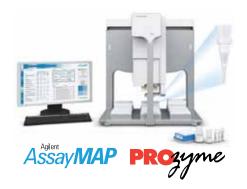


# Highlights

- Gold-standard N-glycan digestion, labeling, and cleanup chemistries in a reproducible, high throughput format
- Simple, interactive user interface for push button operation
- ProZyme state-of-the art modules for quantitative digestion, labeling, and cleanup of N-glycans



## Background

Glycosylation profiles play a critical role in the pharmacology of therapeutic proteins, affecting immunogenicity, pharmacokinetics, and pharmacodynamics. However, due to the complex nature of current manual sample preparation methods, spanning multiple days, analysis has been limited to samples that represent critical decision points. Improved data quality and greater throughput are needed to meet the increasingly rigorous regulatory demands for the development of biosilimars and novel biopharmaceuticals.

#### Introducing the AssayMAP Approach

Agilent Technologies and ProZyme now offer a combined solution for an intelligently automated N-glycan sample preparation workflow that delivers labeled N-glycan samples ready for analysis in hours. This solution is suitable for analysis using any standard instrument platform, dramatically increasing throughput, reproducibility, and reliability, without sacrificing critical data quality.

- Agilent AssayMAP sample preparation technology leverages the best in class liquid transfer capabilities of the Agilent Bravo Automated Liquid Handling Platform combined with AssayMAP cartridge technology to enable automation of complex sample preparation workflows with precise flow control.
- ProZyme's GlykoPrep-plus advanced reagent chemistries enable rapid digestion, labeling, and cleanup of N-glycans, with results that are quantitative, robust, and reproducible.



## Prepare high-quality N-glycan samples in hours

With the automated N-glycan solution from Agilent and ProZyme, you can save significant time over manual methods. First, the purified glycoprotein is denatured and immobilized on a hydrophobic cartridge. Next, N-glycanase enzyme selectively cleaves the N-linked glycans, which are eluted and labeled using a rapid reductive amidation chemistry. The excess dye and other reactants are removed using a hydrophilic interaction cartridge, and eluted ready for analysis by HPLC, CE, or LC/MS.











500

В 450

Table 1. Comparison of traditional manual methods with the AssayMAP-GlykoPrep combined automated solution.

N-glycan workflow	% CVs - total yield	Hands-on time	Number of samples
Automated GlykoPrep- <i>plus</i>	~ 5 %	+	8-96
Traditional manual methods	~ 25 %	++++	1-20

Figure 1. ProZyme's GlykoPrep-plus workflow automated by AssayMAP.

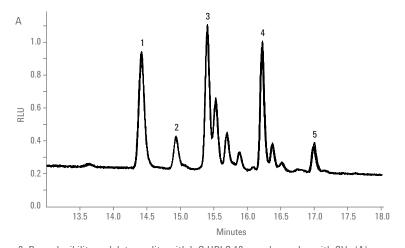
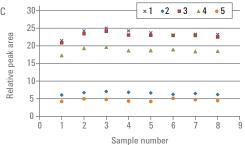


Figure 2. Reproducibility and data quality with IgG HPLC 12 sample overlay with CVs (A), total peak area scatter gram (B) and relative peak area scatter gram (C).

#### 400 area (x1000) 350 300 250 **Total** peak 200 150 100 50 0 Sample number С 30-

% CV= 4.1



### **Ordering information**

This solution is offered in collaboration with ProZyme. Contact your Agilent automation product specialist or ProZyme, and learn how this technology can increase your N-glycan sample preparation throughput.

Maker	Component	Description	Contact info
Agilent Technologies	Bravo platform for AssayMAP	Bravo liquid handler with AM Bravo head, configured for N-glycan sample prep	Americas, Asia/Pacific: orders.automation@agilent.com or 1-866-428-9811 Europe, Middle East, Africa: orders.automation@agilent.com or +44 (0)1763 853638
ProZyme	GlykoPrep-plus rapid N-glycan preparation	Modules for digestion, labeling, and clean up	Americas: www.prozyme.com,orders@prozyme.com or 1-800-457-9444 Europe: www.europa-bioproducts.com, info@europa-bioproducts.com or +44 (0)1353 721118

#### www.agilent.com/lifesciences/AssayMAP

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