BELUGA


Run ID: 123456
Estimated time remaining
25:30
Progress
70%
Current step: Lysis (44%)
Protocol steps
Lysis
Binding
Wash 1
Wash 2
Wash 3
Run status
Temperature: 37°C
Pressure: Normal
Liquid detection: OK
Tips remaining: 159
Pause run
Abort run
BELUGA
CAMBRIAN BIOWORKS



From sample to PCR plate

From a clinical sample to a PCR-ready plate, Beluga brings **end-to-end automation** to nucleic acid extraction workflows.

No manual pipetting, no transfers, no supervision, just load your samples and let Beluga do the work.

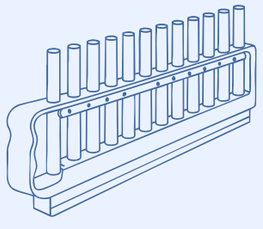
Beluga combines magnetic-rod based extraction with precision liquid handling. This creates a **hybrid platform** that unites speed, reproducibility, and flexibility in one compact system.

- Direct sample input
- Integrated barcode reader
- Set up in <15 minutes
- Pre-filled extraction cartridges




Run setup
Configure your DNA extraction run parameters
Sample input
Choose your sample input method.
EDTA tube
MCT tube
Falcon tube
96 deep well plate
Elution type
Choose your elution type.
2D barcode tube
PCR plate
Back
Next
BELUGA
CAMBRIAN BIOWORKS

Typical sample preparation workflow



Load samples and plastic consumables directly





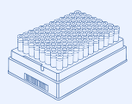
Nucleic acid eluates



Scan barcodes



Magnetic bead based extraction

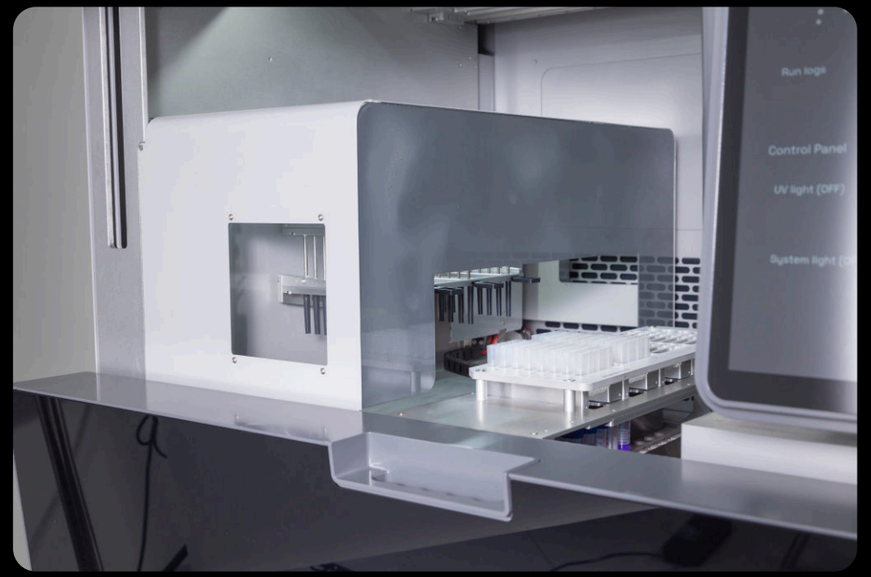


Transfer eluates to 2D barcoded tubes



Prepare PCR plate




Run logs
Control Panel
UV light (OFF)




SAFE*
Store Aliquots For Ever

Flexible input for every workflow

1-32 samples with no minimum sample throughput

Beluga was built with flexibility at its core - giving you complete control across workflows.



K2 EDTA tubes

Load barcoded K2 EDTA tubes (2-10mL) into the tube rack without having to separately scan them



Cell free DNA preservation tubes

Load plasma-separated Streck® tubes or 15mL centrifuge tubes



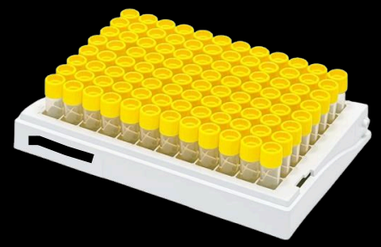
Plasma/VTM

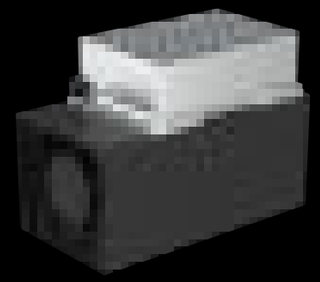
In case of viral samples, blood collection or VTM tubes can be loaded directly

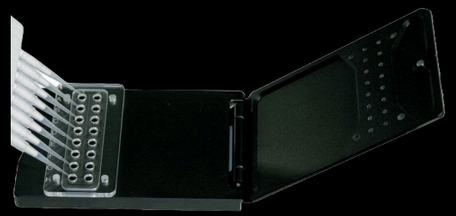


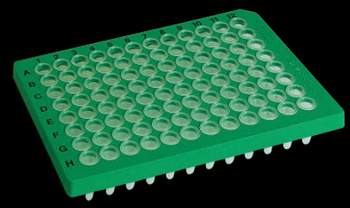
FFPE tissue lysate

FFPE tissue lysates can be loaded via multiple formats: 1.5mL micro-centrifuge tubes or deep well plates








A
B
C
D
E
F
G
H

Pressure transduction pipetting

Beluga is packed with safety features which ensure that each run is a success.

Clot detection

Beluga identifies clotted samples during aspiration, protecting the pipette and alerting the user before a failed run.

DropSafe™ technology

Keeps every run contamination-free by securely collecting any residual liquid from the pipette path.



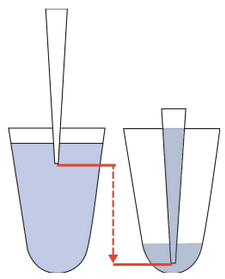
Liquid level detection

Real-time liquid level detection that continuously monitors reagent volumes and alerts the user in case of empty consumables.

Adaptive liquid tracking

Rather than submerging the entire tip, the pipette only touches the meniscus and tracks the falling liquid level along the Z-axis as it aspirates.

This ensures zero spillover or droplet formation on the pipette tip.



Pipette accuracy

Target volume	Aspirated volume	% D
20 µL	19.93 µL	3.12%
50 µL	45.96 µL	0.83%
200 µL	200.04 µL	-0.20%
500 µL	499.97 µL	0.05%
1000 µL	997.29 µL	2.71%

Pipette precision

Tip volume	Aspirated volume	% CV
50 µL	5 µL	3%
50 µL	10 µL	2%
200 µL	50 µL	1%
1000 µL	50 µL	2%

Contamination-free runs, every time

The UV light disinfects the deck between runs, while HEPA filtration keeps the workspace clean and particle-free for reliable, sterile performance every time.

UV decontamination

Built-in UV sterilization for a contamination-free workflow

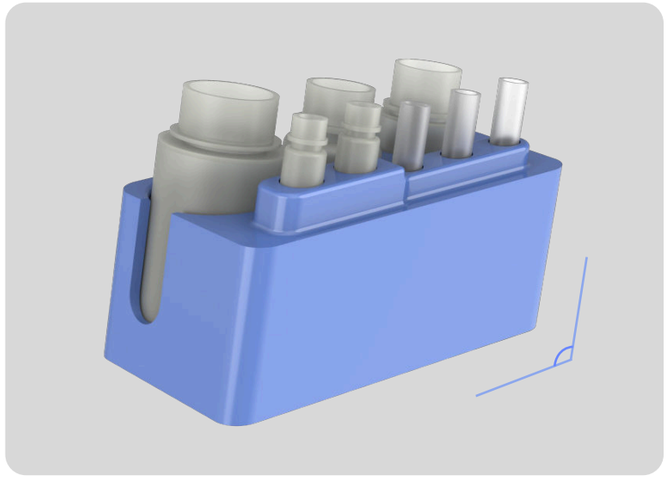
H14 HEPA Filter

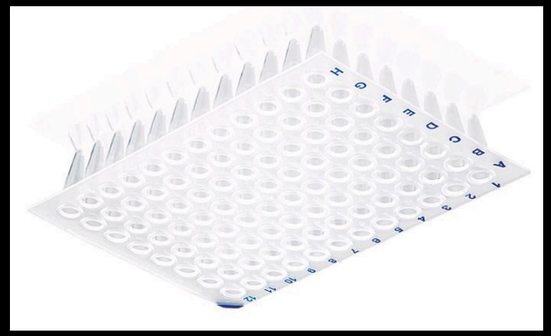
High grade H14 HEPA filters to circulate air inside the system



Lower reagent dead volume

Beluga's inclined reagent storage module has an angled base that allows the pipette to access every last drop of the reagents

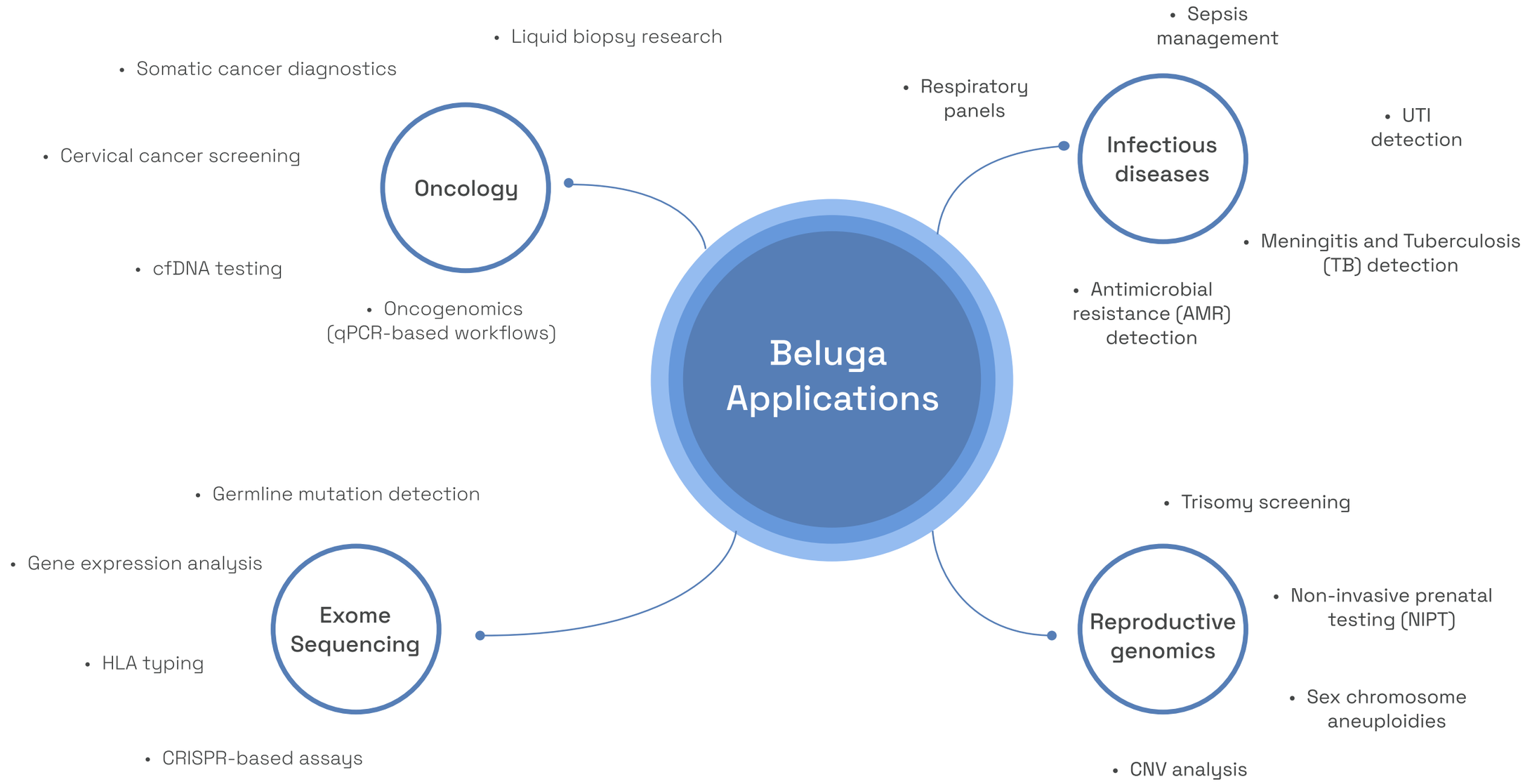








One platform for multiple solutions




Run ID: 123456
Estimated time remaining
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Progress
70%
Current step: Lysis (44%)
Protocol steps
Lysis
15 min
Binding
8 min
Wash 1
12 min
Wash 2
10 min
Wash 3
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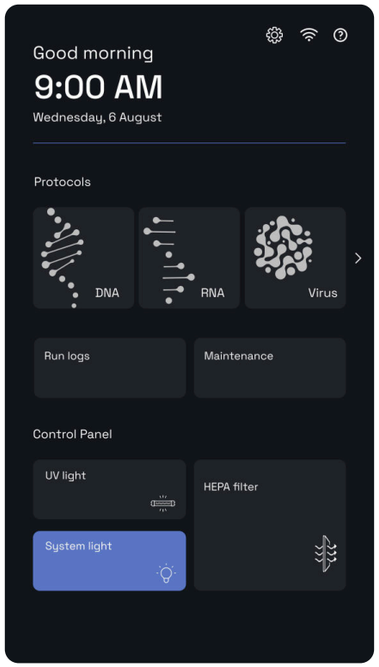
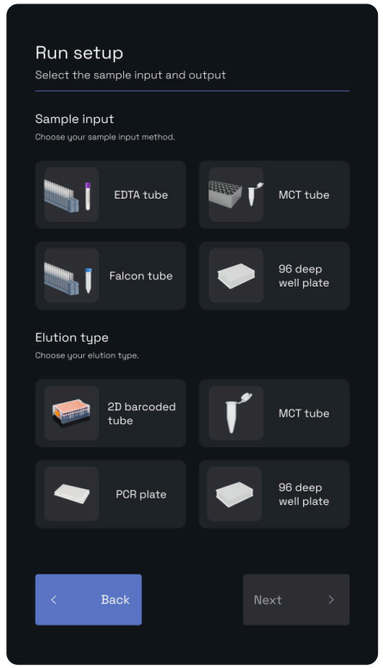
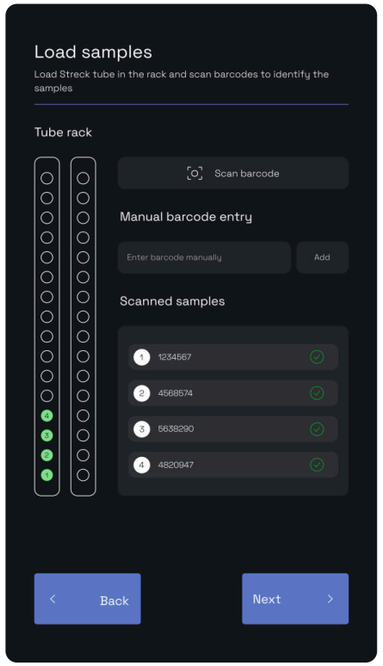
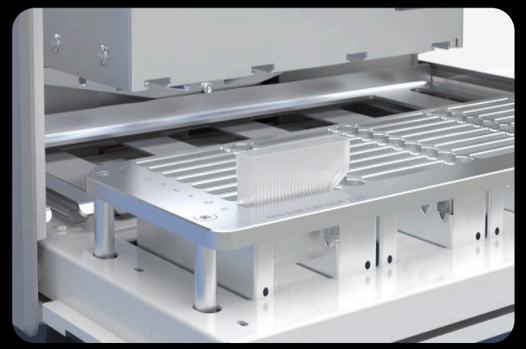
CAMBRIAN
BIOWORKS


Good morning
9:00 AM
Wednesday, 6 August
Protocols
DNA
RNA
Virus
Run logs
Maintenance
Control Panel
UV light
HEPA filter
System light

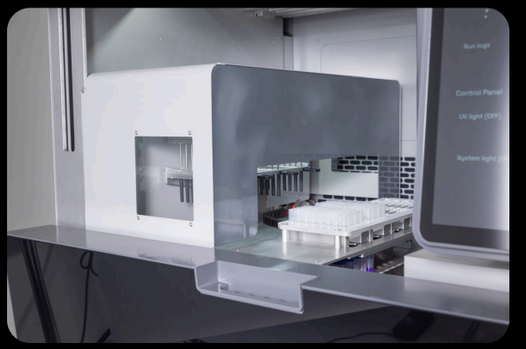

Run setup
Select the sample input and output
Sample input
Choose your sample input method.
EDTA tube
MCT tube
Falcon tube
96 deep well plate
Elution type
Choose your elution type.
2D barcoded tube
MCT tube
PCR plate
96 deep well plate
Back
Next


Load samples
Load Streck tube in the rack and scan barcodes to identify the samples
Tube rack
Scan barcode
Manual barcode entry
Enter barcode manually
Add
Scanned samples
1234567
4568574
5638290
4820947
Back
Next

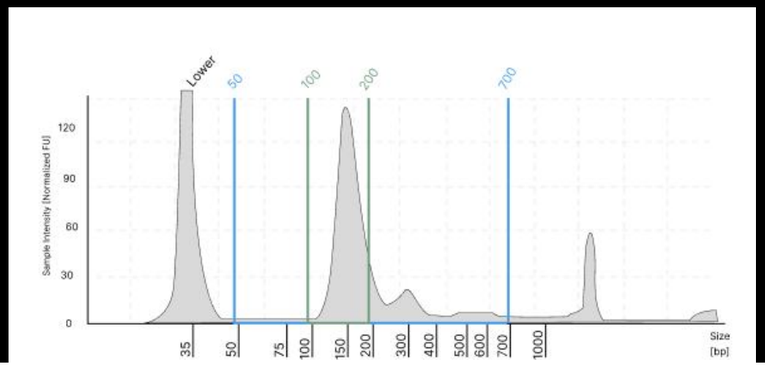




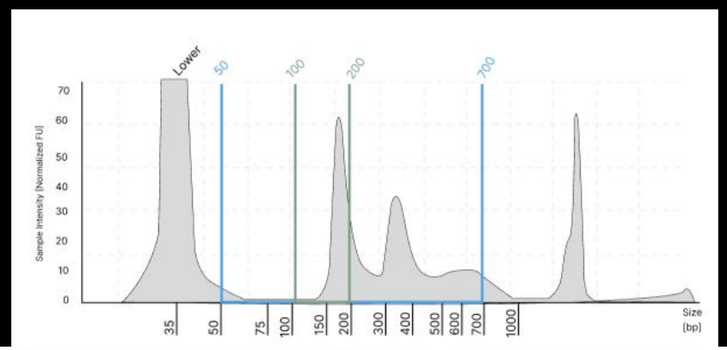



Run logs
Control Panel
UV light (OFF)



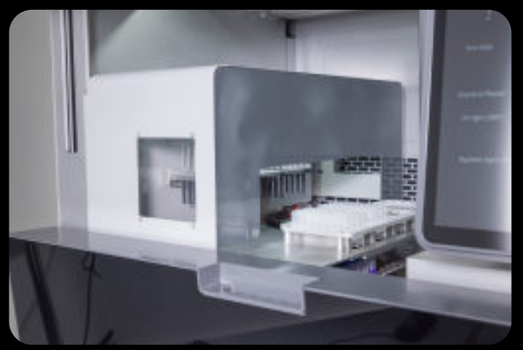


From [bp]	To [bp]	Average Size [bp]	Conc. [pg/µl]	Region Molarity [pmol/l]	% of Total	Region Comment	Color
50	700	221	306	2540	80.47	%cfDNA	
100	200	166	207	1960	54.44		

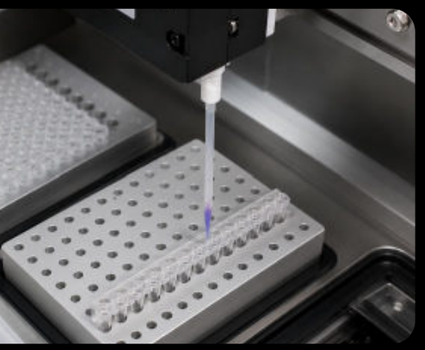


From [bp]	To [bp]	Average Size [bp]	Conc. [pg/µl]	Region Molarity [pmol/l]	% of Total	Region Comment	Color
50	700	311	300	683	75.06	%cfDNA	
100	200	179	31.5	279	23.65		










CAUTION! HOT SURFACE
Stage 2
RT-qPCR
Preparing Run


CAMBRIAN
BIOWORKS
Pull here to open
MANTA

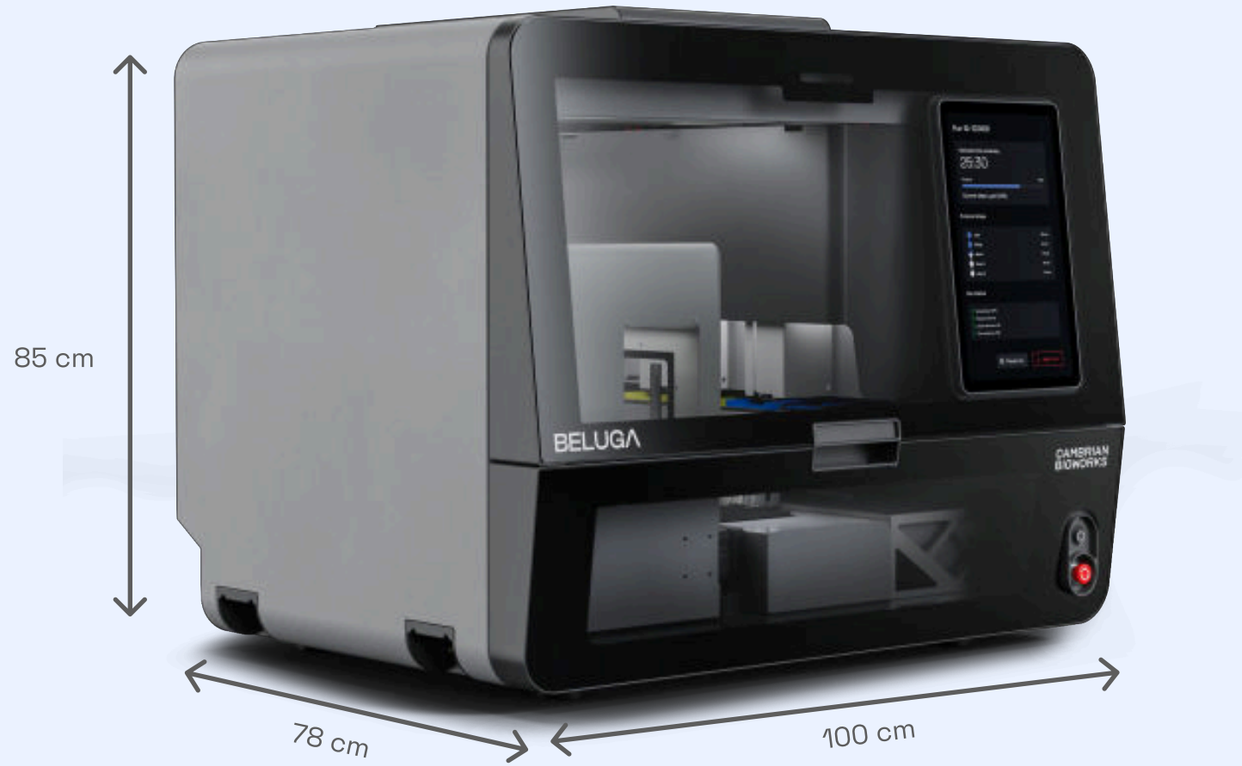


Beluga is an open system

Beluga is not limited to Cambrian's own reagents - it's designed as an open platform that supports third-party reagents, plastics, and pipette tips as long as technical compatibility is ensured.

This flexibility allows labs to continue using their preferred chemistry or consumables while benefiting from Beluga's automation, precision, and throughput.

It's built to integrate seamlessly into existing workflows rather than forcing users to change them — all without being locked to a single reagent or protocol.



Specifications

Throughput	1 sample up to 32 samples per run
Pipette format	2 single channel pipettes
Pipette volume	2 µl - 1 mL
Display	10.1 inch touch screen display
Dimensions	100 cm x 85 cm x 90 cm
Sterilization	H14 HEPA Filters, UVC Light
Temperature regulation	2 Peltier modules included

Ordering information

Cat No.	Product name	Compatible sample types	Pack Size
CBWM101	Beluga - Automated Sample Prep System	All	1 unit

CAMBRIAN BIOWORKS

Cambrian Bioworks is a biotech firm based in India and the United States. We make high-performance automation, reagents and kits to power your laboratory's NGS and molecular pathology workflows. We are a team of biologists, engineers, and business developers building technologies that facilitate early, accurate disease diagnosis. With the world on the cusp of a genomics revolution, make Cambrian your partner as you join this transformative journey.

Contact us today to see Beluga in action.

Locations

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🇺🇸 Cambrian Bioworks Inc | 987 Old Eagle School Rd Ste 709, Wayne, PA 19087-1708

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+91 90356 74375

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Designed, Developed, And Manufactured In India

CB-MKT-B-011/v1.4