. DNA Sample preparation
 - a. Dilute the DNA sample to 10 μ L if necessary.
 - b. Mix 10 μ L of DNA sample with 2 μ L of 6X Sample buffer (●).
 - c. Vortex sample to mix. Spin down.

Create LabChip Run File (Setup Run File before Chip Preparation)

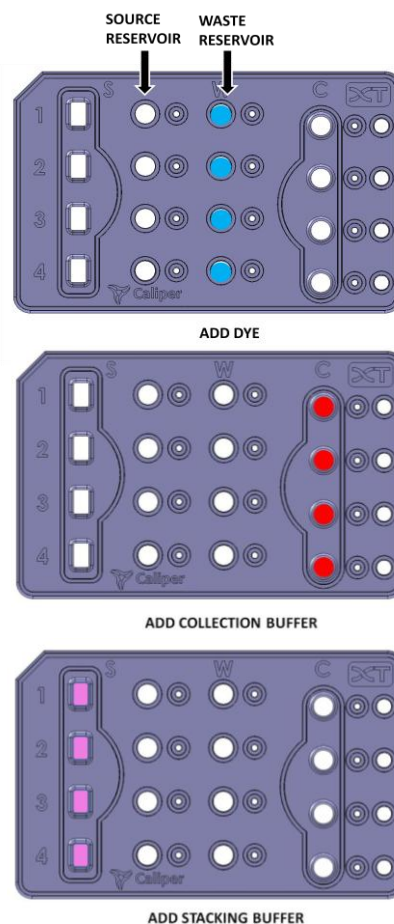
1. On the LabChip XT/XTe Main Window, select Tools → Run File Editor
2. Select the desired XT DNA Method from the Fractionation Method drop down list.
3. Under the Setup Tab: For each channel, select the desired operation mode using the pull-down menu and select the desired extraction mode with the radio button. Type in the sample name. Enter the desired size range and collection width.
4. Click the Output tab. Confirm Data Path and input the File prefix and/or Project Name. Click the Save button to create the run file and save to the desired directory.

Extraction Mode / Operation	Size Range	Fluorescence Trigger	Peak Start	Peak Maximum	Click to Collect	Smear Maximum
Disabled						
Ladder						
Extract and Stop						
Extract and Continue						
Exclude Region						
Separation						
Extract and Pause						
Skip Extraction						
Flush Sample						

Mode Symbols: Each combination of Operation and Extraction Mode is presented on the left side of the channel in the Setup Tab as a different symbol to help user quickly review the run setup. The symbols used are presented in tabular form.

Prepare XT DNA Chip

1. Remove Chip from foil bag and peel back top seal from chip.
2. Remove Sample Well and Collection Well combs.
3. Vacuum or pipette out excess gel or buffer from the sample and collection wells.
4. Optional. For multiple extractions, up to 60 uL of buffer for rinsing and/or collection can be taken from either the Source Reservoir or the Waste reservoir before the run and addition of dye.
5. Vortex Dye and spin down. Pipette 15µL of XT DNA Dye (●) to each of four Waste Reservoirs.
6. Tilt chip sideways and back and forth to ensure homogeneous mixing of the dye and buffer. Before proceeding to the next step, visually check to see that the dye has been evenly distributed throughout the reservoir.
7. Check to ensure the top surface of the chip is dry.
8. Add 20µL of Collection Buffer to round Collection Wells (●).
9. Add 20µL of Stacking Buffer to rectangular Sample Wells (○).
10. Load sample and prepared ladder into Sample Wells. Position the pipette so that the tip gently touches but is not sealed against the bottom of the well. Pipette sample *very slowly*. The goal is to place the sample at the bottom of the well and to avoid mixing the sample with the stacking buffer above the sample.



Starting the LabChip XT

1. Place the chip in the LabChip XT/XTe instrument with the positioning feature in the upper left corner aligning with the corresponding pattern on the instrument.
2. Close lid and click on Instrument and Start Run.
3. To import the settings from a previously saved run file, click the Import Setup button at the bottom of the Start Fractionation window.
4. Select the desired run file, click the Open button and then click Start.

Collect Fractionated Material

For multiple extractions: During the pause after each collection, open the LabChip XT/XTe instrument lid, pipette recovered DNA sample (●) from each collection well into a clean tube for downstream processing. If necessary, wash well with 20µl buffer and add 20µl buffer for next collection. Close lid and click Resume.

For single extractions: After the run has completed, open the LabChip XT instrument lid, pipette recovered DNA sample (●) from each collection well into a clean tube for downstream processing.

