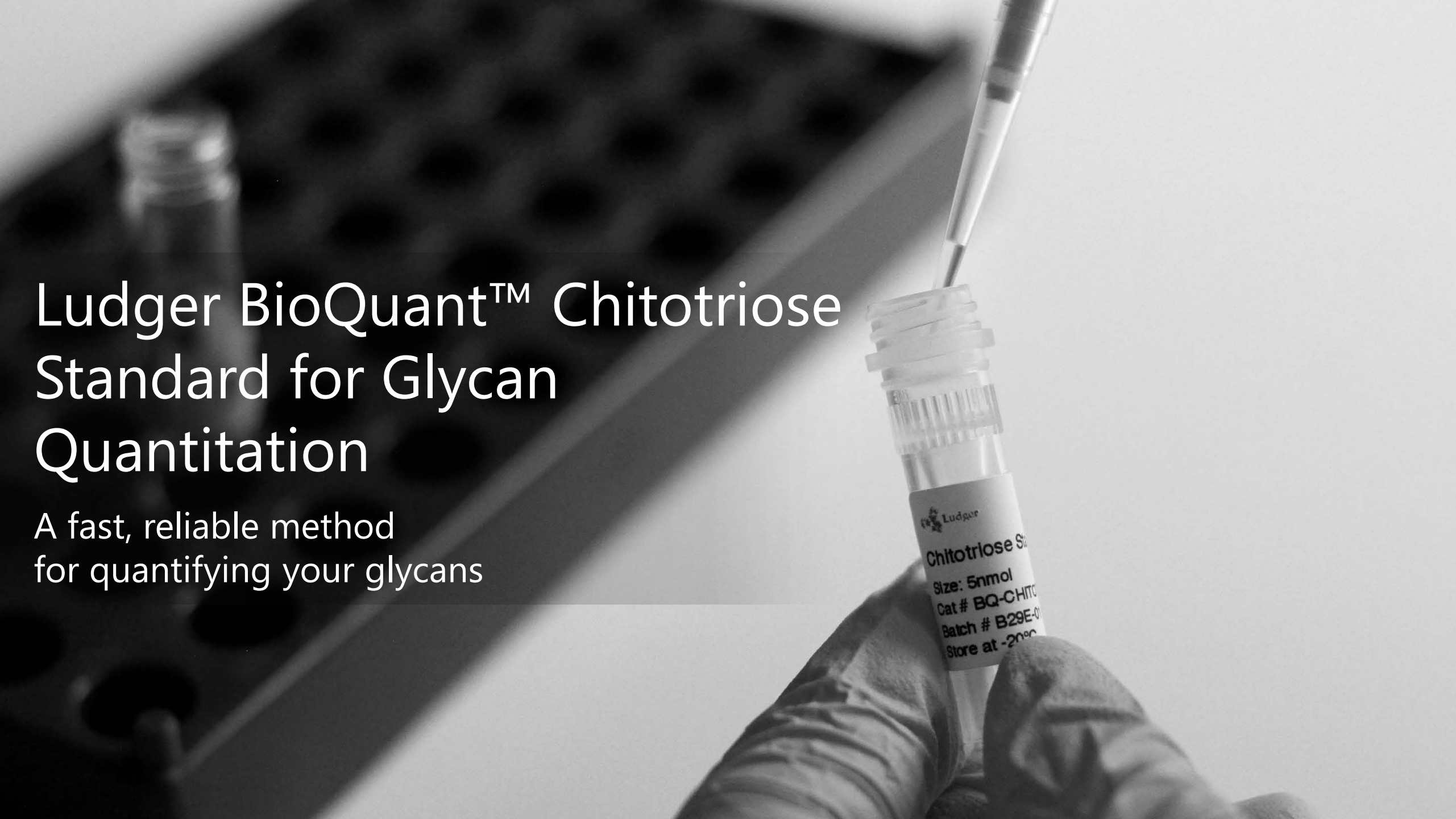
Ludger BioQuant™ Chitotriose Standard for Glycan Quantitation

A fast, reliable method
for quantifying your glycans



Highlights of the Chitotriose Standard System for Glycan Quantification

Regulatory Submissions

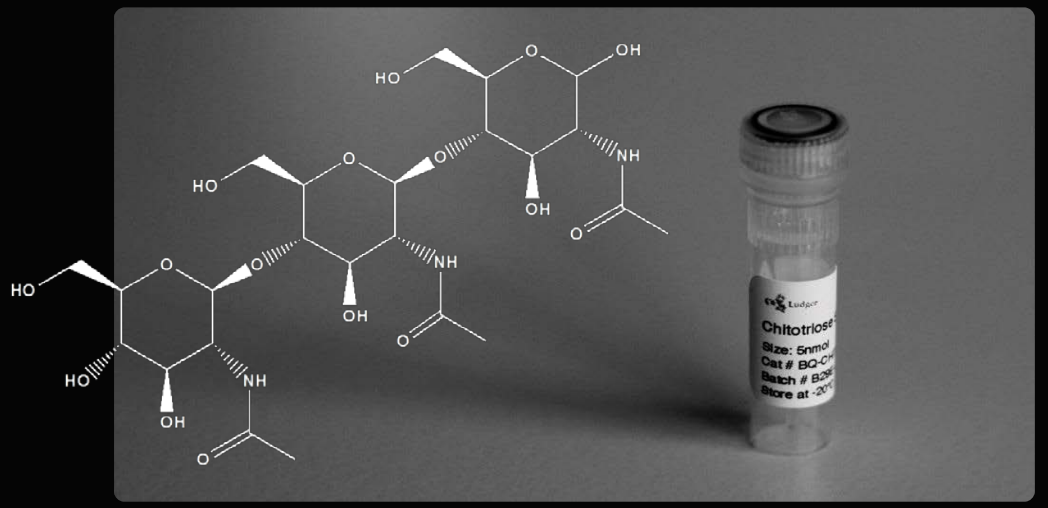
Support system suitability and drugs regulatory submission by demonstrating consistent and reproducible glycosylation levels

Reliable quantification method

Follows established glycan analysis techniques. Provides data comparable to gold-standard glycoprofiling methods based on Monosaccharide analysis

Part of the BioQuant Standard Range

Quantity of Chitotriose standard accurately determined using qNMR



Quick and Easy

Used in QC routine in-house to determine quantity of both bulk and dispensed glycans

Use as Internal or External Quantitative Standard

The Chitotriose standard can be spiked directly into your glycan sample or run in parallel

Integrates Easily With Fluorescent Labeling Workflows (eg. 2-AA and 2-AB)

Adds into your existing labeling workflow, without requiring any extra steps.

BQ-Chitotriose-01

Ludger BioQuant Chitotriose

Linear tri-N-acetylglucosamine quantitative standard

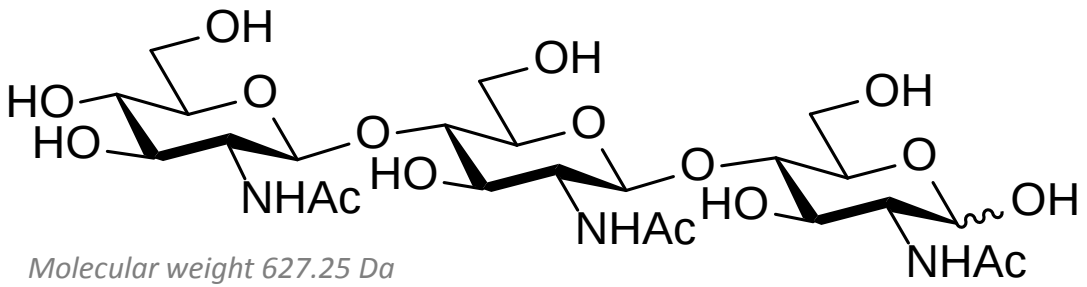
Accurate Quantity

Determined by quantitative NMR using BioQuant metrology

5nmols of the lyophilised standard supplied in a 0.5mL vial.

Ready for LudgerTag

The sugar has a free reducing end that readily accepts a fluorescent tag



Molecular weight 627.25 Da

Structure of BQ-Chitotriose-01 Standard

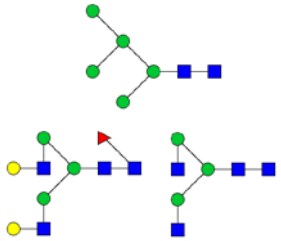
Oxford notation

CFG notation

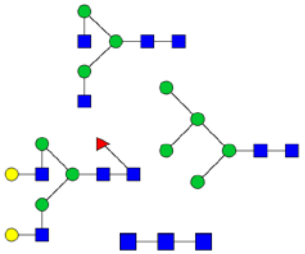
GlcNAc β 4 GlcNAc β 4 GlcNAc

Text notation

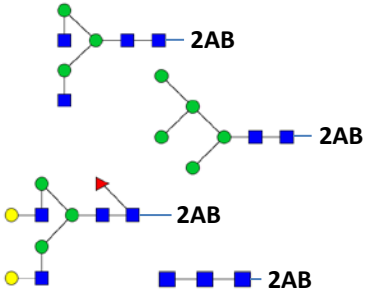
BioQuant Chitotriose Workflow



Glycan sample
Mixed or single N-glycans



Glycan sample
with Chitotriose spike



Mixture of
2AB labeled Glycans
and Chitotriose

HPLC Analysis
and Calculation

1. Chitotriose spike

Introduce the unknown amount of your glycan sample into the vial of Chitotriose

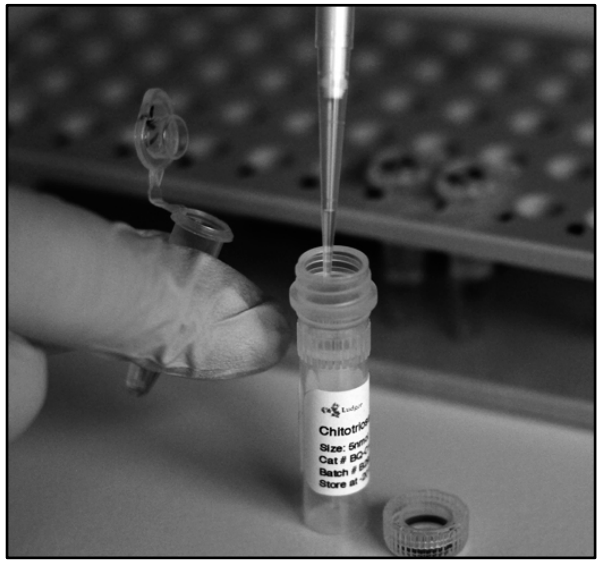
2. Fluorescent Labeling

(e.g. 2AB or 2AA)

3. Sample clean up

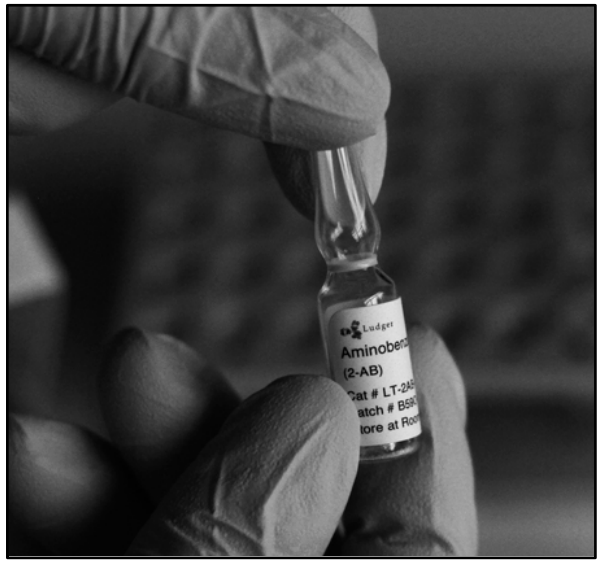
(e.g. S-cartridge or T1)

BioQuant Chitotriose Workflow - Components



1. Transfer your glycan sample into Chitotriose standard vial

Cat #. BQ-Chitotriose-01
Ludger BioQuant Chitotriose

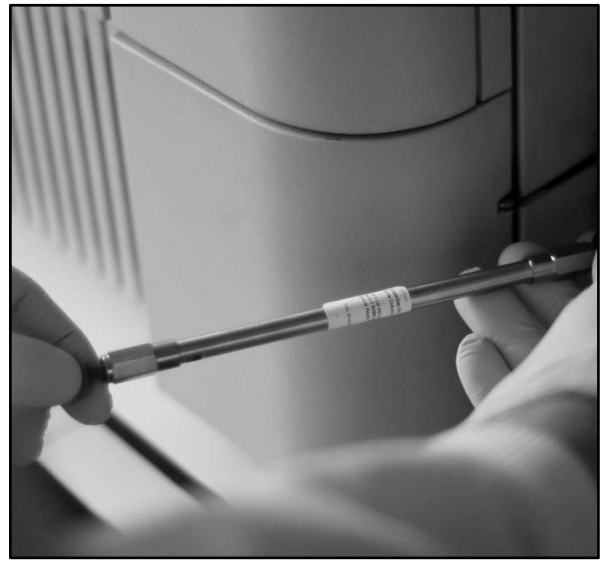


2. Fluorescently label the Chitotriose sample mixture

Cat #. LT-KAB-A2
LudgerTag 2-AB labeling kit
LT-KAA-A2
LudgerTag 2-AA labeling kit

3. Clean up samples using LC-S-A6 or LC-T1-A6

Cat #. LC-S-A6
LudgerClean S Cartridges
LC-T1-A6
LudgerClean T1 Cartridges

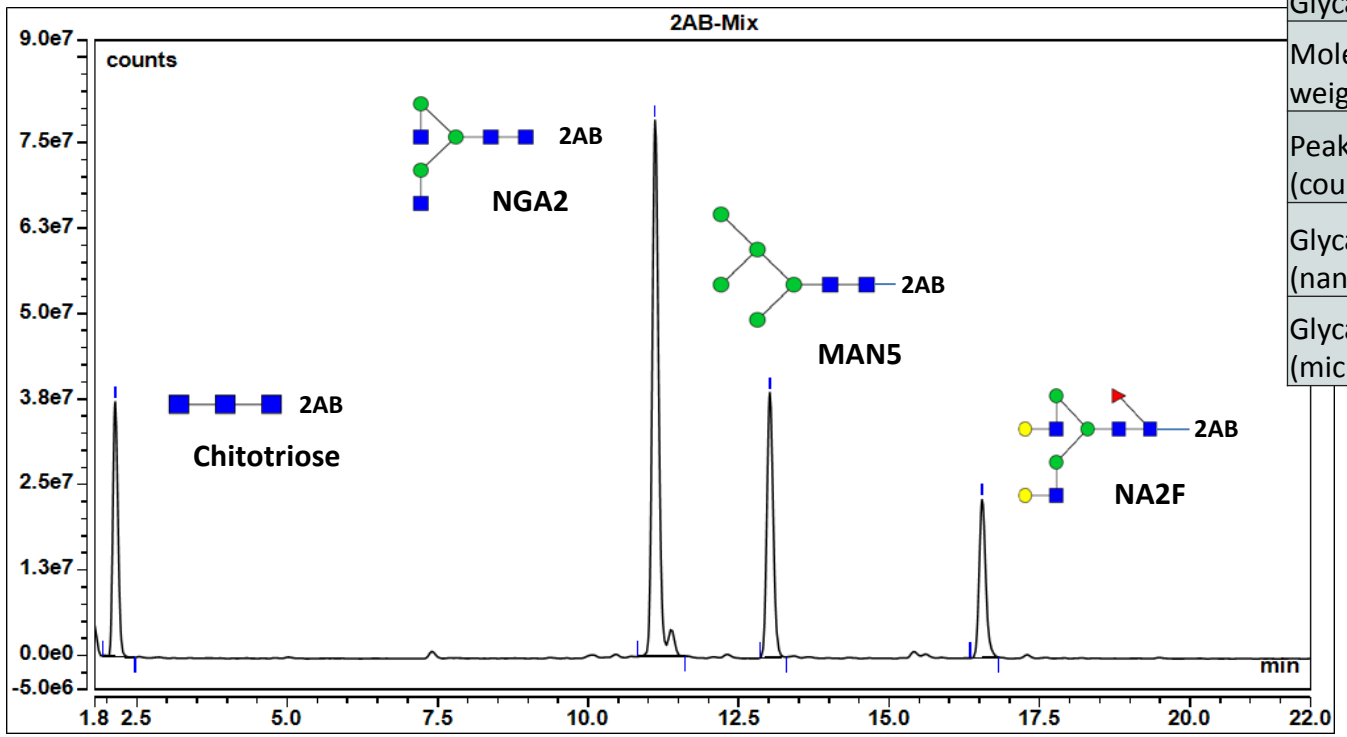


Analysis using HPLC/UHPLC

Cat #. LS-N2-4.6x150 and LS-N2-2.0x150
LudgerSep™ N2 High Resolution Amide HPLC Columns

BioQuant Chitotriose Data Analysis

UHPLC Quantitation



UHPLC profiles of mixed glycan sample with BQ-Chitotriose internal standard.

Peak Number	1	2	3	4
Glycan	**BQ-Chitotriose**	**NGA2**	**MAN5**	**NA2F**
Molecular weight (Da)	627	1317	1235	1788
Peak area (counts/min)	3241146	9416731	4301987	2685867
Glycan quantity (nanomoles)	5.00	14.53	6.64	4.14
Glycan quantity (micrograms)	3.1	**19.1**	**8.2**	**7.4**

Glycan quantitation using the peak area of the BQ-Chitotriose and the glycans

$$\frac{\textit{Peak area of Glycan}}{\textit{Peak area of Chitotriose}} \times \textit{Chitotriose quantity (nmol)} = \textit{Glycan quantity (nmol)}$$

Example of calculation used to determine glycan quantity of the 3 analytes

Mixture of 3 labeled glycan analytes with the BQ-Chitotriose used as an Internal standard.
The quantities are then determined by a comparison of the peak areas in the chromatogram

Next Steps…

If you have a question

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Request a quotation

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