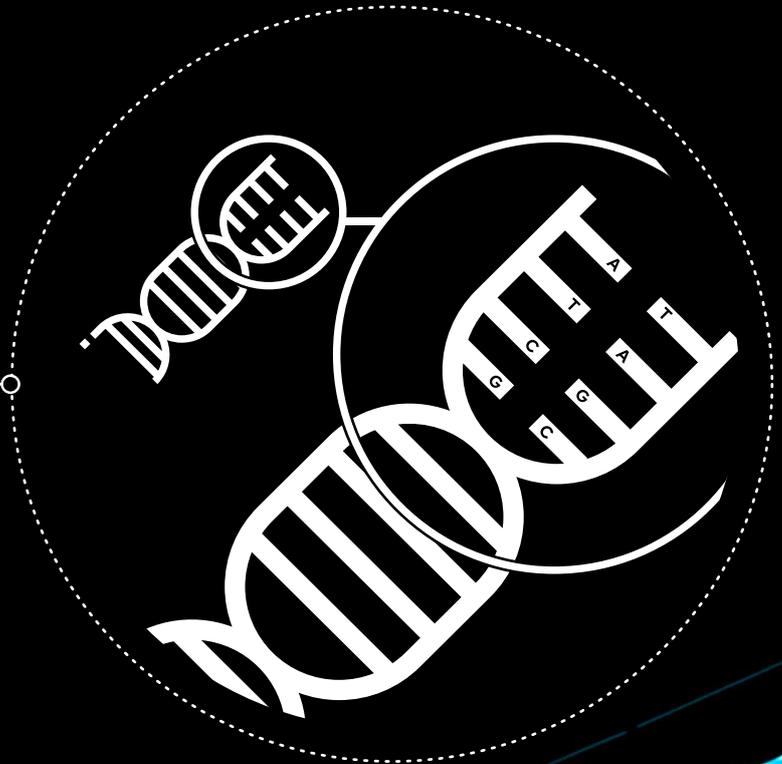


# Tips to Improve NGS Library Preparation



# Tips to Improve

## NGS Library Preparation

A high-quality DNA fragment library is essential for next-generation sequencing (NGS). A smart effort to improve the former is time and energy well spent, as it yields better sequencing results than NGS libraries. With PCR-based library prep kits, the process of creating excellent libraries is simplified. Different kits are optimized for different situations, such as sample types or levels of automation. First, navigating around the potential pitfalls that necessitate the inevitable "re-do's" can be frustrating. These tips to improve your NGS library prep and which speed your way to better libraries and NGS data.

### 1.

#### High quality DNA/RNA in

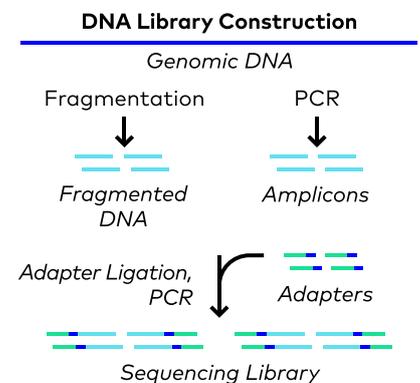
To create an NGS library, you need to start with a pure and concentrated DNA sample. Make sure that your library prep kit can handle the type of sample, the input amounts, and the conditions of your experiment.



### 2.

#### Concentration and cycle optimization of PCR adapters

To use the library as a starting sample for NGS, the library needs to be amplified sufficiently. Over-cycling can lead to PCR bias, duplicates, and dimers. Optimize adapter concentrations to reduce adapter-dimer formation during PCR. As a result of additional cleaning steps, the library prep process becomes less efficient and samples are at risk of loss.

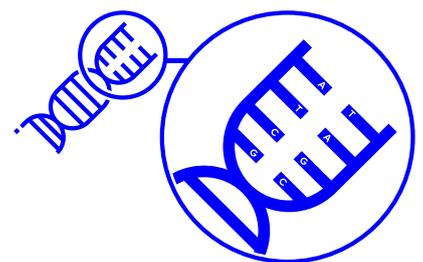


### 3.

#### Library QC and quantification

Data quality can be directly improved by assessing the quantity and quality of your NGS library. Quantification methods include qPCR, fluorometry, and electrophoresis.

The term library quality control refers to measurable parameters that influence the quality of NGS data. In addition to detecting, identifying, and measuring impurities, QC analyses measure library size distribution, complexity, and GC bias, verify insert size, and check for adapter dimer contaminants before sequencing.



## 4.

### G.STATION - Bring Accessible NGS Automation to Your Lab

G.STATION automates NGS library prep kit workflows and minimizes reagent waste and contamination, improves consistency, decreases manual time, and increases throughput. With an automated liquid handler with on-deck thermal cycling, shaking and temperature control coupled via novel bead-based clean up solution and enzyme dispenser will change the way you approach NGS library construction.

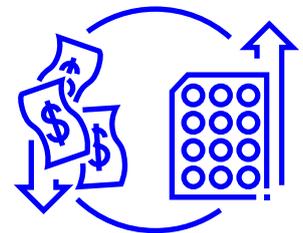
The G.STATION includes cloud-based software that allows users to simply choose a protocol, select samples, and runs a simulation before dispensing to reduce errors.



## 5.

### Run More Samples for Less

The G.STATION uses a fraction of the pipette tip consumables required by traditional NGS automation decreasing your effective costs per library. With an optional 384 configuration, allows you to miniaturize library prep reactions driving down the cost of sequencing sample prep, so you can run more samples.





©2021 BICO AB. All rights reserved. Duplication and/or reproduction of all or any portion of this document without the express written consent of BICO is strictly forbidden. Nothing contained herein shall constitute any warranty, express or implied, as to the performance of any products described herein. Any and all warranties applicable to any products are set forth in the applicable terms and conditions of sale accompanying the purchase of such product. BICO provides no warranty and hereby disclaims any and all warranties as to the use of any third-party products or protocols described herein. The use of products described herein is subject to certain restrictions as set forth in the applicable terms and conditions of sale accompanying the purchase of such product. BICO may refer to the products or services offered by other companies by their brand name or company name solely for clarity and does not claim any rights to those third-party marks or names. BICO products may be covered by one or more patents. The use of products described herein is subject to BICO's terms and conditions of sale and such other terms that have been agreed to in writing between BICO and user. All products and services described herein are intended FOR RESEARCH USE ONLY and NOT FOR USE IN DIAGNOSTIC PROCEDURES.

The use of BICO products in practicing the methods set forth herein has not been validated by BICO, and such nonvalidated use is NOT COVERED BY BICO'S STANDARD WARRANTY, AND BICO HEREBY DISCLAIMS ANY AND ALL WARRANTIES FOR SUCH USE. Nothing in this document should be construed as altering, waiving or amending in any manner BICO's terms and conditions of sale for the instruments, consumables or software mentioned, including without limitation such terms and conditions relating to certain use restrictions, limited license, warranty and limitation of liability, and nothing in this document shall be deemed to be Documentation, as that term is set forth in such terms and conditions of sale. Nothing in this document shall be construed as any representation by BICO that it currently or will at any time in the future offer or in any way support any application set forth herein.

#### Contact

Tel: +49 (0) 711 490 544 00

Email: [info@dispendix.com](mailto:info@dispendix.com)

Website: [www.dispendix.com](http://www.dispendix.com)