Automated workflow for Illumina 5-base solution

Simplified, simultaneous methylation and DNA sequencing to scale your research.

Transform methylation and DNA sequencing with Illumina 5-Base DNA Prep automation

Illumina 5-base solution enables accurate detection of A, T, G, C, and 5 methylcytosine in a single assay—without harsh chemical treatment or loss of sequence complexity. When combined with automated workflows, the benefits multiply: dramatically reduced hands-on time, walkaway convenience, and effortless scalability. From library preparation to analysis, Illumina delivers a streamlined, biologically qualified workflow that accelerates your research and ensures reliable, comparable data you can trust.

Automation you can count on

The Illumina 5-base workflow is automation enabled and enhanced through a trusted partnership with Hamilton Robotics, a leader in precision liquid handling.

- Robust automation that delivers consistent results and confidence from setup to run completion
- Assay ready instrument layouts designed for reliable, reproducible performance
- Seamless integration with Illumina chemistry to support scalable, walkaway workflows
- Workflows for both whole genome and enrichment assays gDNA and cfDNA sample types

Illumina 5-Base DNA Prep library preparation kit and Hamilton Microlab™ NGS STAR MOA Assay Ready Workstation

Walkaway convenience

- Reduce hands-on time
- Streamlined, low-touch workflow

Higher throughput

- Automation that scales effortlessly
- Process up to 96 libraries per run

Illumina-ready protocol

- Reliable, comparable data you can trust
- Qualified automation protocol

Illumina-ready automated protocol workflow for Illumina 5-base solution

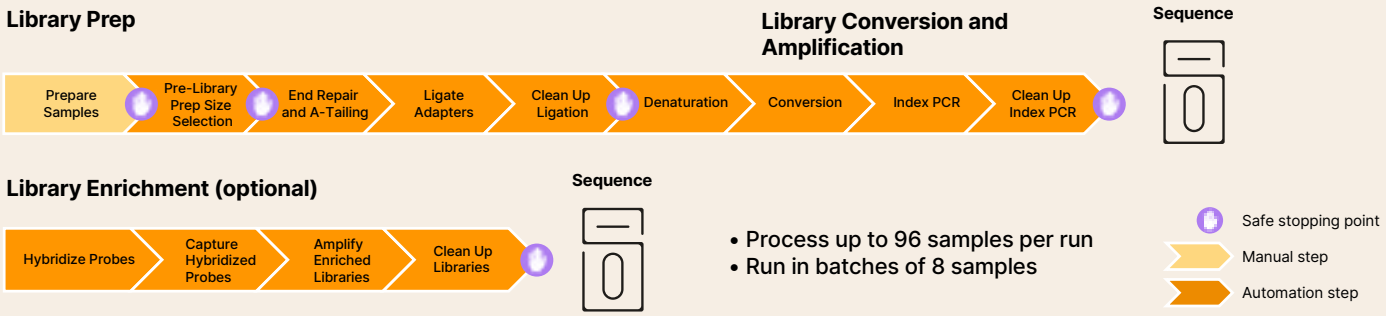

Figure 1: The Illumina-ready automated protocol for Illumina 5-Base DNA Prep on the Hamilton Microlab™ NGS STAR MOA offers minimal manual steps and is designed for modularity. This protocol allows for safe stopping points to break up the workflow into manageable steps.

System details and configuration

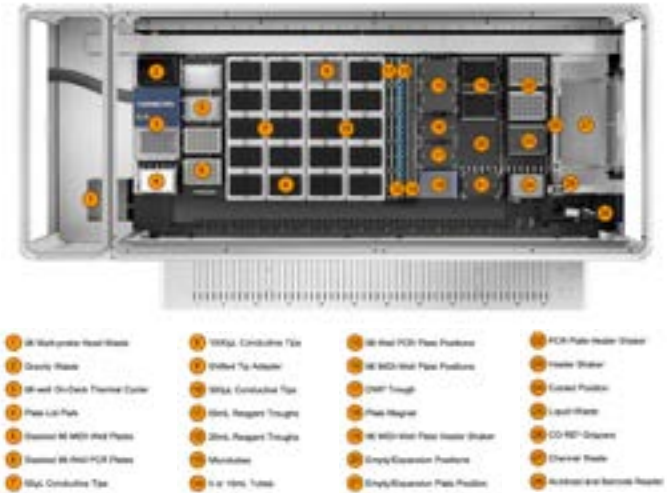

Figure 2: The Hamilton Microlab™ NGS STAR MOA, configured for NGS library preparation up to 96 libraries.

Unlock what's next in automated multiomics

Together, Illumina and Hamilton deliver a simple but powerful workflow. By combining innovative chemistry with trusted automation, researchers will gain walk-away convenience, lower costs, and scalable throughput. This partnership will provide a faster, more reliable path to high quality, comparable multiomic data.

Consistent, comparable results across runs

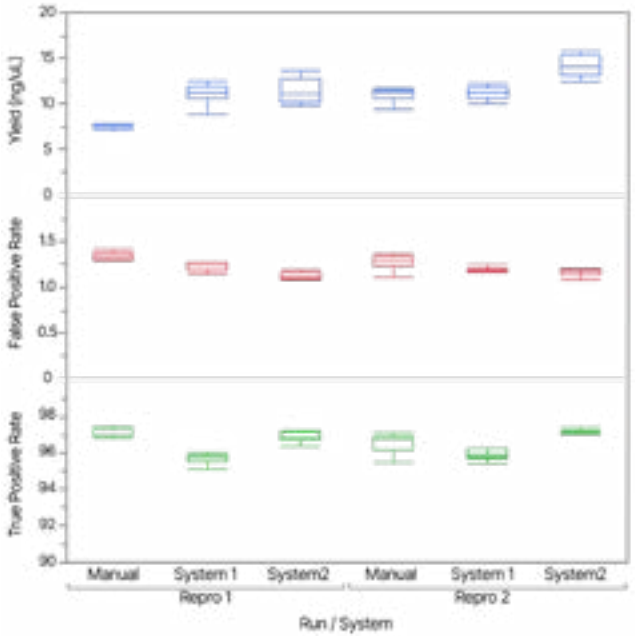

Figure 3: Comparable library prep yields and methylation detection across manual and automation prepared HG001 samples.

Ready to accelerate your research? →

Learn more about the Illumina-ready automation protocol for Illumina 5-Base DNA Prep with optional enrichment Illumina.com/5-base