



## Miniaturized Library Preps with High Yields and Sequencing Data

Volta's **ONT LSK114 DNA Library Prep App** offers an automated, streamlined process to convert high molecular weight DNA into Oxford Nanopore-compatible, sequencing-ready libraries at a miniaturized reaction scale. This App supports whole-genome sequencing, targeted sequencing, and metagenomics applications.

### Benefits

- **Maximized output:** Achieve >90 Gb on PromethION from a single library load over 72 hours.
- **Lower input requirements:** 2x higher library yield enables the same output with less DNA input.
- **Reduced costs & time:** Cut prep costs via 2x miniaturization and up to 6x less hands-on time.



The Volta Labs Callisto Sample Prep System offers robust and versatile library preparation through preloaded apps for high-quality short-read sequencing.

### App specifications

Input: **1 µg, or 100-200 fmol of high molecular weight DNA**

Output: **Sequencing-ready libraries**

Hands-on time: **Less than 30 minutes**

Walk-away time: **3.5 hours**

Throughput: **Flexible, 4 – 24 rxns in a single run**

Chemistry: **Ligation Sequencing Kit V14 + NEBNext® Companion Module v2 for Oxford Nanopore Technologies® Ligation Sequencing**

### Workflow steps

**Input:** Sheared, unpurified DNA

DNA repair and end prep

Clean up

Adapter ligation

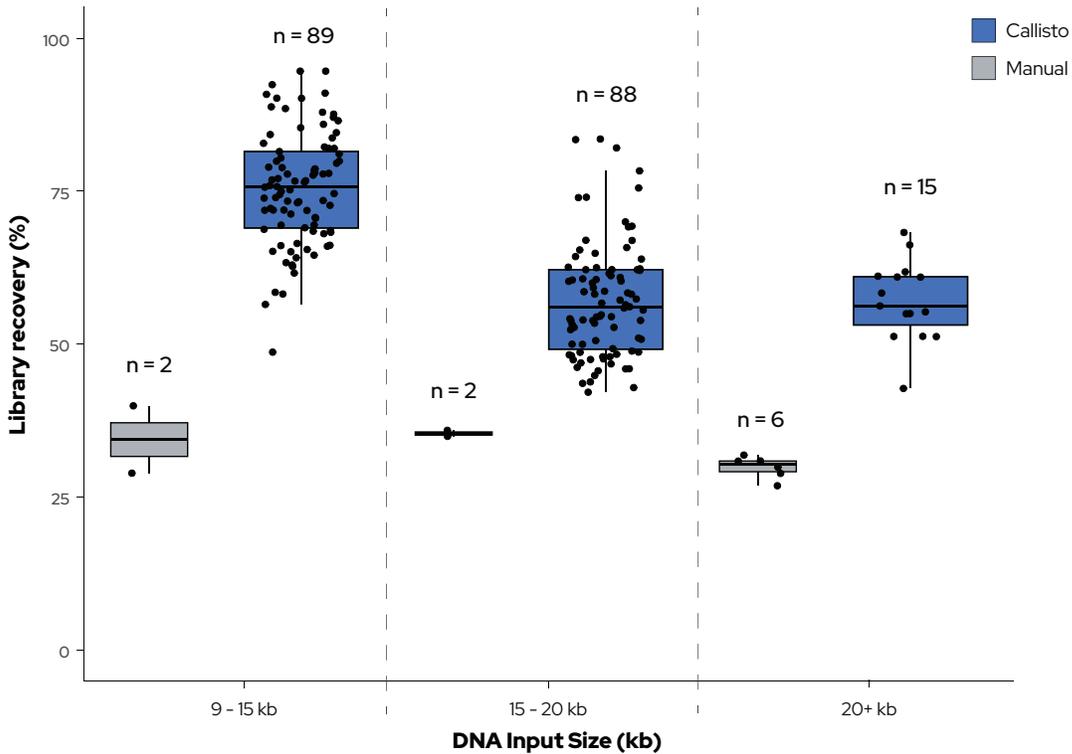
Clean up

**Output:** Oxford Nanopore libraries

Walk-away processing on Callisto

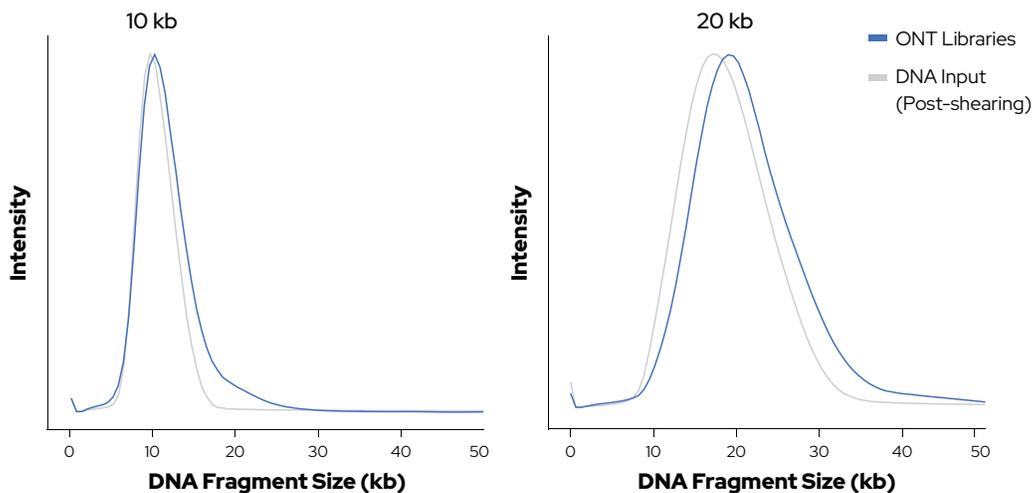
### Miniaturized LSK114 preps with high yields

Callisto generates significantly higher library yields across a wide range of DNA input sizes compared to manual preps. 1 µg of input DNA yields enough library to load a PromethION flowcell and generate high quality sequencing data



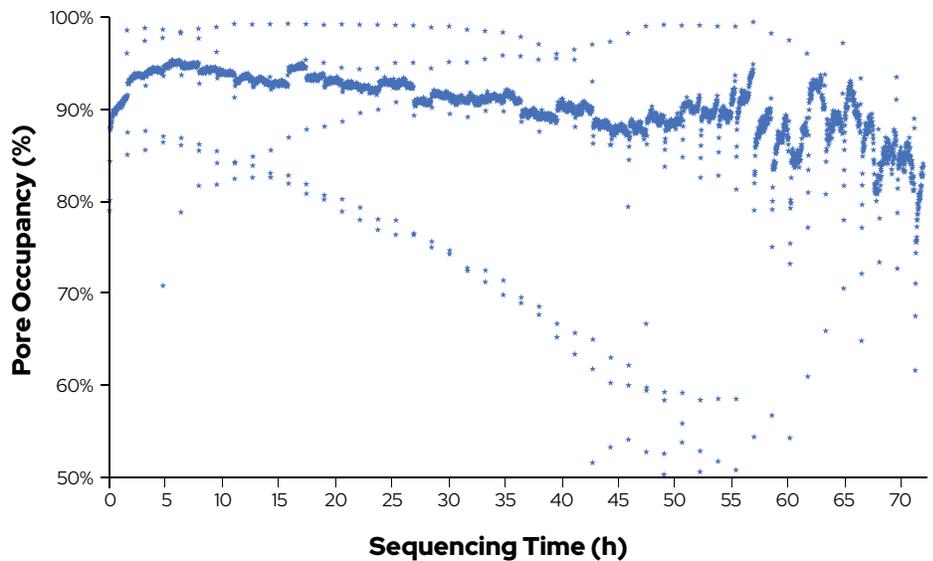
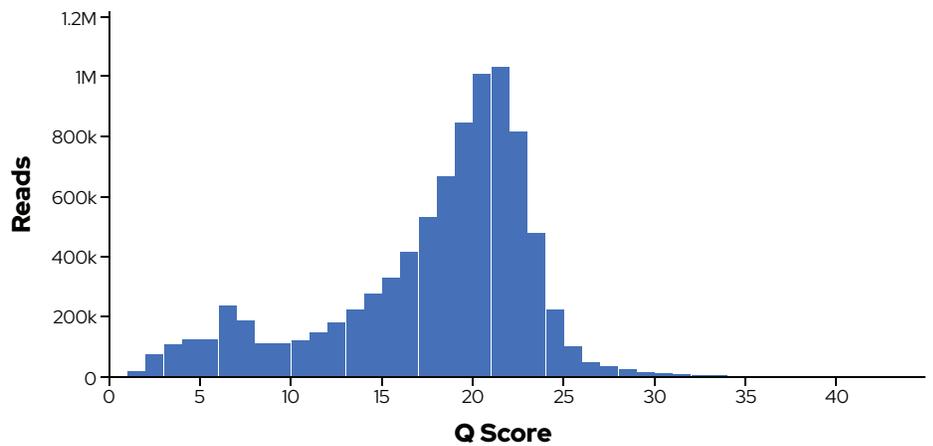
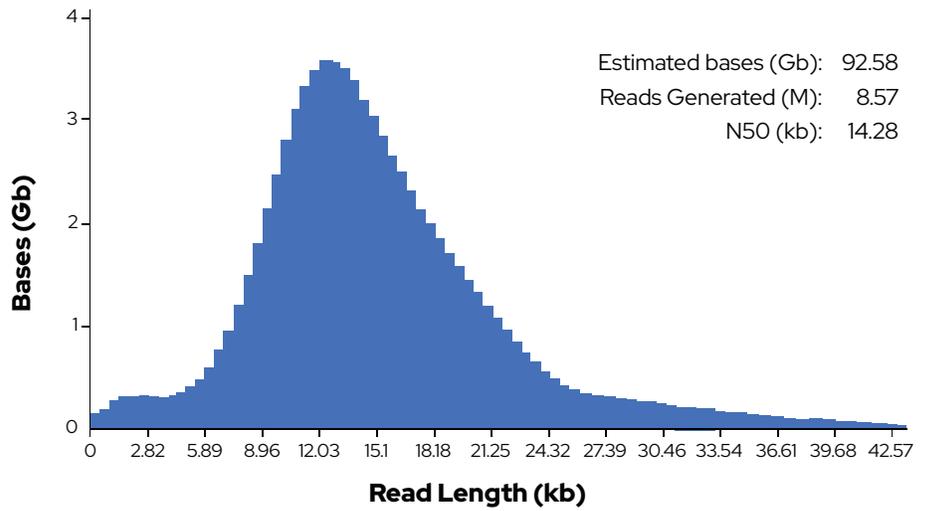
### Libraries retain integrity of input DNA

The App uses a gentle process that prevents shearing, preserving the integrity of high molecular weight input DNA in the output libraries and enabling high N50 values when sequenced. As shown in the figure, the size distribution of input DNA and output libraries demonstrates strong overlap with only minimal shift.



## High quality sequencing on Oxford Nanopore sequencing platforms

Libraries prepared on Callisto deliver high-quality sequencing results on MinION and PromethION platforms with exceptional scores on key metrics including N50, Q score, and pore occupancy with single loading. Consistently generating >90 GB of data is now feasible on PromethION flowcell due to the high efficiency library preparation process. The figure shows data obtained on a PromethION flowcell that was loaded once with 400 ng of the libraries prepared on Callisto.



**Ordering information**

| Part number                 | Product  | Description                     |
|-----------------------------|--|---------------------------------|
| C0001                       | Callisto™ Sample Prep System   | Sample prep instrument          |
| LP0007                      | Callisto Kit for ONT LSK114 DNA Library Prep - 48 rxns                             | Accessory Kit for 48 reactions  |
| LP0010                      | Callisto Kit for ONT LSK114 DNA Library Prep - 480 rxns, HT"                       | Accessory Kit for 480 reactions |
| SQK-LSK114<br>SQK-LSK114-XL | Ligation Sequencing Kit V14  | ONT*                            |
| E7672S<br>E7672L            | NEBNext® Companion Module v2 for Oxford Nanopore Technologies® Ligation Sequencing | NEB*                            |

*LP0007 & LP0010 does not include library prep reagents and should be purchased directly from suppliers.*

*\*Please contact suppliers directly to purchase these reagents.*



**For Research Use Only.** Not for use in diagnostic procedures.

**DISCLAIMER:** All other product names, logos, brands, trademarks, and company names are the property of their respective owners and rights holders. Their appearance herein is not intended to and does not raise nor convey any inference, suggestion, or claim of affiliation, nor connection therewith, or endorsement thereby.