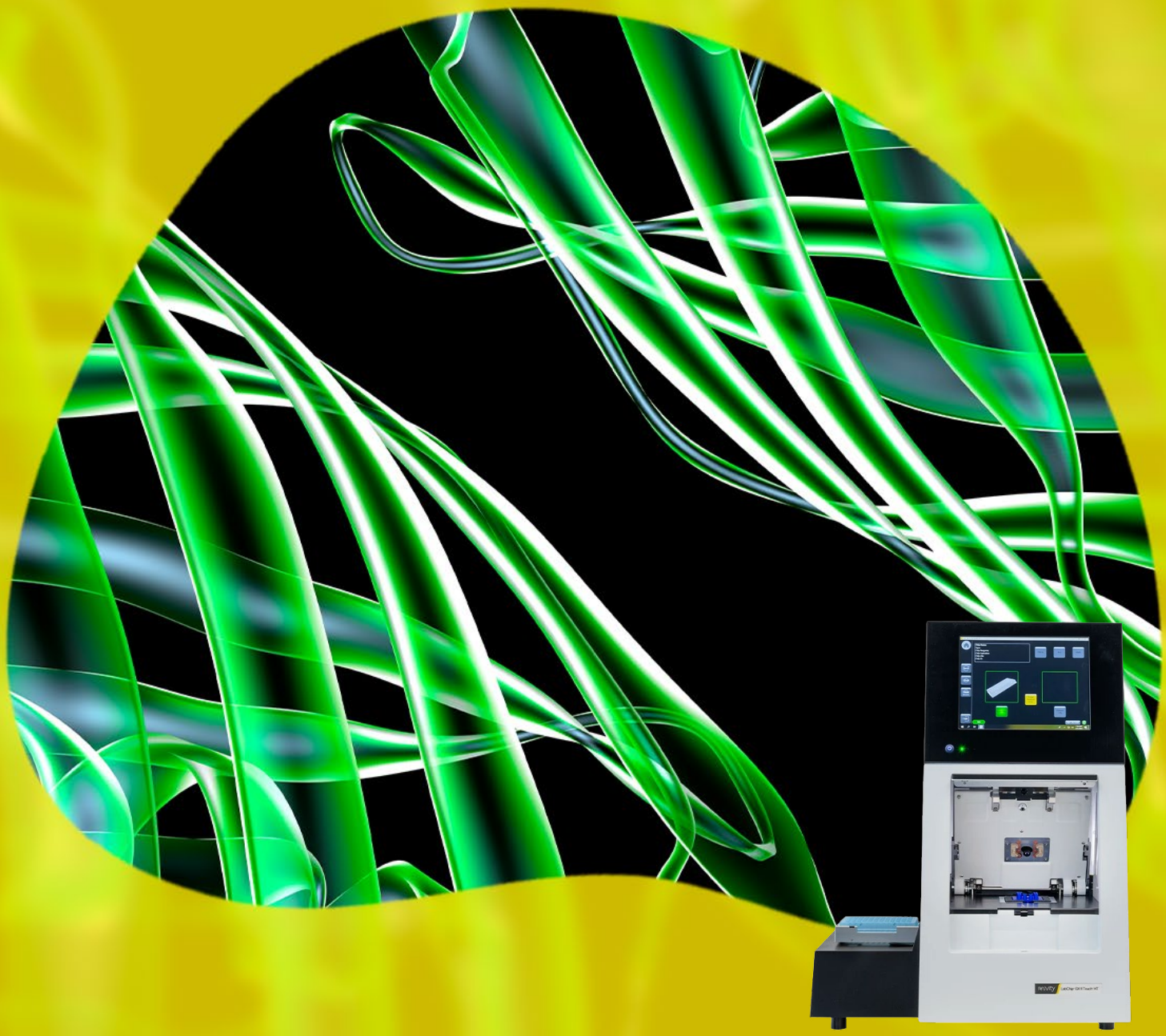
Seconds to insight.
Precision at scale.



revvity

LabChip™ microfluidic capillary electrophoresis portfolio

Automated microfluidic electrophoresis for high-throughput genomics and proteomics workflows.

In modern drug discovery and genomic research, accelerating time-to-insight requires high-speed processing and data precision, hands-on automation, and maximum possible sample conservation.

The **LabChip™ GX/GXII Touch™ platforms** provide automated capillary electrophoresis to analyze quality, size, and concentration, of DNA, RNA, and proteins.

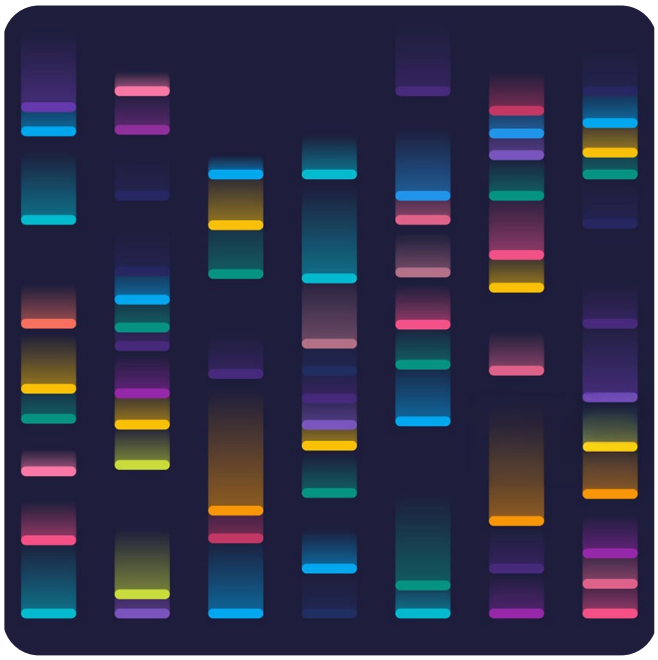
The LabChip Touch series is structured into distinct, application-targeted configurations to better support laboratory investment with the required capabilities.

How does the LabChip instrument work?

The LabChip GX and GXII Touch systems operate based on microfluidic capillary electrophoresis technology. This approach involves microchannels filled with a sieving polymer solution and fluorescent dye, which separate stained proteins, glycans, AAVs, DNA, or RNA fragments into clear, sharp bands for high-resolution analysis.

During the process, each molecule passes through a tightly focused laser beam that excites the dye, allowing sensitive detection down to very low concentrations, such as 10 pg/µL for proteins and DNA, and 1 pg/µL for RNA.

The system automatically sorts, sizes, and quantifies the fragments by comparing them to internal standards and calibration standards, providing data in digital formats like electropherograms, virtual gels, or tabular formats. This technology offers rapid, high-throughput results with minimal sample handling and preparation, ideal for research, screening and quality control applications.



The Micro-CE advantages

Micro-Capillary Electrophoresis (Micro-CE) helps transform routine quality control from a workflow bottleneck into a competitive advantage. The core capabilities below show how the LabChip instrument balances high-throughput performance with the data traceability required for modern therapeutic pipelines.

- **Speed:** real-time analysis in as little as 30 seconds per sample, with throughput up to 384 samples per run to keep pace with today's AI-driven drug discovery demands
- **Sample efficiency:** as little as 1–2 µL sample input per run, preserving precious material for downstream workflows
- **Sensitivity:** detection of analytes down to low pg/µL levels, capturing even the most low-abundance species in your sample
- **Multi-attribute analysis:** simultaneous sizing, purity, and concentration data delivered in a single run, no additional assays required
- **Plug-and-play simplicity:** a wide range of validated assay kits covering diverse characterization needs, with no method development required
- **Automated workflow:** integrated sizing and quantitation standards, automated sample labeling, and automated priming sequences minimize hands-on time and reduce operator variability
- **Regulatory readiness:** GxP-compliant software with full data traceability to support regulatory submissions and audit requirements

Finding the right LabChip instrument fit

Choosing a lower-throughput or domain-specific model does not mean sacrificing core technical precision or sample conservation.

Common technical specifications

All our LabChip GX / GXII Touch models provide the following features:

- **Detection method:** laser-Induced Fluorescence (LIF); linear dynamic range up to 4 orders of magnitude
- **Throughput:** up to 384 samples per run
- **Software:** real-time data acquisition and analysis; templated and customizable analysis; simple run-overlay for batch-to-batch comparison
- **Chip management:** RFID-based chip tracking
- **Automated sample labeling**, and priming steps
- **Consumable chip life:** up to 400 runs (protein assays) / 2,000 runs (DNA/RNA assays)
- **Assay kits:** validated plug-and-play kits; no method development required
- **Sample input volume:** 1–2 µL per well; aspiration volume ~150 nL per separation via automated single-sipper capillary
- **Linear dynamic range:** up to 4 orders of magnitude

Physical specifications

- **User interface:** embedded PC controller with an integrated touchscreen panel
- **Dimensions:** 19.2″ L x 20″ W x 27.2″ H
- **Weight:** 57 lbs.
- **Power parameters:** AC 100–240 V, 50–60 Hz (300-watt consumption)
- **Operating conditions:** 20–80% relative humidity (Indoor use only)
- **Certifications:** CE, UL, and CSA compliant

LabChip model comparison

The comparison table emphasizes target molecular domains, physical sensitivities, and practical operational metrics.

Feature / metric	LabChip GX Touch 24	LabChip GX Touch HT	LabChip GXII Touch HT
Primary domain	Genomics	Genomics	Proteomics and genomics
Application suitability	Small-scale R&D labs, targeted PCR assays, localized cloning QC.	High-throughput sequencing cores, large-scale NGS library preparation libraries.	Biotherapeutic development (mAbs), cell and gene therapy (AAV), protein engineering.
Maximum sample capacity	Up to 48 samples per run	Up to 384 samples per run	Up to 384 samples per run
Minimum sample volume	2 µL (conserves precious sample)		2 µL (Genomics) / 2 µL (Protein preparation)
Separation runtime/sample	DNA: ~28–188 sec		Protein: ~41–100 sec
	RNA: ~80 sec		DNA: ~28-188 sec
			RNA: ~80 sec
Analytical sensitivity LOD)	DNA: Down to 2 pg/µL		Protein (Pico): 10 pg/µL
	RNA (Pico): 250 pg/µL		Protein (Clear HR): 5 ng/µL (mAb)
Sizing resolution	DNA: ± 10% (150-500 bp)		Protein (express): ± 10% (14–200 kDa)
	RNA: Highly resolved profiles		Protein (clear HR): Resolution > 1.0 (mAbs)
Unique algorithmic metrics	RNA quality score (RQS)		RQS (Genomics)
	DNA quality score (DQS)		DNA Quality Score (DQS)
Upgrade pathway	Field-upgradeable to GX Touch HT model	Native high-throughput framework	Native high-throughput framework

The 150 nL advantage

LabChip's microfluidic architecture aspirates just ~150 nL per analysis, a fraction of what traditional electrophoresis platforms consume while delivering detection sensitivity down lower than 10 pg/µL for select protein and genomic assays.

This means researchers can perform comprehensive quality control characterization, including detection of trace system impurities, without exhausting precious samples. Whether you're working with low-yield extractions, rare cell lysates, or high-value biologics, LabChip preserves the majority of your sample for whatever comes next in your workflow.

Scalability: the ability to expand your workflow on demand

The LabChip GX Touch 24 shares a similar high-performance core architecture as our high-throughput (HT) systems. Laboratories managing smaller batch sizes or operating under strict capital budget requirements do not have to sacrifice analytical excellence.

As your research pipeline expands and your sample numbers increase, your hardware can grow with you. The LabChip GX Touch 24 features a field-upgrade pathway to high-throughput (HT) capacity, allowing you to protect your initial capital investment while scaling your automation capabilities at the right time.

LabChip software, enterprise integration, and regulatory compliance

The LabChip GX/GXII Touch portfolio features a modular, three-part software ecosystem designed to support your laboratory operations.

- The LabChip GX Reviewer Software for your analysis
- The GxP Compliance & Security Module for regulatory compliance
- The LabChip GX/GXII Waters™ Empower™ Driver for enterprise connectivity

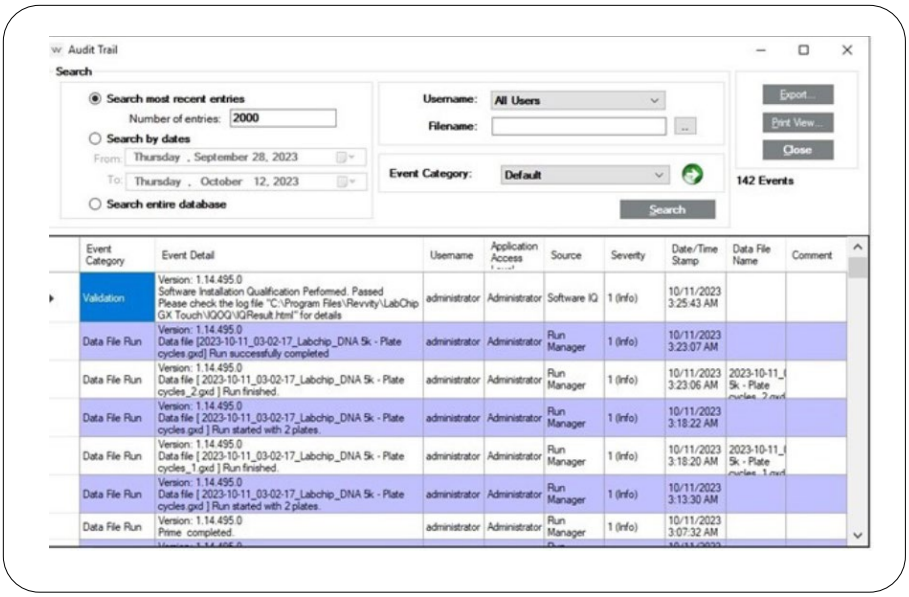
Core discovery with the LabChip GX Reviewer software

It is the foundational software included with every instrument, providing advanced peak integration, sizing, absolute quantification, and automated sample quality scoring (RQS/GQS) through a highly intuitive, customizable data visualization interface.

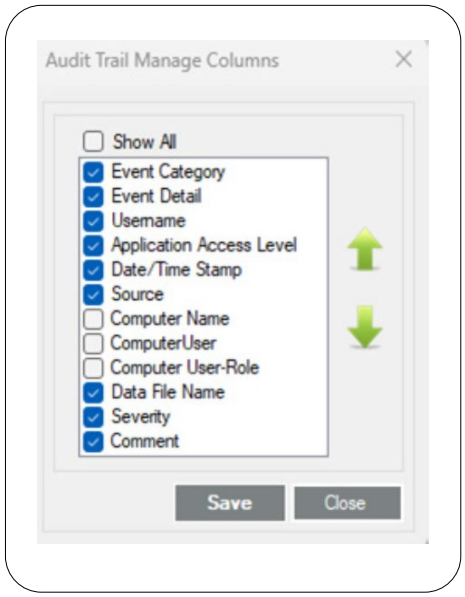
Its intuitive visualization allows researchers to pivot easily between electropherogram, virtual gel, and tabular data layouts.

The software capabilities include a range of features that support accurate, high-throughput analysis of nucleic acids, proteins, and other biologics. Key features include:

- **Assay-specific and easy-to-use guides:** includes detailed assay user guides and quick reference protocols for consistent and reliable results.
- **Automatic data handling** includes automatic saving of raw data, automated sizing, quantitation, and easy data export for further analysis or archiving.
- **Advanced data analysis and visualization:** offers versatile visualizations like tabular data, gel-like images, and electropherograms, enhanced by powerful overlay comparisons, smart filters, automated quality scoring, and robust data queries.
- **User-friendly operation:** features such as self-priming, barcode scanning for plate identification, and intuitive software for assay setup and data review.



LabChip software audit trails



LabChip audit trail manage view

LabChip GxP software kit

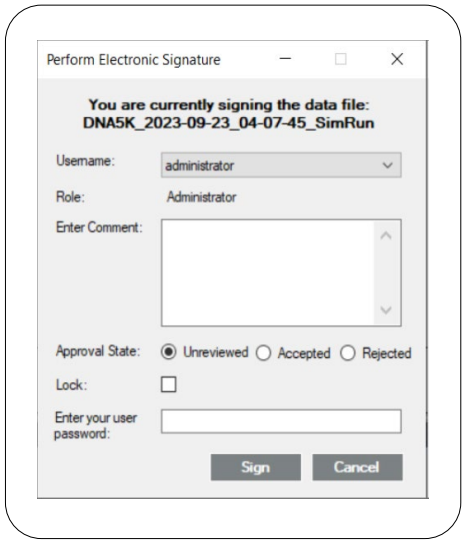
Regulatory readiness with the optional LabChip GxP compliance module

This optional module offers an advanced security layer that introduces technical controls, traceable audit histories, electronic signature, and user account management frameworks to achieve alignment with FDA 21 CFR Part 11 electronic record regulations.

The GxP Software Kit (part number CLS142356) enables the LabChip GX and GXII Touch instruments to function in regulated markets facilitating GLP (Good Laboratory Practice), GCP (Good Clinical Practice), or GMP (Good Manufacturing Practice) environments.

This option enables:

- **Software automation:** self-diagnostics, chip/assay compatibility check, IQOQ electronic report assistance
- **Access management:** account hierarchy, risk-based access controls, password aging controls, login attempt tracking
- **Data integrity:** central data repository, device check, record retention, electronic signature



LabChip electronic sgnature

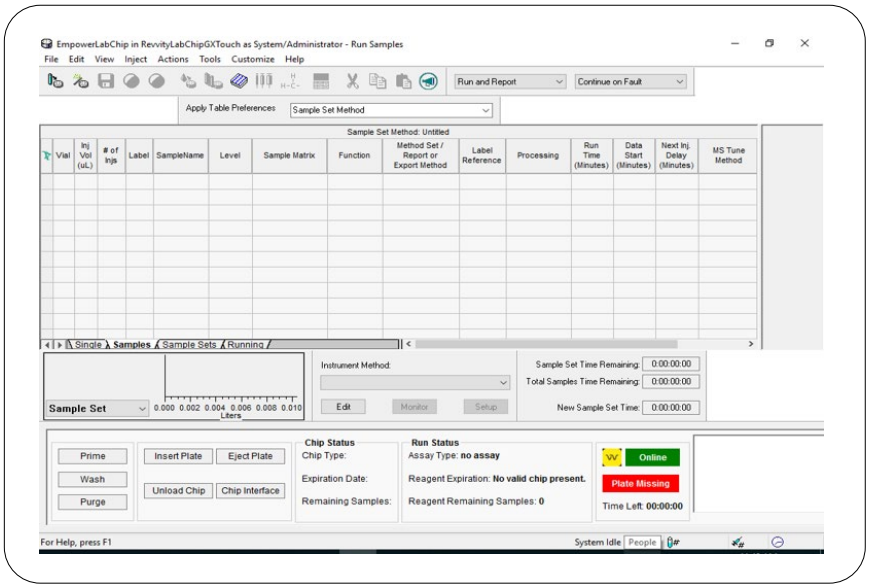
The LabChip Waters™ Empower™ Driver integration

For biopharmaceutical laboratories operating in regulated cGMP environments, data integrity and software standardization are paramount.

The LabChip GX I HT and GXII Touch HT platforms offer the optional Revvity LabChip GX/GXII Touch Waters™ Empower™ driver, allowing you to control microfluidic protein separations directly through your existing Waters™ Empower™ ecosystem.

By unifying instrument control, data processing, and secure storage within a single, tested software network, this integration eliminates manual data transfer steps removes the need for potential transcription errors and simplifies compliance with FDA 21 CFR Part 11 guidelines, all without disrupting your established analytical workflows.

Waters™ Empower™ navigation	
Method editor	Templates for all LabChip GX Touch assay
Sample setup and run	Sample setup and run through the Waters™ Empower™ CDS
Run diagnostics	Helps identify and troubleshoot potential issues quickly, minimizing downtime.
Message center	Centralized hub for system notifications, alerts, and messages
Control panel	Provides a comprehensive overview of the system's current state and operational parameters.

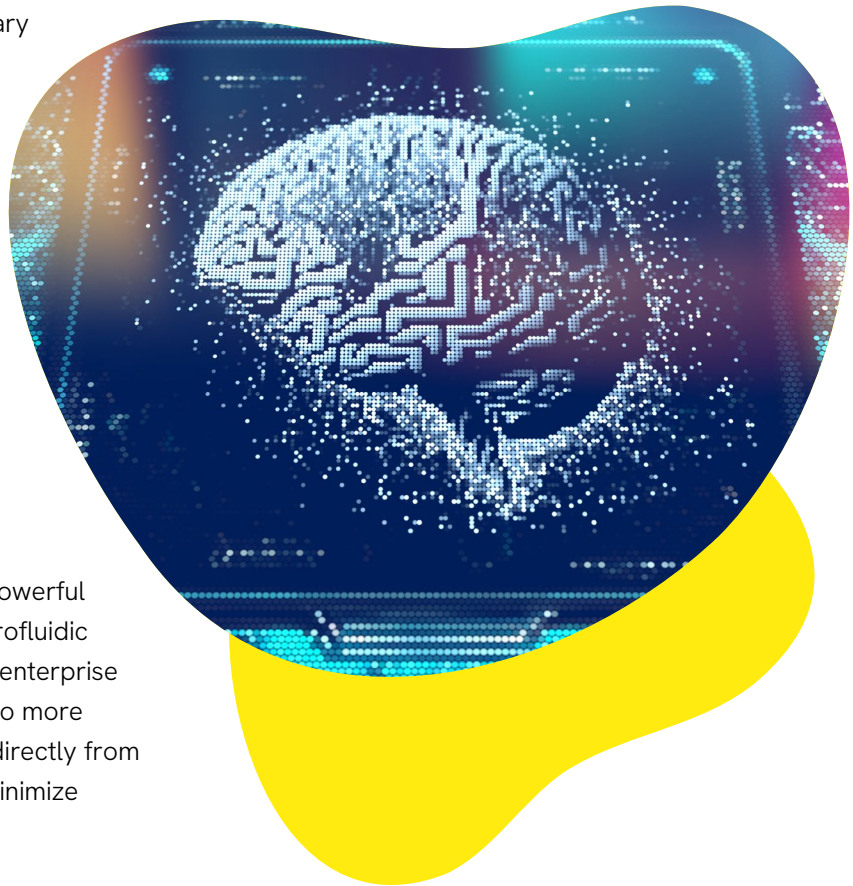


Running LabChip software operations from the LabChip Waters™ Empower™ Driver: Prime, Wash, Purge, Plate control, Door control

CLS160642 - LabChip Empower Driver 1.0
CLS161854 - Configuration License Key, USB Dongle, Empower

AI-ready analytical data pipelines

Equipped with advanced microfluidic capillary electrophoresis (micro-CE) technology, the LabChip instrument is well-positioned for AI drug discovery workflows, offering the high-throughput automation and high data precision that predictive algorithms typically require.



LabChip instruments can generate the large reproducible datasets that fuel predictive AI workflows, helping to accelerate lead optimization and candidate selection in drug discovery.

By introducing the new LabChip Waters™ Empower™ Driver, this ecosystem gains a powerful new dimension. It combines high-speed microfluidic analysis with centralized compliance-ready enterprise data networks. This allows your AI models to more readily ingest structured, audit-ready data directly from a secure corporate repository, helping to minimize manual preprocessing bottlenecks.

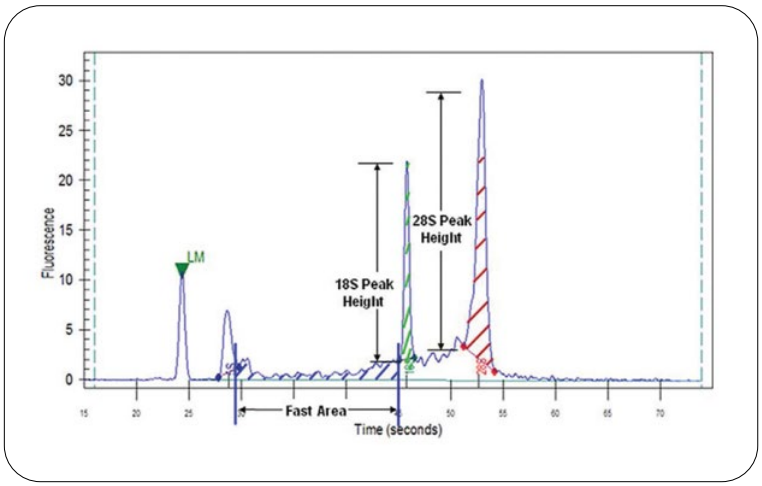
Fueling the future with AI-ready LabChip instruments

- High-throughput feature generation: fast 30-to-41-second runtimes and 384-well automated capacity allow labs to rapidly generate the thousands of high-resolution data points used to train neural networks and predictive algorithm architectures.
- Automated quality labeling: the integrated LabChip Reviewer software automatically calculates objective quality metrics, such as the RNA Quality Score (RQS) and DNA Quality Score (DQS), supplying machine learning models with pre-labeled, standardized quality targets for automated data filtering.
- Uniform data standardization: the LabChip Waters™ Empower™ Driver helps mitigate the potential data pipeline contamination issues by natively organizing protein and nucleic acid measurements into standard, structured database formats that AI scripts can instantly parse.
- Immutable metadata context for deep learning: by leveraging the centralized system architecture, microfluidic data profiles inherit comprehensive, protected electronic records, instrument parameters, and user histories. This structure supports the robust data lineage desired for compliant AI modeling.

Genomics applications

In high-throughput sequencing cores, clinical research, and advanced genomic applications, downstream success depends entirely on the quality of your initial libraries. Microfluidic automated electrophoresis provides the necessary verification checkpoints, ensuring that optimal fragments and properly prepared libraries move forward to high-cost downstream sequencing or amplification platforms.

The LabChip GX Touch platform's genomics configuration supports detailed characterization for Next-Generation Sequencing (NGS) library prep, low-concentration cell-free DNA (cfDNA), total RNA extraction profiling, and automated plasmid DNA (pDNA) isoform analysis, shifting analysis time from minutes to seconds.



The RQS scoring system takes into account many different characteristics of the sample electropherogram.

Objective, standardized sample quality metrics (RQS & GQN)

Reduce subjective user data interpretation with automated, software-calculated indicators of sample integrity. The LabChip GX Touch platforms calculate a validated RNA Quality Score (RQS) and Genomic DNA Quality Score (GQS) to provide predictive data regarding the likelihood of success for subsequent downstream microarray, qPCR, or sequencing pipelines.

LabChip DNA assays

	Reagent kit	LabChip - HT	LabChip - LT
DNA 1K	CLS760673	760517	CLS138948
DNA 12K	760569	760517	CLS138948
DNA high sensitivity	CLS760672	760517	CLS138948
Genomic DNA	CLS760675	760517	CLS138948
DNA 5K	CLS760685	CLS144006	CLS145331
cfDNA	CLS960013	CLS144006	CLS145331
DNA NGS 3K	CLS157242	760435*	CLS138949
Plasmid DNA	CLS160450	CLS160538	

LabChip RNA reagent kits

	LabChip GX	LabChip - HT	LabChip - LT (24)
Small RNA	CLS153530	760435	CLS138949
Standard RNA	CLS960010	CLS960010	CLS960010
DNA high sensitivity	CLS760672	760517	CLS138948

* Available in economy pack, PN 760527

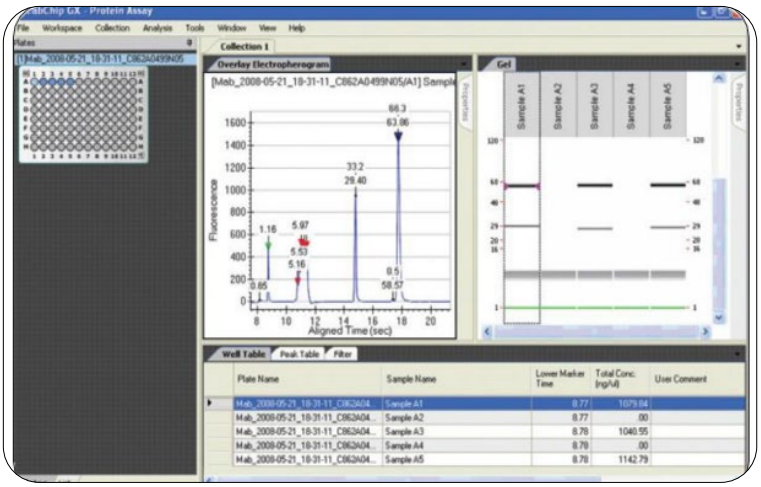
Proteomics applications

Increase your protein characterization throughput

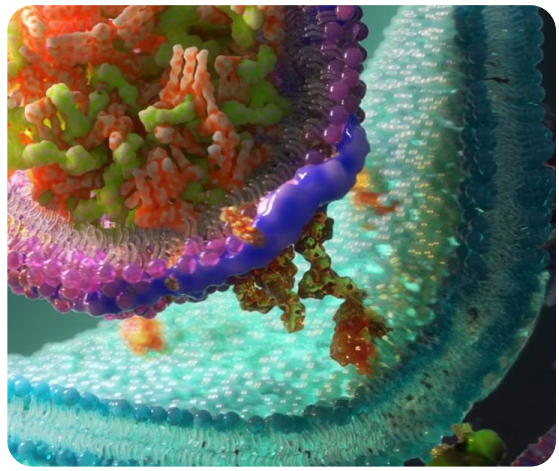
Traditional protein analysis methods including manual SDS-PAGE and single-capillary electrophoresis were not built for the throughput demands of modern biotherapeutic development. In clone selection, process development, and downstream proteomics research, these approaches create bottlenecks that slow critical decisions and consume precious samples.

LabChip GXII Touch HT reduces that bottleneck. By adapting electrophoretic separation to a microfluidic chip format, the system drives proteins through microscopic channels using an electrical field, delivering high-resolution sizing, purity assessment, and quantitation on a single automated platform.

The result is a protein characterization workflow that keeps pace with your development timeline from early clone screening through purification and QC release, without compromising the analytical quality your data demands.



Graphical user interface (GUI) for the LabChip GXII Touch software. Results can be displayed and exported as virtual gels, electropherograms, or data tables.



Top 3 key features for proteomics applications

1. **Impressive separation speed (40–60 seconds per sample)**: unlike legacy single-capillary systems that take up to 45 minutes per injection, the platform processes an entire 96-well plate in less than an hour and a 384-well plate in under six hours.
2. **Automated sample preparation and labeling:** the system integrates automated sample preparation pathways, providing reliable quantification and sizing data while minimizing operator-to-operator variability.
3. **Multi-modal characterization on a single platform:** the LabChip GXII Touch system features specialized, high-speed assay menus for comprehensive biopharmaceutical profiling.

LabChip protein assays

Choose from multiple assays to characterize protein(s) of interest.

Assays	LabChip GXII Touch HT Chips	LabChip GXII Touch 24 Chips	Reagent Kit
Protein Express	760499	CLS138950	CLS960008
Protein Express (4-pack of 760499)	760528		
Protein Express Bulk Sample Buffer			760518
Pico Protein	760499	CLS138950	760498
Pico Protein (4-pack of 760499)	760528		
Pico Protein bulk sample buffer			760414
Pico Protein bulk labeling dye			760519
Low molecular weight	760524	CLS138951	760573
Glycan screening	760524	CLS138951	760525
Glycan Release and Labeling			760523
Charge variant	760435	CLS138949	CLS760670
Protein Clear™ HR	CLS148695	CLS148696	CLS960014
ProteinEXact™	CLS150337	CLS150338	CLS150466

Integrated lab automation

Modular, scalable, all-in-one solutions to automate your workflows

Elevate your productivity with explorer™ G3 SmartBench, our cost-effective solution to integrate instruments with advanced robotics to create modular workflow solutions.

Example integrations

Example of integrated automation of a genomics or biologics characterization workflow with the AssayMate™ liquid handling workstation for plate preparation and the LabChip GX or GXII Touch system.

From simple benchtop solutions to end-to-end workflow, automation benefits include:

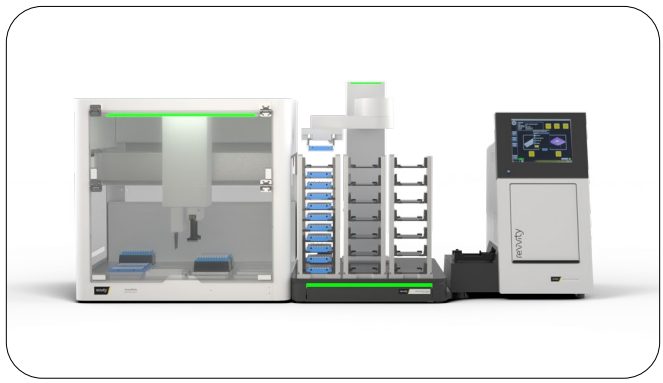
- Improved process control
- Increased throughput and efficiency
- Reduced hands-on time
- Create a collaborative workspace

The LabChip Instrument Automation Integration Kit for the LabChip GX and GXII Touch instruments enables seamless coordination

	LabChip GX	LabChip - HT	LabChip - LT (24)
LabChip integration kit	CLS153556	CLS153556	CLS153556

Please contact us for more information on integrated lab automation.

Add a plate::handler™ Connect robotic arm (part number HH20260001)



explorer™ SmartBench integration with the AssayMate liquid handler

explorer™ integrated workstations. The example shown presents an NGS workflow.

Navigating the next era of biopharma

Regulatory bodies globally are demanding deeper multi-attribute characterization and absolute data traceability much earlier in the developmental lifecycle. In this tightening regulatory landscape, traditional analytical methods are no longer sustainable. The future of drug discovery belongs to laboratories that can confidently navigate increased compliance while accelerating their discovery timelines.

The LabChip Touch portfolio is engineered as a strategic research tool for this future, delivering three definitive operational advantages to support your laboratory's evolution:

- Analytical agility for complex, multi-modal pipelines
- Throughput that keeps pace with the demands of modern drug discovery
- Preservation of precious biological capital
- Data traceability from LabChip workflow inception

Challenge accepted.

At Revvity, we don't just provide tools; we provide the bridge between a question and a breakthrough. Whether you are looking to automate a single assay or build the lab of the future, we are ready to help you navigate the path to impactful discovery.

Welcome to the future of science.

Welcome to Revvity.

Learn more

Scan or click to learn more.

Request a quote

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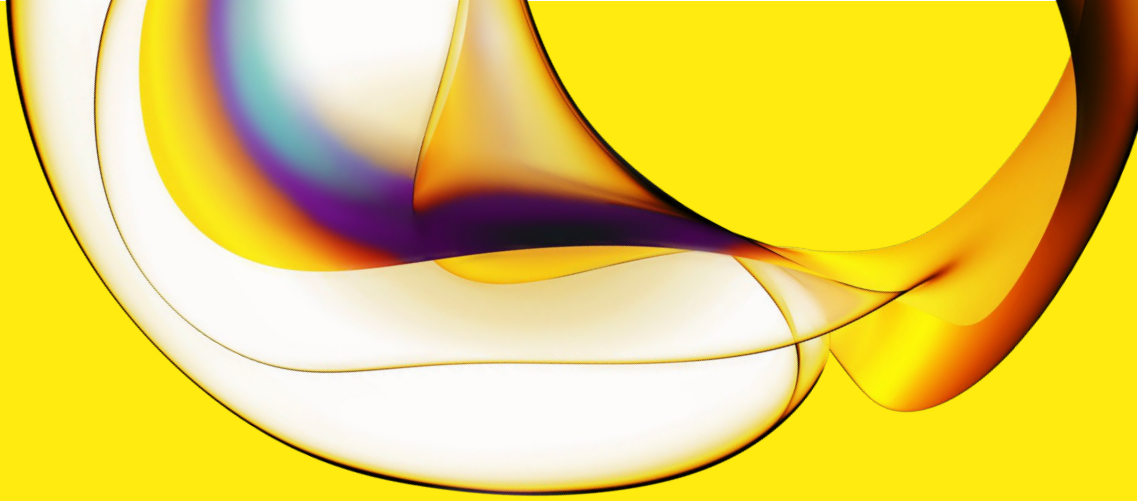

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