

Accurate Analysis. Accelerated Results.

**Innovations in Glycan Analysis
with the C100_{HT}, PA 800 Plus, LC-MS and CESI-MS**



Rapid, Precise Glycan Analysis

SCIEX offers high throughput semi-quantitative glycan screening for clone selection and process control as well as fast glycan analysis for biologics characterization from standard mAbs to complex proteins – all using the same award-winning chemistry.

In addition, SCIEX LC-MS and CESI-MS solutions can accurately determine intact and subunit level glycoprotein profiles for comparability reasons, as well as obtain site specific glycan information at the peptide level.

Simplify your Workflow One Chemistry from Clone Selection Through QC

Resolve Critical Microheterogeneity Information with Fast Glycan Technology

Glycosylation is critical for the efficacy, clearance, and immunogenicity of biologics. Incorrect glycan species associated with a biologic, like a monoclonal antibody (mAb), can lead to an increase and/or decrease in antibody or complement dependent cellular cytotoxicity. SCIEX Fast Glycan Technology gives you the power to rapidly resolve microheterogeneity and helps you profile glycans that could lead to changes in function, efficacy and clearance of a biologic.



Sciex Award-Winning Fast Glycan Technology Takes You from Intact Proteins to Glycans with Sample Prep

- as quick as about an hour for a few samples
- or in <2 hours for 96 samples, using automation

With software that provides Immediate Glycan Identification.

Make Confident Decisions on Clone Selection and Cell Culture Optimization in Real-time

Easily Screen Large Sample Cohorts, with the C100HT Biologics Analyzer

Just mouse over any well and see why the sample passed (green) compared to your acceptance criteria, or failed (red). Parameters can be easily changed if desired.

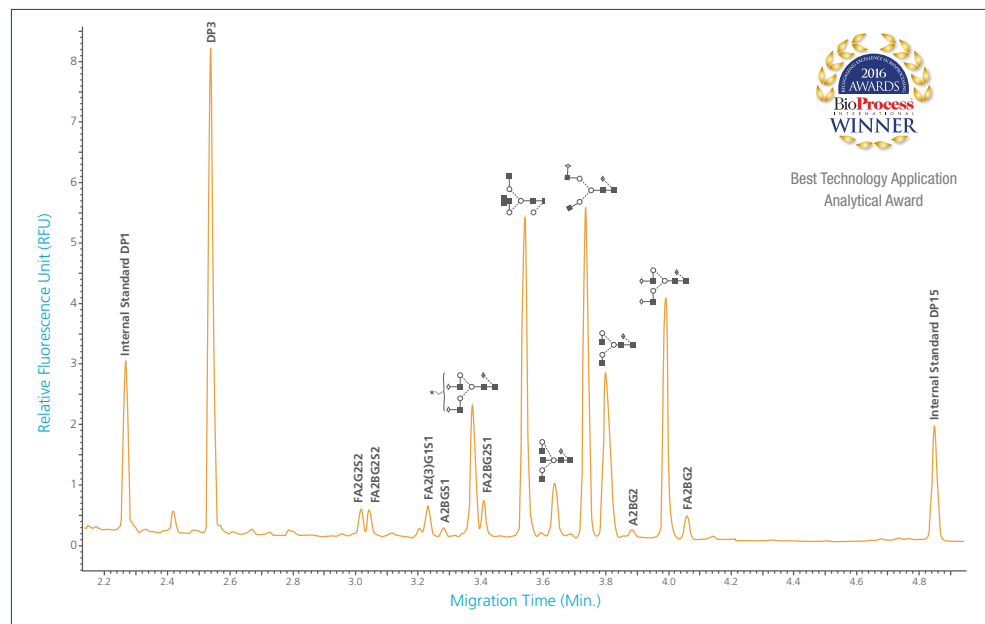


Characterize Glycans in Record Time

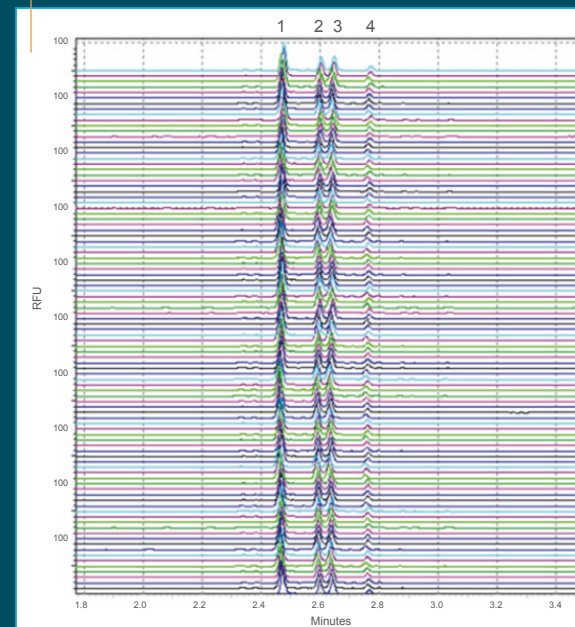
Glycoprotein to Identified Glycans within 90 minutes

When paired with the PA 800 Plus, SCIEX Fast Glycan Labeling and Analysis technology delivers rapid glycan heterogeneity identification, capable of profiling your glycans in record time.

Combining simplified sample preparation, rapid separations and automated glycan identification, you can make confident decisions quickly by running glycans up to five-times faster than HILIC – including sialylated N-glycans.



Get repeatable results with exclusive recirculating liquid coolant to control separation temperature.



Raw data illustrating rapid and highly reproducible CE-LIF analysis of APTS labeled IgG glycans prepared in a 96-well plate format using automated liquid handling.

Optimize your workflows through the use of automated sample preparation, resulting in high resolution separation data with excellent reproducibility across large sample sets.

Obtaining High Resolution Glycan Analysis Has Traditionally Required Patience

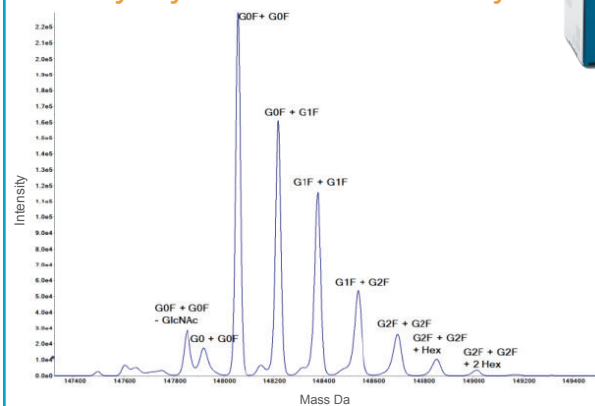
	HILIC UHPLC	Conventional CE	SCIEX Fast Glycan CE
Sample Prep	30-min to 24-hours	4-hours	1-hour
Separation Time	17- to 45-min	15- to 20-min	5-min
Immediate ID	—	—	✓

Comprehensively Characterize Your Glycosylated Proteins Using LC-MS Technologies

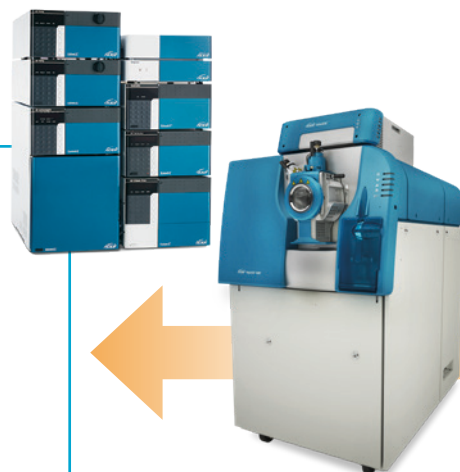
For intact glycoprotein analysis, or glycopeptide profiling and identification, our high-resolution MS systems provide the comprehensive data to make critical decisions.

Rapidly profile intact protein glycoforms and obtain accurate protein mass information. Learn more in the [Technical Note](#).

Glycosylated Intact Protein Analysis



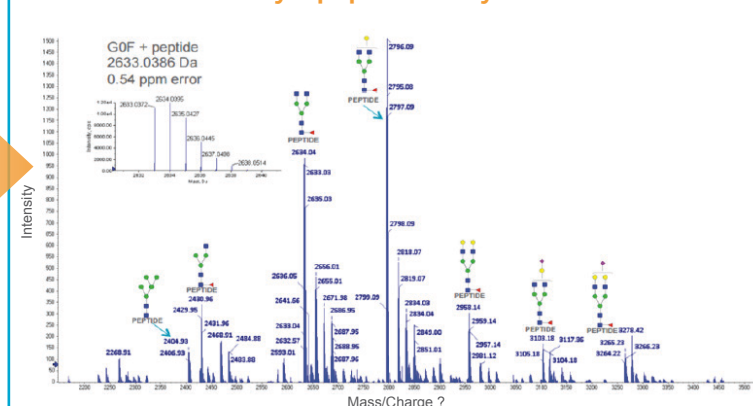
Detection of low abundance intact infliximab mAb glycoprotein forms.



Detect intact glycosylated protein isoforms, or protease digested glycopeptides with high accuracy and sensitivity on the high resolution, accurate mass TripleTOF® 6600 or X500B QTOF LC-MS systems.

Profile glycopeptide forms and identify specific glycopeptide species for comprehensive protein characterization.

Glycopeptide Analysis

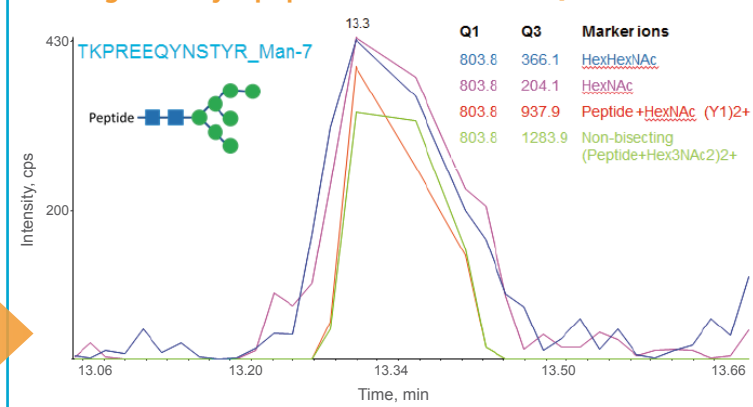


Detection of a set of glycopeptides from a therapeutic mAb.

Identify and quantify specific glycopeptides, using unique targeted MRM transitions for enhanced selectivity, on QTRAP LC-MS Systems. Learn more in the [Technical Note](#).



Targeted Glycopeptide Detection and Quantitation



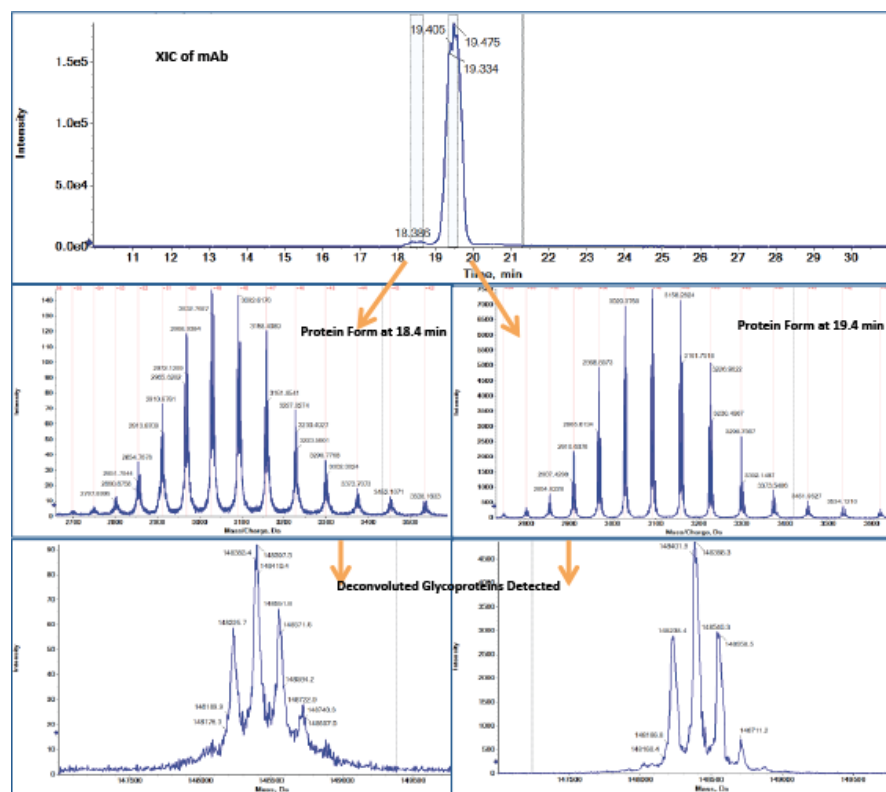
Example targeted analysis of TKPREEQYNSTYR_Man-7 glycopeptide from an antibody digest using specific MRM marker ions.

Uncover What You May Be Missing with CESI-MS

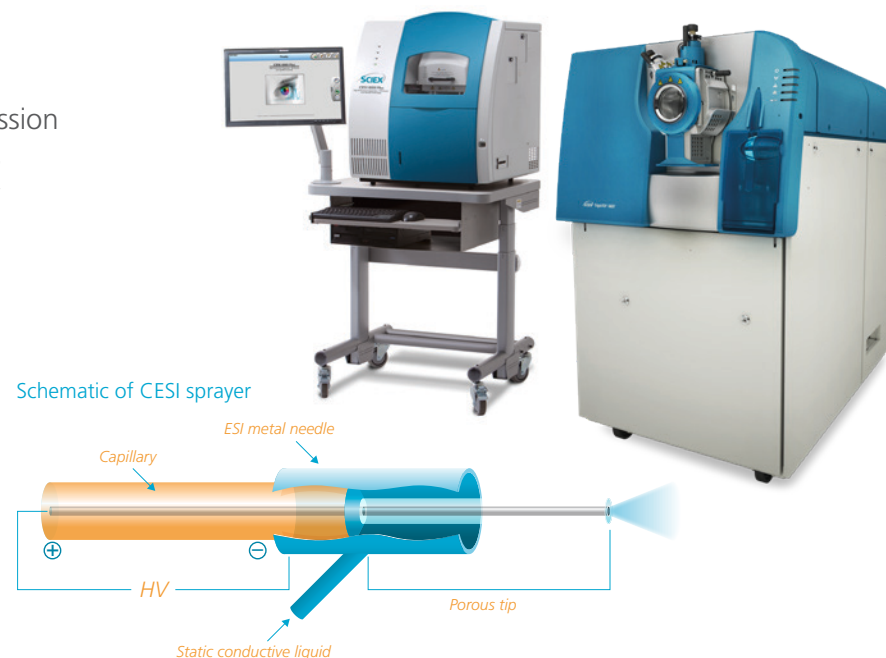
Enhanced resolution combined with superior sensitivity and reduced ion suppression of CESI separation using the Neutral OptiMS capillary, coupled to accurate mass TripleTOF® 5600+ or 6600 MS systems, ensure that you will be seeing even low abundance forms at the intact glycoprotein and glycopeptide levels.

See both major and minor glycoprotein charge variants using CESI separation, allowing for a more thorough analysis and characterization of the protein product. (Additional publication).

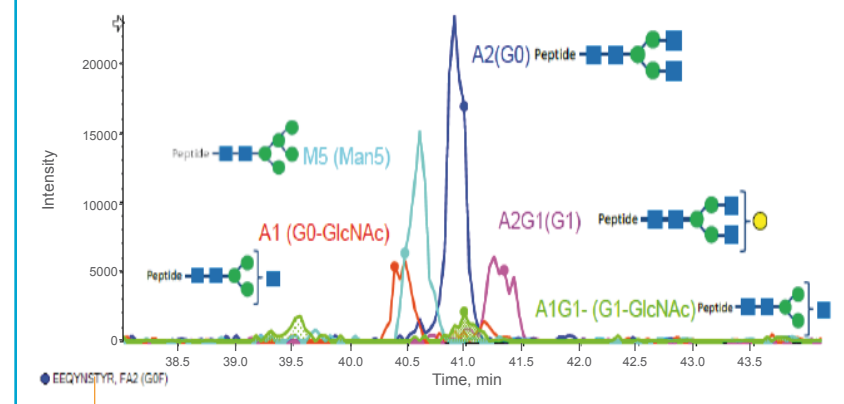
Glycosylated Intact Protein Analysis



Separation and detection of two glycoprotein charge variants with different isoelectric points (18.4 min and 19.4 min). Each protein form was able to be effectively deconvoluted, showing associated glycoforms.



Glycopeptide Analysis



Separation and detection of a set of glycopeptides from trastuzumab biotherapeutic using CESI 8000 and TripleTOF 5600+ system.

Separate and identify low abundance glycopeptides from biotherapeutics, helping you achieve 100% sequence coverage and a more clear picture of your protein forms in a single run. Learn more in the [Technical Note](#). (Additional publication).

It's Time to Reduce Complexity in Biologics Characterization

Glycan Analysis is part of the SCIEX 360° solution for Biologics Characterization. You can advance your characterization workflows with our full-circle product portfolio, including application-focused systems, software and services designed specifically for biologics analyses. SCIEX innovation can help you speed routine tasks as well as simplify your most complex characterization challenges. Now you can achieve insights faster and with greater confidence than you ever thought possible. Find out more at sciex.com/biologics-characterization.



Notable Publications and Tech Notes

Multi-Site N-glycan mapping study 1: Capillary electrophoresis – laser induced fluorescence

High Resolution and high speed glycan analysis for microheterogeneity determination

Rapid sample preparation and analysis of monoclonal antibody Nglycans by magnetic bead technology and CE-LIF.

CE Separation of N-Linked Oligosaccharides Released From Recombinant Monoclonal Antibody.

Fully automated sample preparation with ultrafast N-glycosylation analysis of therapeutic antibodies.

High fidelity glycan sequencing using a combination of capillary electrophoresis and exoglycosidase digestion.

SCIEX Biologics Characterizations Solutions

SCIEX Biologics Analytical Characterization Compendium

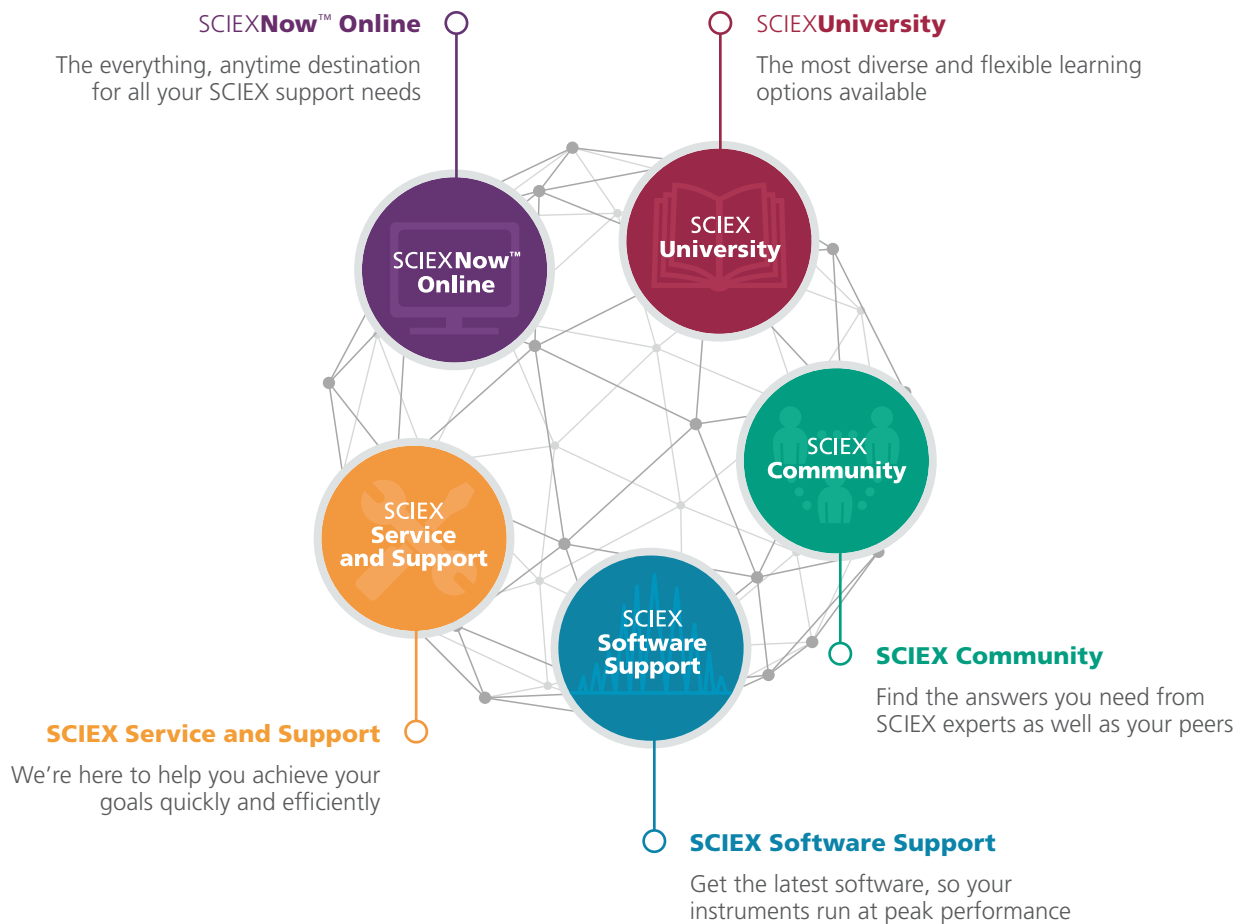
For an extensive collection of recorded webinars and events on CE, [click here](#)



In 2016 the US Pharmacopeial Convention (USP) published [Chapter <129>](#) describing application of CE-SDS and glycan analysis for the characterization of monoclonal antibodies.

Network Your Way to Success

Discover How the SCIEX Success Network Speeds and Simplifies Your Path to Answers



Start Your Path to Success Now: sciex.com/support

Answers for Science. Knowledge for Life.™

AB Sciex is doing business as SCIEX.

© 2018 AB Sciex. For Research Use Only. Not for use in diagnostic procedures. The trademarks mentioned herein are the property of AB Sciex Pte. Ltd. or their respective owners. AB SCIEX™ is being used under license.

RUO-MKT-03-4398-C 03/2018

Headquarters

500 Old Connecticut Path
Framingham, MA 01701 USA
Phone 508-383-7700
sciex.com

International Sales

For our office locations please call the division
headquarters or refer to our website at
sciex.com/offices

