

New Application Notes

Automated Library Preparation using NEBNext Ultra DNA Library Prep Kit for Illumina (E7370) on the Hamilton STARline

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Library preparation from low amounts of input DNA is a key requirement for many Next Generation Sequencing (NGS) applications such as sequencing precious clinical samples or ChIP-seq libraries. Reagents from New England Biolabs[®] provide an ideal solution for generation of indexed NGS libraries over a broad range of input amounts from 5 ng to 1 µg of genomic DNA. In this application note, we describe the automation of the NEBNext[®] Ultra[™] DNA Library Prep Kit for Illumina[®] on a Hamilton Microlab STARlet instrument. The design allows a capacity of 8-48 samples per run. Ready to sequence libraries with high yield and quality can be obtained from different sample sources.

System Benefits

- ✓ Optimized throughput from 8 to 48 libraries per run
- ✓ Wide range of input from 5 ng to 1 µg genomic DNA
- ✓ Automated master mix generation on deck
- ✓ Independent size selection per sample in a single run

Find the full article [here](#).

Illumina[®] NGS Sample Prep Automation from Hamilton

Hamilton and Illumina are working together to qualify the TruSeq[®] and Nextera[®] series of Sample Preparation Kits for use on the Microlab STAR. The methods include the following features:

- ✓ Full automation, with on-deck incubations and plate shaking, plate stacking, and large tip inventory for maximum walk-away time
- ✓ 1 to 96 samples processed in a single run

- ✓ Easy-to-use graphical interface
- ✓ Barcode verification of proper placement of reagents, plates, and tips
- ✓ Magnetic-bead based cleanup and size selection steps are fully automated
- ✓ PCR thermal cycling is done offline, to minimize system cost
- ✓ Automated error handling
- ✓ Existing methods can be customized to meet each laboratory's needs and budget

The methods currently available for Illumina sample preparation are:

- ✓ TruSeq Stranded mRNA*
- ✓ TruSeq Stranded Total RNA

Find the full article [here](#).

Software and Operator Seminars

New training dates for software and operator seminars are available:

VT20B **Basic software** seminar:

06.-08. May 2014

PT21B / PT22 F **Software praxis** seminar:

08. May 2014

TO10A STAR Line **Operator** training:

26. Jun 2014

VTM1LL **Liquidhandling and correct labware definition:**

18. Mar 2014

VTM1AD **Worklists, data handling, data in- and output, reports:**

19. Mar 2014

VTM1VE **Dialogs, variables, error handling, structuring by submethods and libraries:**

20. Mar 2014

What do I learn in your seminar VTM1LL Liquidhandling and correct labware definition?

Proper aspiration and dispense of liquid strongly depends on different factors as environment, liquid type, pipetting modus, pipetting parameters, tip type but also the correct definition of the labware used (e.g. plates, vials, troughs). The seminar gives an overview on all factors influencing liquid handling and a deeper knowledge on how to adapt these parameters within the VENUS software method steps, labware definition and liquid classes.

For further information send your email to support.de@hamiltonrobotics.com.

About Hamilton Robotics

Hamilton Robotics designs and manufactures fully automated robotic systems for samples preparation and storage. The products range from unique, custom laboratory automation solutions (turnkey solutions) on standard applications validated through partnership programs with renowned biotechnology companies as well as OEM solutions to the top ten diagnostic companies. Hamilton Storage Technologies designs and manufactures cold storage systems for biobanking and other applications.