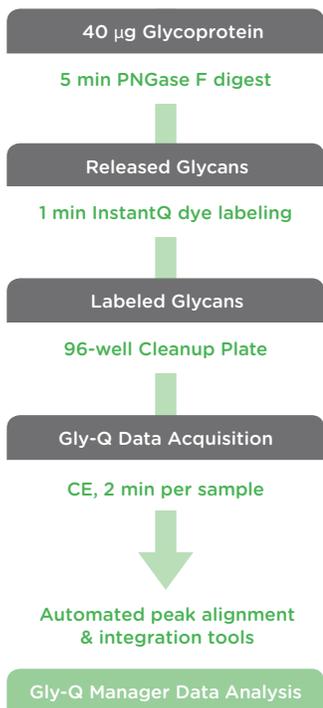


# Gly-Q™ Glycan Analysis System

## PRODUCT GUIDE

- Dedicated system for oligosaccharide analysis
- Rapid 2-minute separations, 96 samples in 4 hours
- High sensitivity detection
- InstantQ™ dye specifically designed for N-glycan detection
- Gly-Q Manager software for streamlined glycan analysis



## INTRODUCTION

### Complete Integrated System for N-Glycan Analysis

The Gly-Q system is designed as a complete system for rapid analysis of oligosaccharides such as N-glycans, and includes an instrument, replaceable cartridges, software and sample preparation kits.

The instrument is comprised of a capillary gel electrophoresis (CGE) core integrated with a high sensitivity fluorescence detector and 96-well autosampler. The replaceable Gly-Q cartridge automatically regenerates the capillary gel between runs and can be used for up to 150 sample injections.

Gly-Q Manager software provides integrated system control, data analysis and data export functions. InstantQ™ dye, provided in the Gly-X N-Glycan Rapid Release and Labeling with InstantQ kit, is specifically designed for N-glycan separation and detection using the Gly-Q instrument.

# RAPID SAMPLE PREP

## Gly-X Technology with InstantQ Dye

ProZyme Gly-X 5-minute deglycosylation with N-Glycanase™ (PNGase F) is enabled by a proprietary denaturant reagent that enhances exposure of N-glycan sites to rapid enzymatic cleavage. Gly-X achieves complete, unbiased in-solution deglycosylation of up to 40 µg glycoprotein per sample. Followed immediately by labeling with InstantQ dye (1 minute), and a simple clean-up step (elution into water), the glycan samples are ready for analysis using the Gly-Q instrument. With deglycosylation and labeling carried out in solution, the method is simple, rapid (96 samples in 1 hour) and suitable for automation.

The Gly-X with InstantQ sample preparation kit is available in a modular format with reagents to prepare from 24 to 96 samples. InstantQ labeled standards and controls are also available.

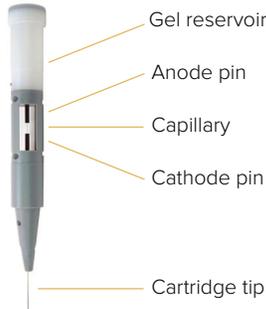


**Figure 1:** Gly-X N-Glycan Rapid Release and Labeling with InstantQ Kit for 96 samples, complete with Gly-Q cartridge, InstantQ Migration Standards, and GU Ladder.

# N-GLYCAN DETECTION

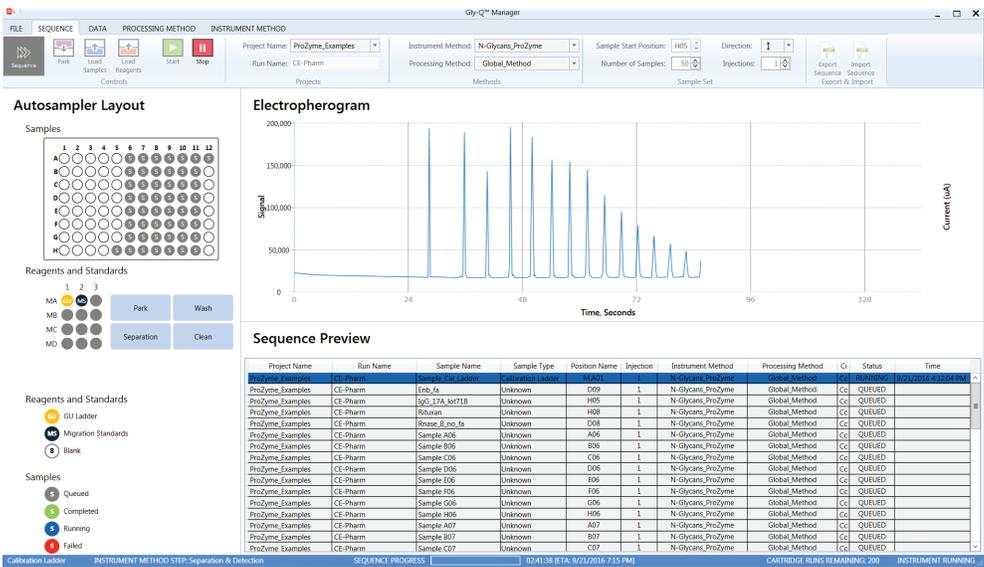
## CE Designed for Rapid Glycan Analysis

Gly-Q is a small, simple, user friendly capillary gel electrophoresis system with an easily-replaceable gel cartridge. The 147 mm capillary mounted into the cartridge contains a gel matrix that is replenished from the top reservoir of the cartridge automatically between sample runs (Figure 2). The reservoir provides sufficient gel for up to 150 sample separations.



**Figure 2:** Gly-Q Cartridge with capillary and gel reservoir.

Gly-Q Manager Software provides a simple sample set-up in both a 96-well plate and table view. Standards, controls and system buffers are loaded into dedicated wells on the instrument. After sequence set-up, place the InstantQ labeled samples on the autosampler and press start. Special solvents and diluents are not required.



**Figure 3:** Gly-Q Manager Sequence Tab. Sample set-up and real-time data acquisition window. Samples are loaded in a 96-well plate, reagents for instrument functions and required standards are loaded in a dedicated instrument tray. Real time data and system progress by sample are displayed.

# RAPID N-GLYCAN ANALYSIS

## Automated & Simplified for Rapid Screening

Gly-Q Manager software provides simplified data analysis that enables rapid screening of samples as well as more detailed analysis. The software automatically aligns electropherograms with GU values and, where possible, assigns N-glycans. The ProZyme global processing method contains GU values for 46 N-glycans. This component table can be easily modified to contain any set of expected N-glycans and saved as a new processing method. Entire data sets or individual samples can be re-processed without loss of the original analysis. The interactive interface allows one to zoom in on areas of interest, and to compare data across samples and experiments. Peak name, GU units, relative peak area, total area and other calculations are displayed for each sample in the table. Data can be exported as PDF, CSV as well as CDF for making reports in additional software packages.

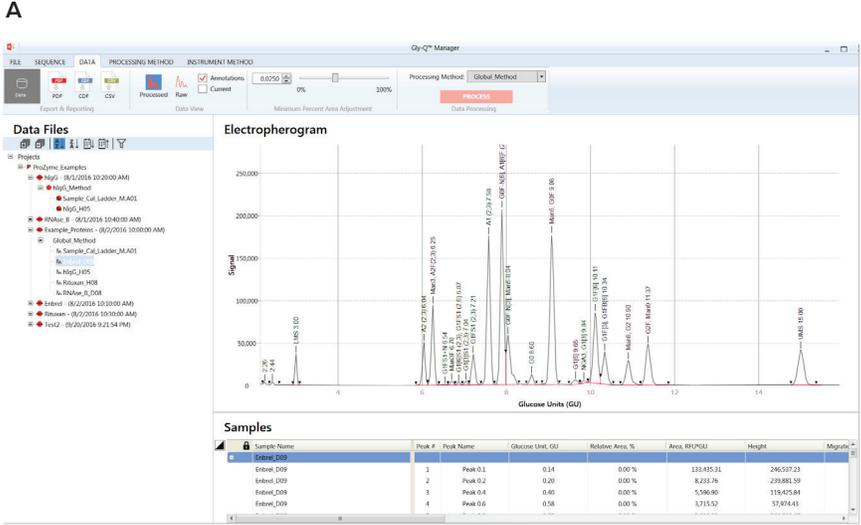
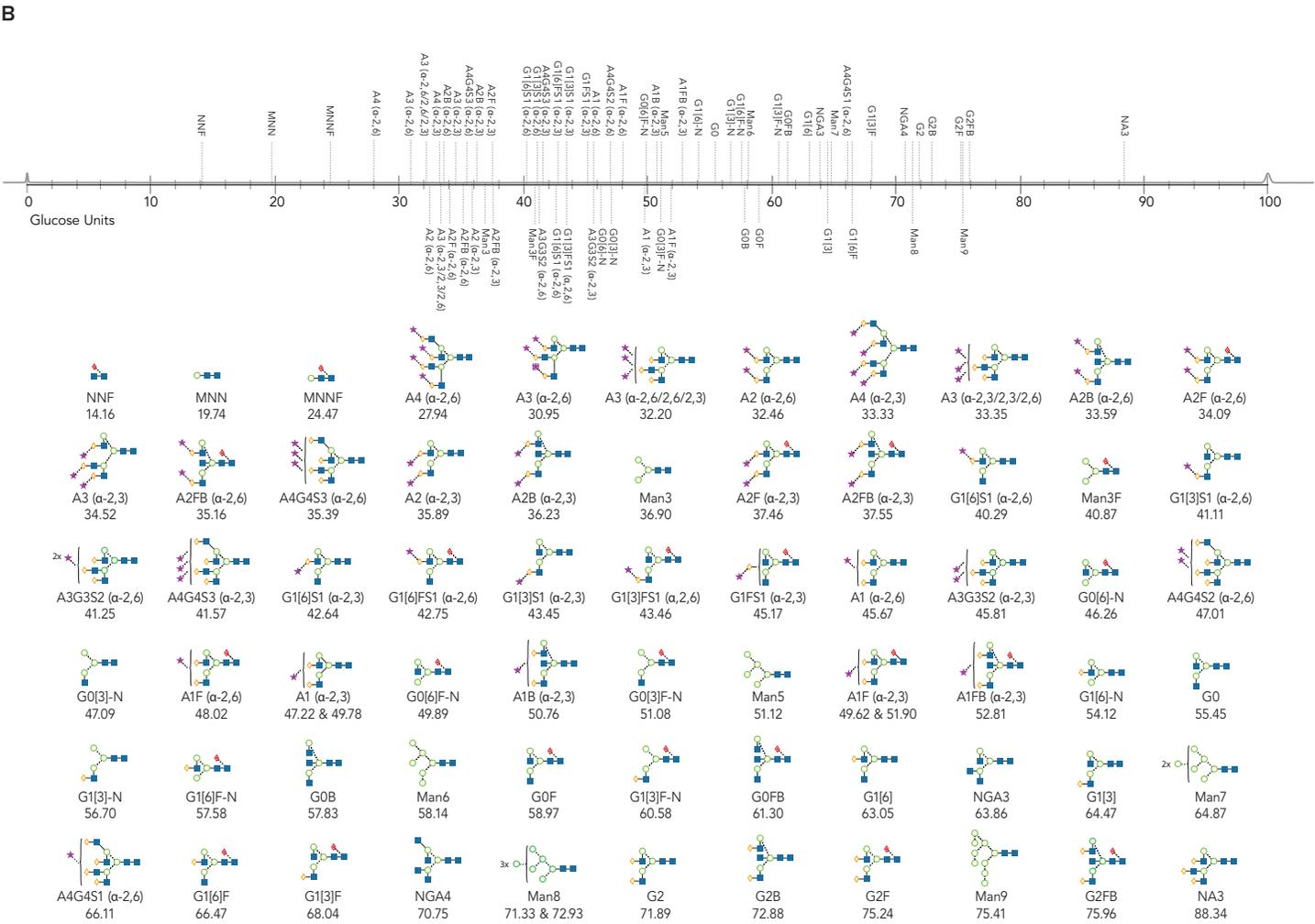


Figure 4: A) Gly-Q Manager Data Tab. Experiment navigation tree, display of aligned selected sample(s) electropherogram(s) and detailed data table; B) ProZyme Global Processing Method N-glycan GU values.



## SPECIFICATIONS

### Gly-X with InstantQ Kit

| Specification              | Gly-X with InstantQ Kit   |
|----------------------------|---------------------------|
| Sample prep time           | 96 samples in 1 hour      |
| Protein load range         | 1–40 µg                   |
| Label                      | Proprietary instant label |
| Deglycosylation efficiency | >99%                      |
| Glycan recovery            | >95%                      |
| Sialylated species         | >95% retained             |
| Precision                  | <5% CV                    |
| Sample stability           | 4°C for up to 5 days      |
| Sample stability           | -20°C for up to 3 months  |
| Kit configuration          | Modular (see below)       |

### Gly-Q Instrument

| Specification         | Gly-Q Instrument                 |
|-----------------------|----------------------------------|
| Throughput            | 96 samples in 4.5 hours          |
| Separation time       | 2 min                            |
| Capillary length      | 147 mm (total), 114 mm (working) |
| Input voltage         | 100–240V, 40-60Hz                |
| Output voltage        | 1–15 kV                          |
| Light source          | LED (310 nm)                     |
| Fluorescence detector | PMT, 18 bit, >385nm              |
| Computer connection   | USB                              |
| Physical dimensions   | 30x38x40 cm                      |
| Weight                | 15 kg                            |

## ORDERING INFORMATION

| Product Code | Description   |
|--------------|---|
| GQ2000       | Gly-Q Glycan Analysis System  |
| GX96-IQ      | Gly-X with InstantQ Kit (96-ct)                                     |
| GX24-IQ      | Gly-X with InstantQ Kit (24-ct)                                     |
| GX96-302IQ   | Gly-X with InstantQ Deglycosylation and Labeling Module Set (96-ct) |
| GX24-302IQ   | Gly-X with InstantQ Deglycosylation and Labeling Module Set (24-ct) |
| GX96-301     | Gly-X InstantQ Labeling Module (96-ct)                              |
| GX96-302     | Gly-X InstantQ Cleanup Module (96-ct)                               |
| GQ103        | Gly-Q Cartridge Module  |

## INSTANTQ-LABELED GLYCAN STANDARDS

| Product Code | Description                         |
|--------------|-------------------------------------|
| GKSQ-503     | Gly-Q GU Ladder                     |
| GKSQ-500     | InstantQ Migration Standards        |
| GKSQ-005     | InstantQ Human IgG N-Glycan Library |



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