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LabChip® GXII Touch™

English Version
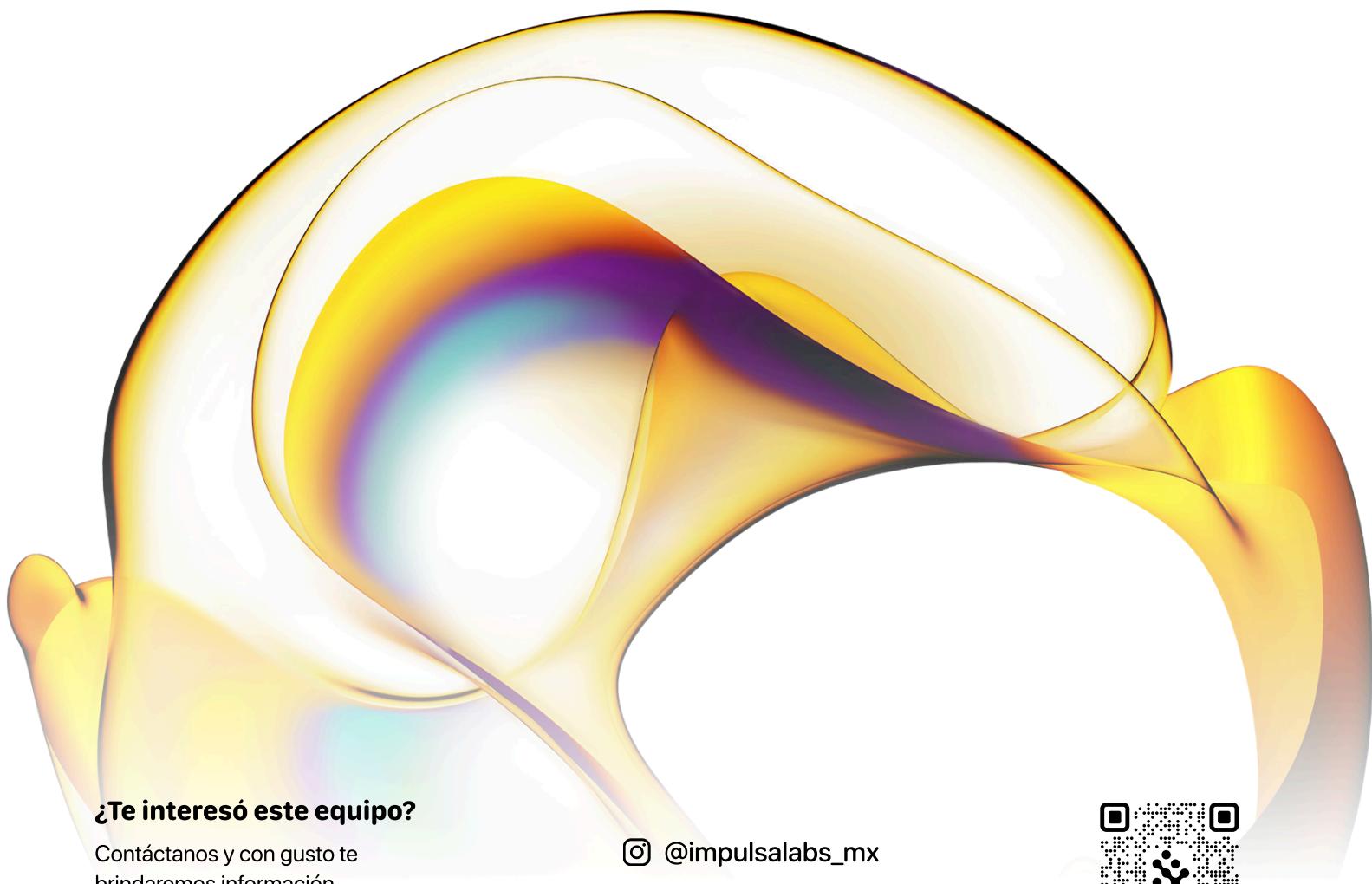
¿Te interesó este equipo?

Contáctanos y con gusto te brindaremos información personalizada, cotizaciones y todo lo que necesitas para tomar la mejor decisión para tu laboratorio.

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LabChip® GXII Touch™

❇ Biología Molecular

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Introduction

The LabChip® GXII Touch™ protein characterization system uses a single sipper microfluidic chip to rapidly characterize protein samples from 24-, 96- or 384-well plates. The microfluidics chip technology automatically stains, destains, electrophoretically separates and analyzes the protein samples. After the LabChip® instrument optics detect the laser-induced fluorescent signal, easy to use system software automatically analyzes the data and provides the user with protein concentration, molecular weight sizing and percent purity using ladder and marker calibration standards. Digital data results are immediately available for review or reporting in virtual gel, electropherogram or table summary formats (Figure 1).

Choose from multiple assays to characterize protein(s) of interest – from the ProteinEXact™, Protein Express, Pico and Low Molecular Weight assays for concentration, molecular weight sizing, and percent purity for each detected peak within the sample; in addition, rapid Glycan Screening and Charge Variant analysis can be performed on the same system.

Key features

- Fast quantitative results, molecular weight sizing, and relative percent purity in as fast as 42 seconds

- One platform, multiple assays available to characterize protein(s) of interest

- High- and low-throughput assay setup options

- Review and export results in multiple formats

- GMP, 21CFR part 11 compliant software available

- Automated analysis provides significant cost savings relative to the materials and labor required to run manual gels for protein analysis.

- Easy to use digital format facilitates review, export, and archiving of data.

- Extended workflow setup allows a single chip preparation to support multiple sample processing runs within an eight-hour window.

- Flexible data display options - Results shown in your choice of virtual gel, electropherogram graph or tabular formats.
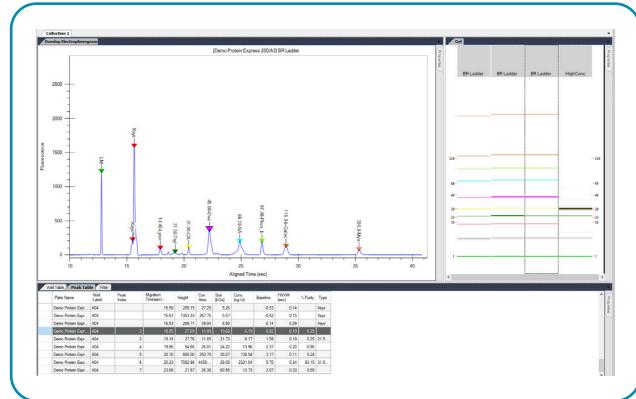

Figure 1: Shown is the graphical user interface for the LabChip® GXII Touch™ software. Results can be displayed and exported as virtual gels, electropherograms, or data tables

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Specifications for LabChip Protein Assays:

	ProteinEXact™	Protein Clear™ HR	Protein Express	Pico Protein	Low Molecular Weight	Glycan Screening	Charge Variant
Sizing Range	6.5 kDa – 250 kDa	14 kDa – 250 kDa	14 kDa – 200 kDa	14 kDa – 200 kDa	5 kDa – 80 kDa		
Sizing Precision RSD (CV)	2.31	Sizing Range	± 20%	± 20%	Sizing Range	CV <2.5%	
Sizing Resolution*	± 10% difference in molecular weight	Resolution >1.0 for VeriMAb reference standard by full width half max	± 10% difference in molecular weight	± 10% difference in molecular weight	14-80 kDa ± 10% < 14 kDa ± 20%		Comparable to IEX and conventional CZE
Linear Dynamic Range	10-2000 ng/µL	10 - 1000 ng/µL (mAb, non- reduced main peak)	5.0 – 2000 µg/mL	Sizing Range	30 - 2000 µg/mL (BLG, CAII in PBS)		
Maximum Total Protein Concentration	2 mg/mL	2 mg/mL	10 mg/mL		10 mg/mL		10 mg/mL
Sensitivity Limit of Detection (LOD)	0.2 ng/µL	5 µg/mL (mAb, non-reduced main peak)	5 µg/mL	0.1 % of total protein	4 µg/mL CAII (8 µg/mL BSA) in PBS	Assay precision is <4 % for the major glycan peaks	
Quantitation Reproducibility	<10%		30 % CV up to 120 kDa		30 % CV up to 120 kDa	CV<10 % for peak ≥2.5 % of total glycan	CV < 5 % for varying concentration from 1-3 mg/mL CV< 3% at constant concentration
Maximum Salt Concentration	Sizing Range	1M NaCl at pH 6.5 to 8.5	1M NaCl at pH 6.5 to 8.5	1M NaCl at pH 6.5 to 8.5		0.5 M Total Salt	
Chip Primes per Reagent Kit	10	10	10	4	4	4	N/A
Chip Sample Lifetime	400	400	400	400	400	400	500
Sample Analysis Time	65 sec	65 sec	42 sec	42 sec	60 sec	68 sec	90-110 sec

* Resolution is defined as the difference in migration times divided by the sum of the full width half max for two closely migrating peaks

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