Biomek NGeniuS

NEXT GENERATION LIBRARY PREP SYSTEM

IT'S NOT JUST SMART. IT'S **INGENIOUS**.

You asked for an accurate, easy to use, cost-effective, NGS sample prep system with built-in error reduction and the flexibility to run an array of library preparation kits from multiple vendors—without requiring in-depth programming knowledge, and now it's here.

ACCELERATING *answers.*

BECKMAN COULTER *Life Sciences*

Introducing Biomek NGeniuS Syste

The Genius is in its Total Workflow Solution

1. Flexible application selection

As part of our comprehensive service agreement, the Biomek NGeniuS System provides a wide range of complimentary demonstrated methods from a variety of reagent manufacturers, including:

DNA Sequencing

- Whole genome
- Targeted re-sequencing (Amplicon & Hybridization Capture)

RNA Sequencing

- mRNA
- Total RNA
- Targeted RNA (Amplicon & Hybridization Capture)

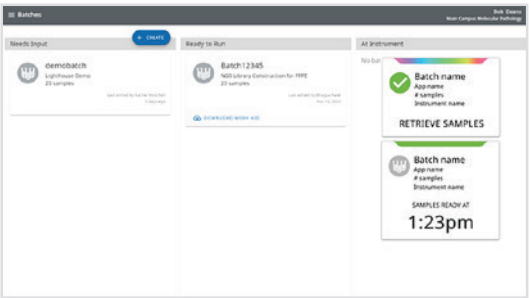
2. Application control

Control user access to applications with a simple authorization process (if required). Ensure that only authorized users have access to non-lab validated applications.

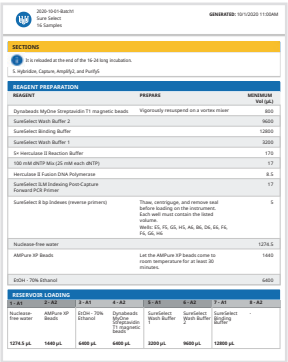
3. Work-from-anywhere batch set up*

Using the **Biomek NGeniuS Portal software**, set up your batch run when and where it's most convenient for you.

Whether working from home, office, or benchtop, you can program batch sizes from 4-24 samples.



4. Reagent preparation made easy



2020-10-01-Batch1
Sure Select
16 Samples

GENERATED: 10/1/2020 11:05AM

SECTIONS

1 It is reloaded at the end of the 16-24 long incubation.

S, Hybridize, Capture, Amplify2, and Purify6

REAGENT PREPARATION

REAGENT	PREPARE	MINIMUM Vol (µL)
Dynabeads MyOne Streptavidin T1 magnetic beads	Vigorously resuspend on a vortex mixer	800
SureSelect Wash Buffer 2		9600
SureSelect Binding Buffer		12800
SureSelect Wash Buffer 1		3200
5× Herculase II Reaction Buffer		170
100 mM dNTP Mix (25 mM each dNTP)		17
Herculase II Fusion DNA Polymerase		8.5
SureSelect SLM Indexing Post-Capture Forward PCR Primer		17
SureSelect 8 bp Indexes (reverse primers)	Thaw, centrifuge, and remove seal before loading on the instrument. Each well must contain the listed volume. Wells: D1, F1, G5, H5, A6, B6, D6, E6, F6, F6, G6, H6	5
Nuclease-free water		1276.5
AMPure XP Beads	Let the AMPure XP beads come to room temperature for at least 30 minutes.	1440
EtOH - 70% Ethanol		6400

RESERVOIR LOADING

1 - A1	2 - A2	3 - A1	4 - A2	5 - A1	6 - A2	7 - A1	8 - A2
Nuclease-free water	AMPure XP Beads	EtOH - 70% Ethanol	Dynabeads MyOne Streptavidin T1 magnetic beads	SureSelect Wash Buffer	SureSelect Wash Buffer 2	SureSelect Binding Buffer	-
1276.5 µL	1440 µL	6400 µL	6400 µL	3200 µL	9600 µL	12800 µL	

Once you select the application and enter the number of samples, the Biomek NGeniuS software creates a **Work Aid**, which includes:

- Reagent list needed for the run
- Volume requirements for each reagent
- Instructions on how to prepare and load reagents

The Work Aid saves time and effort while ensuring reproducibility during reagent preparation.

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5. Error-reduced instrument setup

Sophisticated optical analytics combined with the head-up display give you real-time feedback on labware placement, virtually eliminating loading errors.

Now you can allow less-experienced operators to run complex applications with confidence.

6. Remote system monitoring*

The 360° multicolored, pattern-encoded light bar shows current instrument status.

Not within visual range? The Biomek NGeniuS Portal software allows you to monitor the system status from any computer.

7. Simplified sample processing

The **Multi-functional Reaction Vessel (RV)** combines three consumables into one, reducing time spent on labware inventory management:

- Sample input plate
- Thermal cycling plate
- Clean-up plate

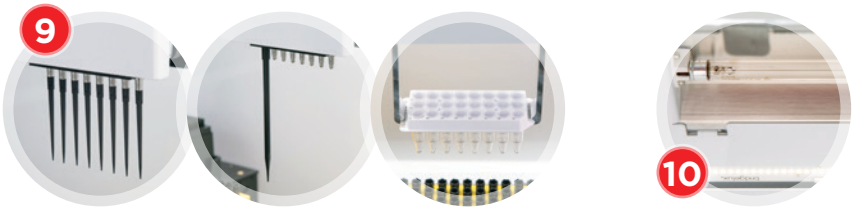
Track your samples—with up to **100 million unique RV barcodes**—throughout the application run.

* Requires a Google Chrome or Microsoft Edge enabled computer.

Biomek NGeniuS System

The latest in a long line of Smart Automation Technology

Inspired by Beckman Coulter's 30-plus years of laboratory automation and Smart Automation Technology, Biomek NGeniuS System represents an evolutionary leap in NGS liquid-handling systems with its best-in-class performance, error-reduction technology, ease-of-use, reduced hands-on-time, and flexibility.

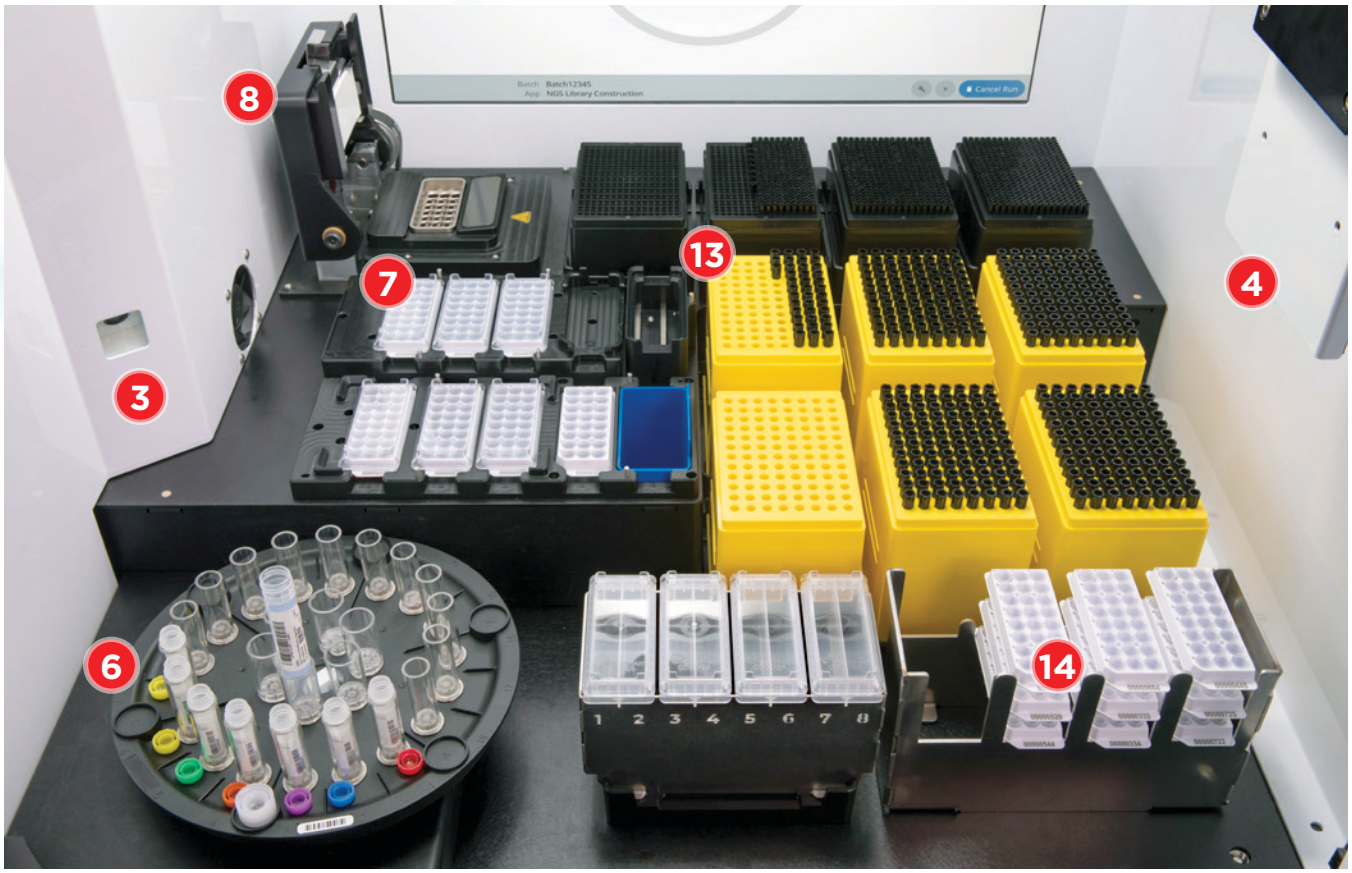


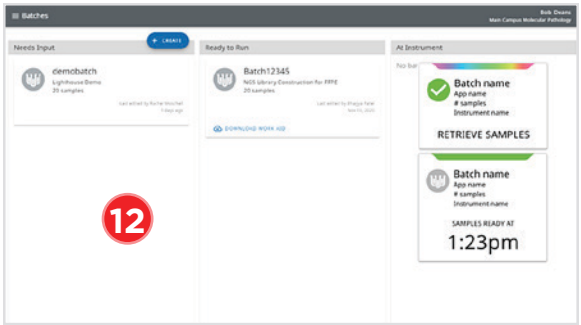
Error reduction

1. **Dynamic DeckOptix** system provides software-guided labware placement and confirmation
2. **Head-up Display** ensures mission critical information is in sight
3. **Reagent Carousel Auto ID** confirms the correct reagents are on board for the samples being processed
4. **Multi-channel Liquid Level Sensing** aids in the detection of insufficient reagents, alerting the operator before it becomes a processing issue
5. **Sample Tracking** eliminates the worry of mixing up samples when running in pre- and post-PCR lab environments

Less hands-on-time

6. **Reagent Carousel** reduces the need to manually transfer reagents and automates most reagent kits designed for manual use
7. **Temperature-controlled Reagent Storage** protects reagents from thermal degradation and allows you to run end-to-end chemistries
8. **Integrated Thermal Cycler** extends walkaway time
9. **Multi-functional Pipetting Pod**
   - **Pipetting Range** – 1 to 1000 µL
   - **Selective Tip Type** – ensures the right tip for the right volume without manual intervention
   - **Select Tip** – 1 to 8 tips for pipetting efficiency
   - **Labware Transport** – enables longer walkaway time
10. **UV-C Light** standard on the system





Easier to use

- **11** **Software Navigation Dial** makes system programing as simple as turn and select
- **12** **Biomek NGeniuS Portal Software*** allows setup and monitoring of batch runs from wherever it's most convenient for you
- **13** **Partial Tip Box Use** eliminates manual tip transfers and/or wasting partially used tip boxes
- **14** **Multi-functional Reaction Vessel** provides 3-in-1 functionality and less inventory management
- **15** **Multicolor Status Light** provides 360° line of sight system status

Flexible design

- ✓ **Dynamic Sample Batch Size** accommodates batch sizes of 4 to 24 samples
- ✓ **Complimentary Application Library** is designed to evolve with your changing chemistry needs
- ✓ **Network Enabled Scalability** enables you to seamlessly set-up and run multiple instruments from your Biomek NGeniuS portal.
- ✓ **Continuing Application Development** ensures your investment is protected for the foreseeable future

* Requires a Google Chrome or Microsoft Edge enabled computer.

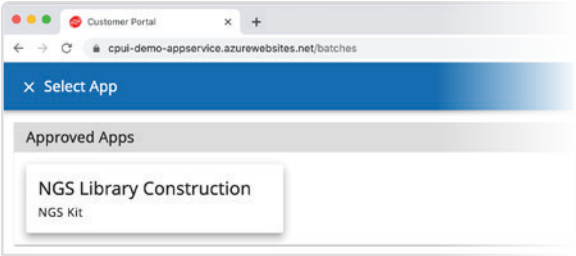
The Genius is in its Simplicity

The unique instrument design and software functionality of the **Biomek NGeniuS** System not only make it easy to operate, but advanced programing skills are not necessary to set up an application and complete a run.

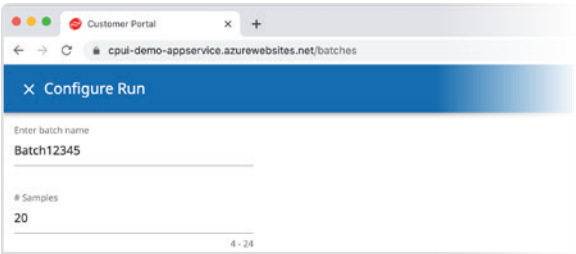
Set up and run a batch in 6 easy steps...

On the Biomek NGeniuS Portal software:

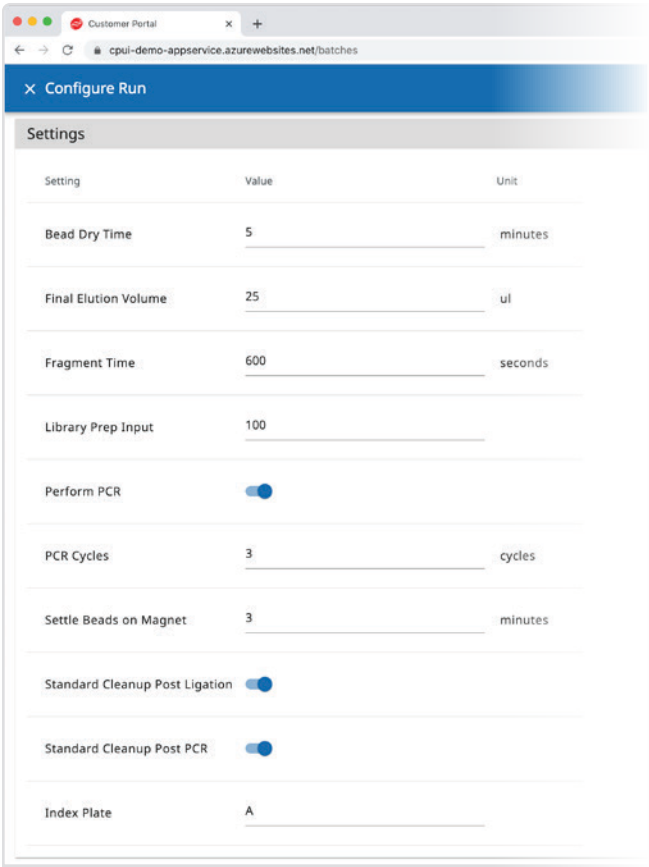
Step 1 Select an application



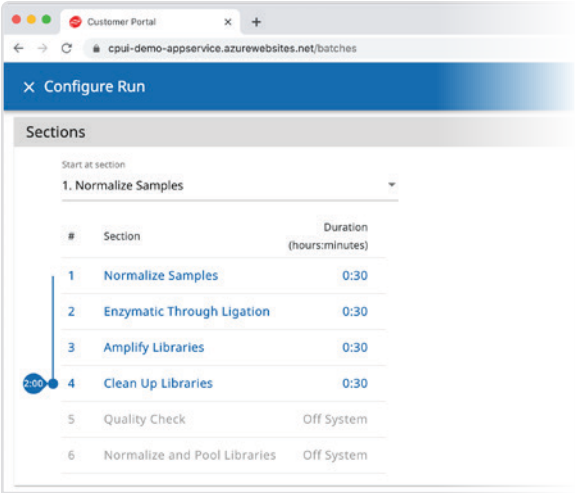
Step 2 Enter batch name and number of samples from 4 to 24



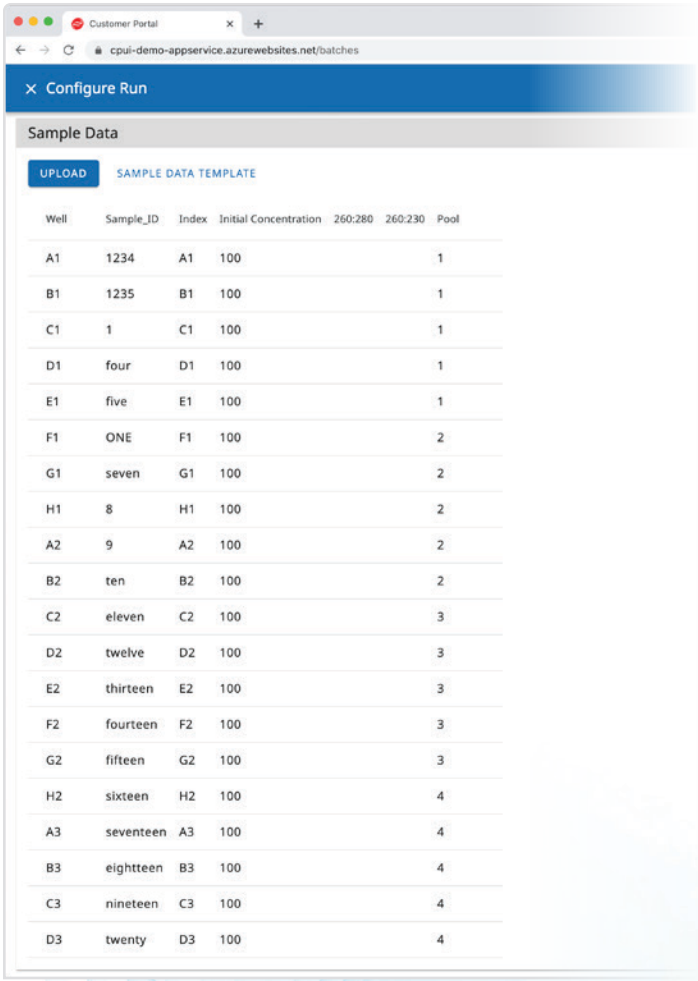
Step 3 Make any necessary setting adjustments



Step 4 Select the stop point that fits your schedule



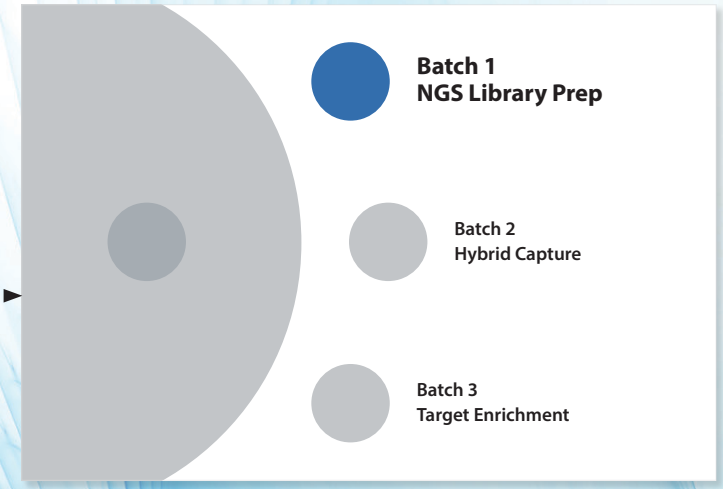
Step 5 Upload your Sample Data and select 'Ready to Run'

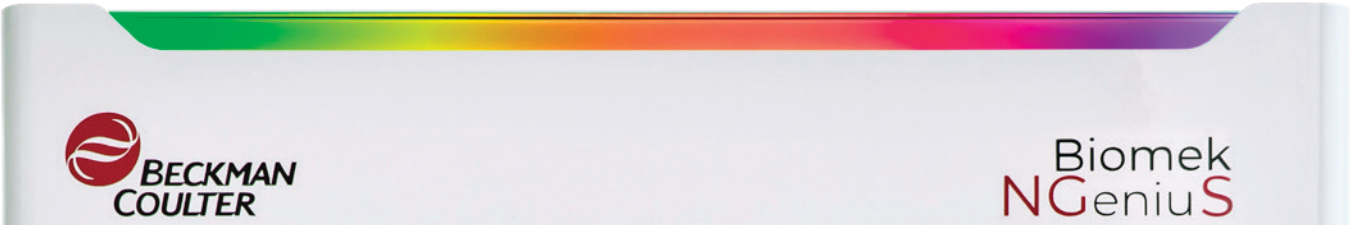


Well	Sample_ID	Index	Initial Concentration	260:280	260:230	Pool
A1	1234	A1	100			1
B1	1235	B1	100			1
C1	1	C1	100			1
D1	four	D1	100			1
E1	five	E1	100			1
F1	ONE	F1	100			2
G1	seven	G1	100			2
H1	8	H1	100			2
A2	9	A2	100			2
B2	ten	B2	100			2
C2	eleven	C2	100			3
D2	twelve	D2	100			3
E2	thirteen	E2	100			3
F2	fourteen	F2	100			3
G2	fifteen	G2	100			3
H2	sixteen	H2	100			4
A3	seventeen	A3	100			4
B3	eightteen	B3	100			4
C3	nineteen	C3	100			4
D3	twenty	D3	100			4

On the instrument:

Step 6 Use the dial on the instrument to select the batch and you are ready to run





Biomek NGeniuS System

Small footprint, unimaginable power and performance

Part Number	Description	Power Requirements	Weight	Dimensions (W x D X H)
C62703	Biomek NGeniuS System	10 A, 100-240 V, 50/60 Hz	135 lb (61.23 kg)	73.2 cm x 78.5 cm x 128.5 cm (with door open)

Biomek NGeniuS Consumables

The most critical point of contact

The Biomek NGeniuS System is optimized to perform as a complete system, which is why only Biomek consumables from Beckman Coulter Life Sciences are validated and approved for use.

Part Number	Description	Quantity
C62705	Biomek Reaction Vessel, 24 well	64/Box
C62706	Biomek Lid, 24 well	96/Box
C62707	Biomek Bulk Reservoir, 20 mL/section	32/Box
C59585	Case, Tips, 1025 µL, Conductive, Filtered, 480 Tips	5 Racks/Box (96 per rack)
C62712	Case, Tips, 70 µL, Conductive, Filtered, 3840 Tips	10 Racks/Box (384 per rack)
C70672	Case, Biomek 1025 µL Tip Box, Empty, 5 Racks	5 Racks/Box
C70673	Case, Biomek 70 µL Tip Box, Empty, 10 Racks	10 Racks/Box
C70665	Biomek Seal Plate, 24 well	20/Box

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Biomek Automated Workstations are not intended or validated for use in the diagnosis of disease or other conditions.

In development, performance characteristics have not been validated.

For Beckman Coulter's worldwide office locations and phone numbers, please visit "Contact Us" at beckman.com

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