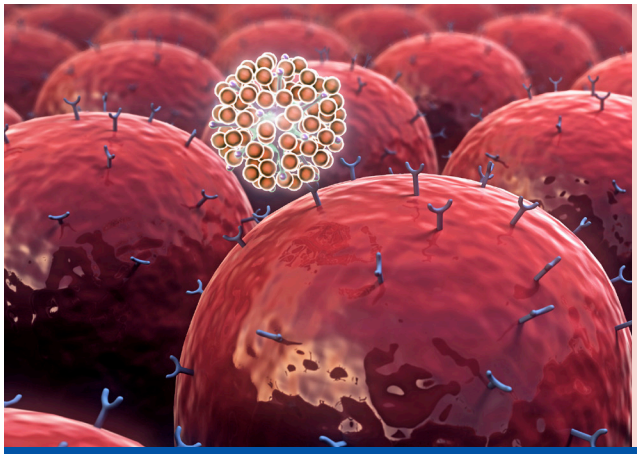


Automated Electrophoresis for Protein Characterization

Figure 1. LabChip GXII Touch

The LabChip® GXII Touch System offers researchers an automated alternative to traditional methods by streamlining the multiple, manual steps of slab gel electrophoresis, while also providing the throughput and data quality essential in the biotherapeutics workflow (Figure 1).

The platform supports multiple assays for characterizing proteins in reduced and non-reduced samples including:

- Purity
- Titre
- Glycan screening
- mAb charge heterogeneity
- Fragmentation

Analysis can be performed in as few as forty seconds per sample that deliver comparable data to traditional capillary electrophoresis with as much as a 70X increase in throughput. Choose 96-well or up to 384-well platforms depending upon throughput needs. With an easy to use touch screen interface, even occasional users get up and running samples quickly. TIBCO SpotFire® data visualization further enhances data output.

PerkinElmer offers solutions to ensure the consistent, reproducible results your biotherapeutics research and patient safety considerations demand. The LabChip GxP Security Software provides users with with electronic signature, electronic record retention, and access management to streamline meeting requirements for compliance.

PerkinElmer®
For the Better

LabChip GXII Touch Screen Simplifies Sample Analysis

Touch – User friendly operation

- Load sample plate and chip
- Select samples (up to 384 in a run)
- Select assay type
- Touch 'Run' to start
- You can even have the system automatically export data directly to your network or LIMS system

Run – Observe runs in real time

- Sample analysis in as few as 40 seconds
- View electropherogram in real time during data collection
- Overlay collected data to compare sample profiles within software
- Select from various run time analytical feature annotations

Review –See data in real time or export for later analysis

- Choose display in E-gram, virtual gel or data table format (Figure 2)
- Enhance results with TIBCO SpotFire® data visualization
- Pull multiple archived plates into data review or analytical comparisons
- Apply data mining filter functions on key attributes
- Highlight expected peaks
- Track relevant user access and data history parameters with 21 CFR Part 11 compliance software

The LabChip GXII Touch operator controls are designed to allow users to easily setup and execute a run with as few as three easy steps. Run temperates can also be imported within the operator control fractures. Run templates can include such things as well selections, sample names, expected peak tables, and more, which facilitate operator ease of use. Data can be automatically exported to network or LIMS directories for subsequent analysis. Every instrument also comes with a full software package for data review, allowing analysis from current or archived data sets.

LabChip GX Touch and Reviewer Software contain built-in technical controls and features specifically designed to support the 21 CFR Part 11 compliance. These features include a shared user account database, access controls, device check, enforced sequencing of run steps, audit trails, record copying, record retention, system documentation, and electronic signature controls (Figure 3).

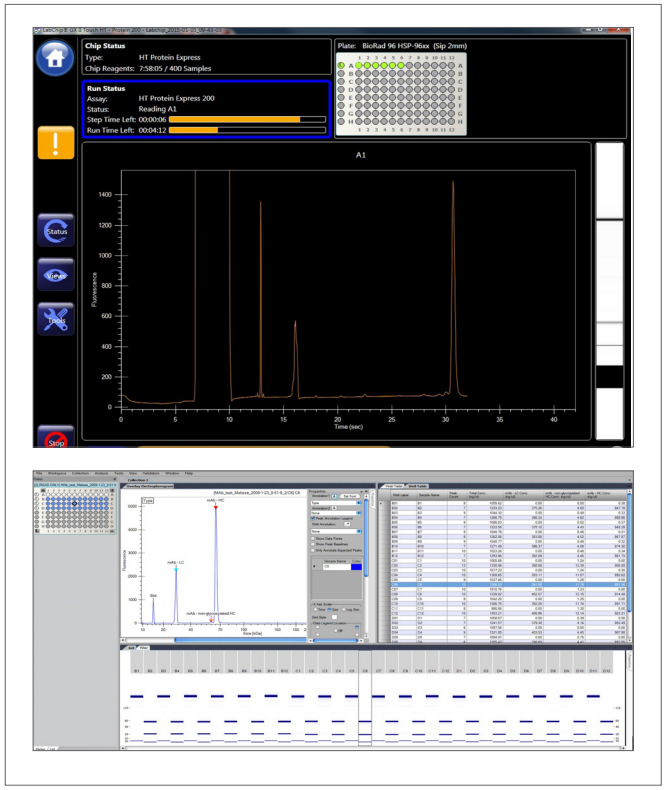


Figure 2. The Touch interface offers simple instructions for project initiation with real-time run sample evaluation (top) and complete sample analysis (bottom).

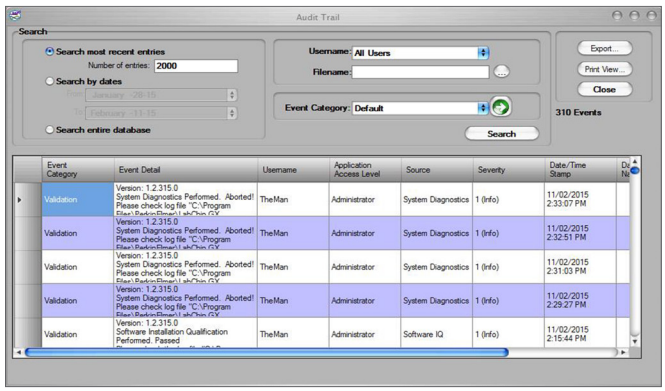
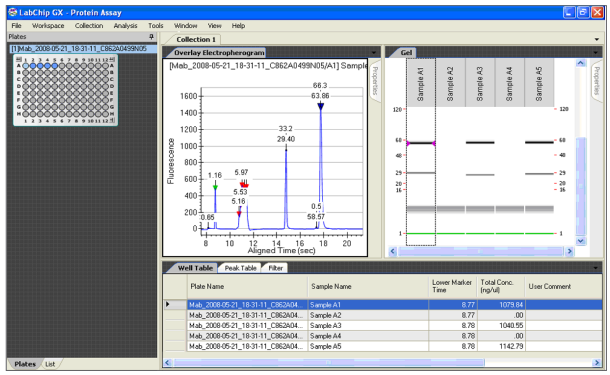


Figure 3. 21 CFR Part 11 Software, part of a suite of digital governance, helps ensure process compliance.

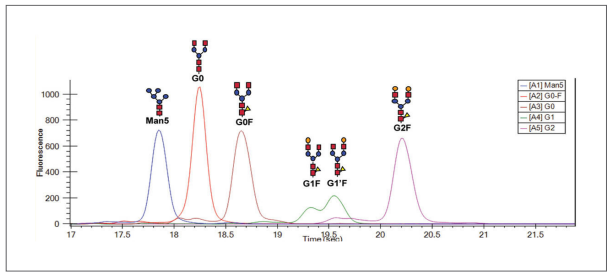
Rapid Analysis Throughout the Protein Workflow

The LabChip GXII Touch offers rapid quantification and quality control throughout the biotherapeutics workflow. For example, automating the characterization process allows multiple, critical quality attributes to be obtained significantly faster. Researchers can now screen for optimal protein characteristics earlier in the process, and integrate Quality by Design initiatives into their biotherapeutics development workflow (Figure 4).

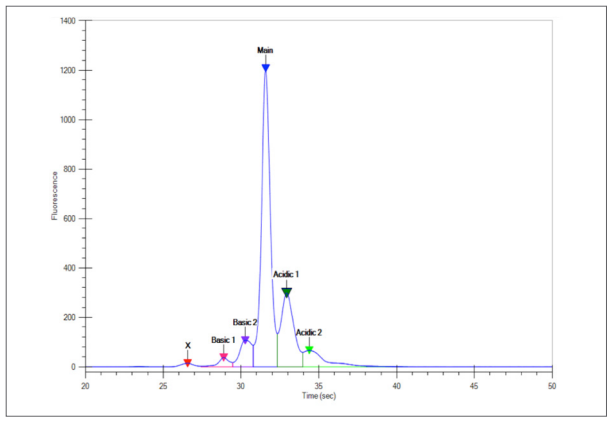
Figure 4. With LabChip microfluidics technology and the JANUS® G3 BioTx Workstation, you can purify and analyze in one day what typically takes weeks with alternative methods. Explore a broader range of experimental conditions and save in both the development time and cost of your biotherapeutics research (above). LabChip Touch reagents are available for multiple protein attribute analysis including standard and pico protein, glycan profiling and charge heterogeneity (right).



Standard and Pico Sensitivity Protein Assay



Glycan Profiling



Charge Heterogeneity Assay

LabChip Electrophoresis

How Does it Work?

LabChip electrophoresis is performed on a small, microfluidic chip. Prior to analysis, reagents are loaded into the individual wells of the chip. These wells are connected to tiny microchannels about the size of a human hair etched within the quartz microfluidic chip. (Figure 5).

When the chip is loaded into the LabChip GXII Touch system, the chip's wells interface with platinum electrodes that provide voltage and current control. The system robot moves the microtiter plate wells directly under the chip's capillary 'sipper', and approximately 150 nL of sample is aspirated onto the chip. Sample staining and destaining are performed automatically on the instrument platform.

Individual sample analytes are separated electrophoretically and the bands are detected via laser induced fluorescence. Sizing and concentration for each band are determined using ladder and internal markers. Because the sipper is rinsed between samples, cross-contamination or carryover is eliminated.

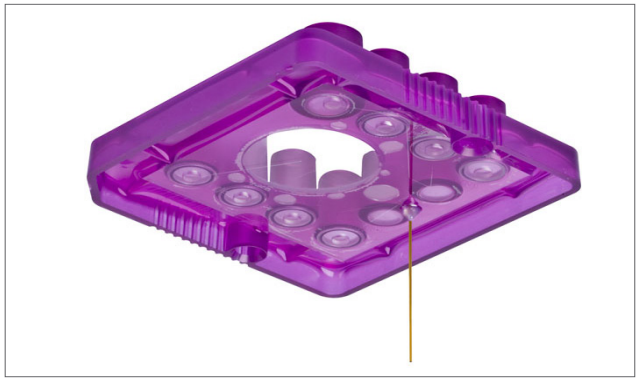


Figure 5. LabChip for protein research

Ordering Information

	LabChip GXII	LabChip GXII Touch HT	LabChip GXII Touch 24
Protein Express LabChip	760499	760499	CLS138950
Protein Express LabChip (Economy 4 pack)	760528	760528	N/A
Protein Express Reagent Kit	CLS960008	CLS960008	CLS960008
Bulk Protein Express Sample Buffer	760518	760518	N/A
Pico Protein Reagent Kit	760498	760498	760498
Bulk Pico Protein Sample Buffer	760414	760414	N/A
High Resolution Protein LabChip	760524	760524	CLS138951
Low Molecular Weight Reagent Kit	760573	760573	760573
Glycan Screening Reagent Kit	760525	760525	760525
Glycan Release & Labeling Kit	760523	760523	760523
DNA 5K/RNA/CZE LabChip	760435	760435	CLS138949
Charge Variant Reagent Kit	CLS760670	CLS760670	CL5760670

LabChip GXII Touch Specifications			
Height	25.75 in	**Power Requirements**	100-240 Vac
Width	19.25 in	**Power Consumption**	N/A
Depth	18.25 in	**Plate Formats**	96- or 384-well
Weight	54 lbs (24.5 kg)	**Excitation/Emission**	635 and 700 nm
Temperature Range	18-26 deg C	**Humidity Range**	20% - 80% RH

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