

NEXT GENERATION SEQUENCING

Unlock the full potential of your NGS research with **Lasec®**, your trusted partner in laboratory equipment.



Contact your **Lasec® Sales Representative** for more information

+27 21 531 7504 sales@lasec.com www.lasec.com

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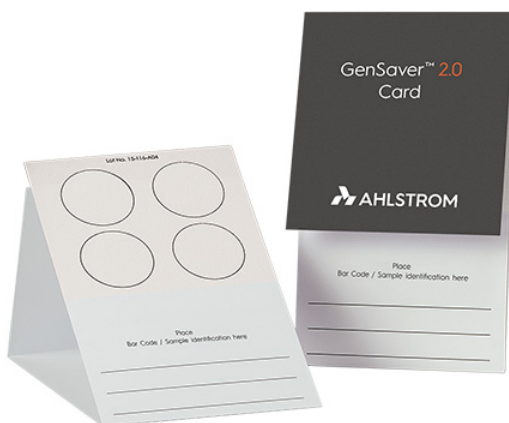
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1. SAMPLE COLLECTION

BioSample 2.0 Card

The Ahlstrom BioSample 2.0 Card allows for efficient and reliable qualification and quantification of RNA from whole blood or other biological samples. The microsampling device is designed to absorb, store and transport specimens under ambient conditions while maintaining RNA integrity, the ideal solution for molecular diagnostics and research applications. Manufactured from ultra-pure fibres, the cards are free from chemical treatment, ideal for preserving RNA integrity for next-generation sequencing.

- No chemical treatment: Allows for high-quality RNA extraction
- Suitable for remote sample collection
- Stabilisation and protection of nucleic acids at ambient temperature



GenSaver™ 2.0

The Ahlstrom GenSaver™ 2.0 Card enables long-term DNA storage at ambient temperatures for over 20 years with performance suitable for next-generation sequencing. The fibre-based material combined with a stabilising chemical treatment prevents environmentally induced degradation, ensuring the integrity of high-quality DNA.

- Chemically treated fibre-based card
- High-quality NGS data
- ISO 18385 compliant

eNAT®

Ready-to-use molecular preservation and transport medium designed to stabilise nucleic acids immediately upon collection. It ensures reliable RNA and DNA integrity for downstream applications, including Next-Generation Sequencing (NGS), PCR, and molecular diagnostics. By inactivating pathogens and preventing nucleic acid degradation, eNat® streamlines sample handling and enhances reproducibility across the entire NGS workflow—from collection to data analysis.



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SMART-eNAT®

Combines eNAT® with Copan's patent SMART push and turn activation cap and a FLOQSwab®. The SMART-cap feature prevents any spillage or unwanted contact, allowing for safe, self-collection and transport of DNA and RNA.



Venous Blood Collection Kits

- Single-use kits suitable for either whole or plasma venous blood collection are uniquely designed for safe adult, adolescent or paediatric sample collection
- Kits contain draw needles, blood tubes, tube holders and other accessories specific to program objectives

[Request more information on our sample transport solutions](#)

Dried Blood Spot Collection Kits (DBS)

- DBS collection from patients is a scalable, reliable, cost-effective and easy sample collection method
- To streamline blood collection from patients, Lasec® offers all the items required to complete the collection procedure in a single-use labelled zip-lock bag
- The specimen collection cards used to collect blood samples are easily transportable at room temperature to central testing laboratories

[Customised sample collection kits available on request](#)



NGS Consumable Workflow Bundles

Ensures easy and quick stock management and dissemination either in response to outbreaks or for routine screening activities.

- All consumables required to complete specific tests supplied in one package
- Tests can be carried out to completion thereby reducing the number of patient call-backs
- All components included in the bundles are clearly labelled for easy reference
- Improved stock management efficiency by dealing with a single source

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2. SAMPLE PREPARATION

Rotor Stator Homogenisers

Process tough samples efficiently with rapid high-shear homogenisation, reducing the risk of heat degradation.

- Speeds of up to 75,000 rpm
- Available in handheld or stand-mounted configurations
- Ideal for laboratories requiring consistent, reliable sample preparation



Bead Mill Homogenisers

Powerful and versatile bead-beating technology designed for efficient tissue homogenisation and cell lysis.

- Mechanical shearing ensures rapid, reproducible results
- Built for durability and high-throughput workflows
- Ideal for tough samples requiring consistent processing

Automated Homogenisers

Automate your sample preparation workflow for greater throughput, consistency, and efficiency.

Revvity's Omni Automated Homogeniser Workstations streamline tissue lysis and essential front-end processes, including sample weighing, buffer addition, and tube-to-plate reformatting.

- Reduces manual handling and bottlenecks
- Enhances turnaround times and workflow efficiency
- Scales sample preparation with reliable walkaway operation
- Improves consistency and reproducibility across runs



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3. NUCLEIC ACID PURIFICATION

AUTOMATED

We offer automated systems for extracting DNA / RNA from start to finish; sample to eluate. Our instruments will simplify your daily workflow with their own distinguishing features and patented magnetic bead purification technology. Models available to cater for a throughput of 12, 16, 48, 96 and 192 samples.



chemagic™ PREPITO®

Compact and efficient, this benchtop system is ideal for automated DNA and RNA isolation in medium-throughput labs.

The chemagic™ Prepito® offers seamless integration with various sample types and delivers consistently high yields when used with chemagic™ Prepito® Kits.

- High-quality DNA / RNA for sensitive downstream applications
- Compatible with NGS, MLPA, genotyping, chip-based assays and more
- Small footprint with powerful performance

chemagic™ 360

Built on robust magnetic bead-based chemagic™ technology, the chemagic™ 360 system is configurable with three different rod heads to accommodate sample volumes ranging from 50 µl to 18 ml.

- Adapts to a wide variety of sample materials and workflows
- Delivers high-quality DNA / RNA for NGS, MLPA, PCR, genotyping and more
- Scalable solution for low to high-throughput applications
- Ensures consistency and reliability across runs



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chemagic™ PRIME

Combining trusted M-PVA Magnetic Bead technology with advanced liquid handling, the chemagic™ Prime automates primary sample transfer, DNA / RNA isolation, optional normalisation, and PCR setup.

- Delivers high-yield, contaminant-free DNA / RNA
- Enables true walk-away sample processing
- Reduces complexity with a validated single-supplier workflow
- Ideal for high-throughput labs with demanding applications



MANUAL EXTRACTION KITS

Versatile, ready-to-use solutions for high-quality nucleic acid isolation across diverse sample types. Designed for both routine and challenging samples, these manual kits deliver reliable results for downstream molecular applications in spin column or 96-well format.

- Suitable for blood, saliva, plant, stool and more
- Delivers pure DNA / RNA for PCR, microarrays, NGS, pathogen detection
- Available in spin column or 96-well plate formats
- Easy-to-use protocols for consistent, high-quality yields



4. QUANTIFICATION OF NUCLEIC ACIDS

PLATE READERS

We have single and multi-mode microplate solutions to assist with a wide array of laboratory applications.

Absorbance Microplate Readers

Quickly measure protein, RNA, and DNA concentrations with discrete end-point assays. This method detects changes in sample properties as indicators of biological substance levels, enabling rapid and reliable quantitation.



Multi-Mode Microplate Readers

Designed for high-throughput screening, these systems combine absorbance, luminescence, and fluorescence detection. Automate workflows and leverage dynamic labels to screen and characterise large sample volumes with flexibility for emerging assays and miniaturised formats.

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5. AMPLIFICATION OF NGS LIBRARIES

Conventional Thermal Cyclers

Reliable, versatile PCR instruments designed to meet a wide range of amplification needs.

Equipped with Peltier-based temperature control and gradient functionality, these systems simplify assay optimisation while delivering consistent, high-performance results.

- Thermal gradient to optimise multiple PCR conditions in a single run
- Intuitive interface and robust design for everyday use
- Compatible with a variety of PCR tube formats and plate types



6. NGS LIBRARY PREPARATION

MICROFLUIDICS

Microfluidics simplifies your workflow through nanoscale automation which maximises efficiency and provides the flexibility to scale your projects with increased data output. This allows you to tailor your experimental plan to match your experimental needs with microfluidics-based PCR and NGS library preparation.

Biomark X9™

The X9™ Real-Time PCR System enables high data output with more than 9,000 individual nanolitre reactions in a single run, ensuring cost-effective comprehensive sample profiling with minimal hands-on time.

- Versatile: Compatible with TaqMan® and SNP Type™ leading assays for genotyping, gene expression and Standard Biotoools custom assay designs
- Efficient: Reduce cost and hands-on time with walk-away automation and reaction miniaturisation
 - 2 hours for up to 9,216 datapoints
 - 8 hours for up to 384 barcoded, NGS-ready libraries
- Panel Design: Simplify custom panel development with the D3™ assay design website. Create panels of any size in just 2 days or less using the intuitive interface.



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ddSEQ SYSTEM

The Bio-Rad ddSEQ is a fully automated NGS library preparation platform designed to streamline workflows and deliver highly reproducible results. It uses droplet-based digital microfluidics to precisely handle reagents in a closed, contamination-free system. Offering walkaway automation from sample to library, the ddSEQ supports a wide range of library preparation kits and accommodates varying throughput needs. The result is reduced hands-on time, minimal error, and consistent, high-quality sequencing libraries.

ddSEQ Single-Cell Isolator

The ddSEQ Single-Cell Isolator is part of the Bio-Rad Single-Cell NGS Solution, enabling researchers to explore gene expression and gene regulation at the single-cell level. Using disposable microfluidic cartridges, the system coencapsulates single cells or nuclei with barcoded beads in subnanolitre droplets, allowing cell-bead pairing and barcoding to occur within a controlled microenvironment. Once captured, 3' RNA-Seq or ATAC-Seq libraries are prepared using Bio-Rad Library Preparation Kits, followed by sequencing and powerful data interpretation with Bio-Rad Omnicron Analysis Software.

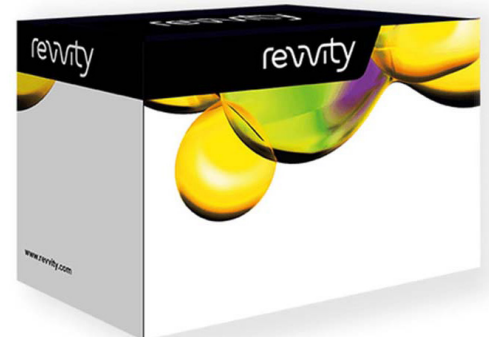
- Process hundreds to tens of thousands of cells per experiment
- Achieve sensitive, unbiased characterisation of gene expression and regulation
- Scalable for a wide range of experimental designs
- Compatible with diverse mammalian cell types, independent of cell size
- Offers a true end-to-end solution with streamlined data analysis



NEXTFLEX® NGS LIBRARY PREPARATION KITS

NGS Library Preparation is a critical process that involves converting raw DNA or RNA samples into a format suitable for sequencing on high-throughput platforms. NEXTFLEX® kits, designed for sequencing platforms such as Illumina® and Element Biosciences™, simplify these steps with verified, high-quality protocols, making the library preparation process more efficient.

- Small RNA Kits
- Low-Pass Agrigenomics WGS Kits
- NEXTFLEX® 16S V3–V4 Amplicon-Seq Library Prep Kits
- NEXTFLEX® 16S V4 Amplicon-Seq Kit 2.0
- NEXTFLEX® 16S V1–V3 rRNA Amplicon-Seq Kits
- SPRI Cleanup Beads
- UDI-UMI Barcodes
- UDI Barcodes



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7. VISUAL QC OF NGS LIBRARIES

Labchip® GX Touch™ Nucleic Acid Analyzer



Leverages microfluidic technology enabling DNA and RNA quantitation and sizing to be done in seconds via automated capillary electrophoresis separation. It is optimal for:

- Fast, high-throughput QC analysis of NGS libraries
- NGS library preparation (smear and fragment analysis) and quality control
- RNA and DNA fragment analysis (including cell-free DNA, DNA isolated from FFPE samples, and PCR-free libraries)
- Quantitation and qualification for CRISPR fragment analysis
- Screening nucleic acid source material for vaccine development
- Characterisation and QC of small RNA molecules and CRISPR/Cas9 gRNA

8. AUTOMATED LIQUID HANDLING FOR NGS

Why Automated Liquid Handling Matters in NGS

Automated liquid handling systems, like those from **SPT Labtech** and **Revvity**, eliminate the variability of manual pipetting, ensuring reproducible results across large sample sets. By improving accuracy, reducing hands-on time, and minimising contamination risk, these platforms enhance data quality—key to unlocking reliable, high-performance NGS results.

apricot® Series

Flexible and intuitive automated liquid handling systems to streamline routine workflows.

- Compact design ideal for space-conscious labs
- Simplifies tasks like copying, mixing, pooling, aliquoting, and serial dilutions
- Suitable for a wide range of applications and budgets



mosquito® Series

High-precision nanolitre liquid handling to support miniaturised workflows in life sciences.

- Ideal for genomics, crystallography, and drug discovery applications
- Positive displacement pipetting ensures accuracy and consistency
- Reduces sample, reagent, and plastic consumption for cost-effective workflows

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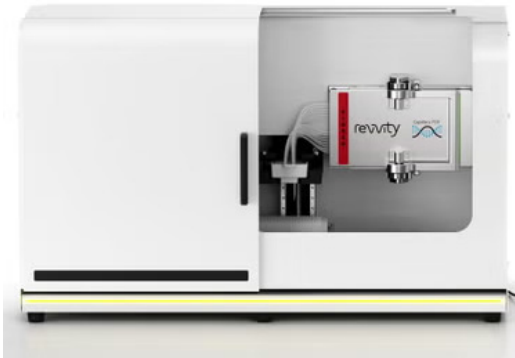
firefly® All-in-One System

A compact, integrated solution that streamlines genomic research from start to finish.

- Combines pipetting, dispensing, incubating, and shaking in one platform
- Enhances efficiency and reproducibility in sample and library prep
- Designed to simplify complex workflows in genomics labs
- Small footprint ideal for space-conscious environments

BioQule™ NGS Solution

Automated DNA sequencing library preparation system designed to streamline genomic workflows with minimal hands-on time and user training.



- Compatible with library prep chemistries from top vendors including Revvity, Illumina, Qiagen, Watchmaker Genomics, and Claret Biosciences
- Reduces hands-on time by up to 80 %, processing up to 8 samples per run
- Integrates DNA extraction, library preparation, and quantification into a single workflow
- Intuitive interface allows quick setup with just a reagent plate and cartridge
- Produces robust DNA libraries optimised for Illumina sequencing platforms
- Ideal for low-throughput labs, requiring no advanced automation expertise

Fontus™ Workstations

Designed to simplify workflows and improve turnaround times, Fontus™ liquid handlers combine easy-to-use software, optimised deck access, and verified protocols to deliver reliable, high-performance automation.

- Three portfolios tailored to your needs: Application-specific (including dedicated NGS), Customisable, and High-efficiency Workstations
- Verified NGS protocols for faster setup and reliable results
- Save time and boost productivity with intuitive, powerful automation
- Reliable support to safeguard your projects and reduce downtime
- Flexible configurations to grow with your evolving research demands



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Sciclone™ Workstations

Proven performance and an open-deck design make the Sciclone™ G3 workstations ideal for automating a variety of laboratory applications. Their integration-friendly architecture supports flexible configurations tailored to your research needs.

- Suitable for genomics, proteomics, immunoassays, and cell-based assays
- Open-deck design allows easy customisation and integration
- Reliable automation to streamline complex workflows
- Configurable to fit diverse laboratory requirements

Zephyr™ Workstations

Compact and adaptable automated liquid handling workstations with a small footprint designed for convenient benchtop use. The deck design allows easy access from all sides, enhancing workflow efficiency and flexibility.

- Supports row-wise and column-wise serial dilutions
- Holds lids during dispensing to improve sample handling
- Seamless integration with other lab instruments
- Barcode identification for sample tracking and management



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CAPE TOWN

52 Old Mill Road,
Ndabeni,
Cape Town,
7405

+27 21 531 7504

JOHANNESBURG

48 Gazelle Crescent,
Gazelle Place,
Corporate Park South,
Randjiespark,
Midrand,
1685

+27 11 052 2500

DURBAN

Unit 3, Windsor
Court, Ground Floor,
AFS House, 4 Derby
Place, Derby Downs,
Westville,
3629

+27 31 702 6001

PORT ELIZABETH

Unit 5.1, Building 3,
Ascot Office Park,
Block 7,
Conyngham Street,
Greenacres,
6001

+27 41 373 9173

BLOEMFONTEIN

Genius Loci
Building 5,
6 CP Hoogenhout
Street,
Langenhovenpark,
Bloemfontein, 9330

+27 51 447 9500

PLEASE DIRECT ALL ENQUIRIES FROM OUTSIDE SOUTH AFRICA TO:

 52 Old Mill Road, Ndabeni, 7405, Cape Town PO Box 2110, Cape Town, 8000

 www.lasec.com

 +27 21 531 7504

 sales@lasec.com

 international@lasec.com