



# LabChip

## Advanced Nucleic Acid Size Selection and Collection

- Reduce wasted “non-align” reads with tight size selection
- Increase average read length by excluding shorter fragments
- Faster sample processing maximizes use of sequencer
- Reduce waste and exposure to harmful reagents

The LabChip XT performs fast, automated nucleic acid fractionation accurately and reproducibly using Caliper’s proprietary microfluidics. The resulting sample is tightly sized and is delivered in a sequencing compatible buffer. The XT improves laboratory efficiency and provides sizing that is difficult to obtain using manual methods. Data is displayed digitally and non-fractionated sample can be recollected and used at another time.

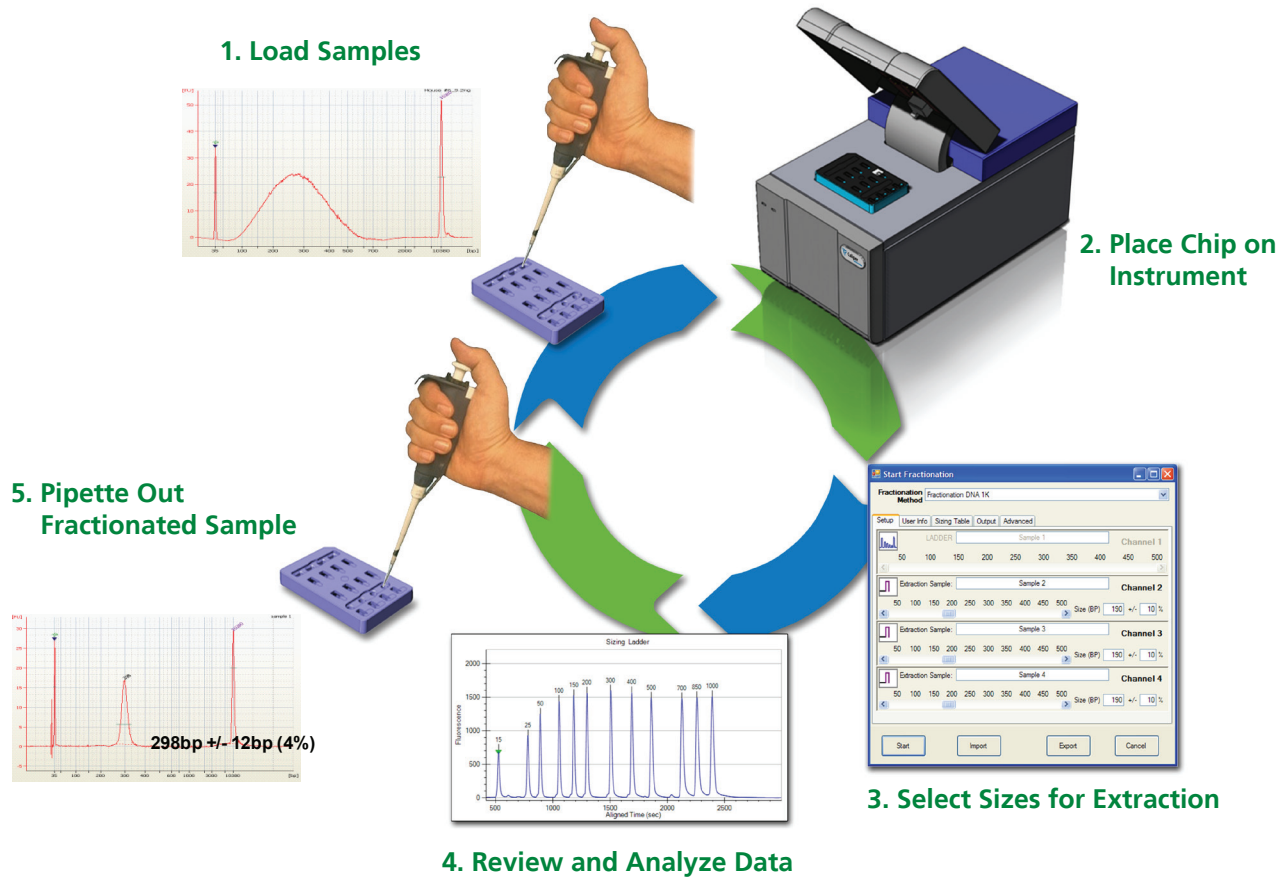
Current next generation sequencing workflows have numerous manual processes that bottleneck throughput and contribute to process inefficiency. One of the most time consuming tasks is gel-based size-selection during the library generation process. In addition to being labor intensive and not scalable, manual methods introduce run-to-run and operator-to-operator variability. Furthermore, the imprecision of this manual excision results in the size selection precision (width of the selected band) being typically no better than  $\pm 10\%$  of the median fragment size (e.g. 400 bp  $\pm$  40 bp).

### Features

- Fast, reproducible, high resolution size selection
- < 30 minute processing
- Up to 4 samples processed simultaneously per chip
- Quantitative, digital data
- Sample tracking via barcode
- Completely independent channels minimizes potential for cross contamination
- No post purification, with collection in PCR compatible buffer


## LabChip XT Workflow

The efficiency of second generation sequencing is reduced by having an overly broad or asymmetric size distribution of DNA library fragments. This reduction in efficiency is particularly apparent in paired-end sequencing and is a product of both preferential amplification of smaller fragments and the processing of larger fragments, which cannot be utilized in alignment.



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**The LabChip XT system will be available mid 2010**  
 To have your sample processed today or for more information,  
 please contact us at: [www.caliperls.com/labchipxt](http://www.caliperls.com/labchipxt)

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