

# 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

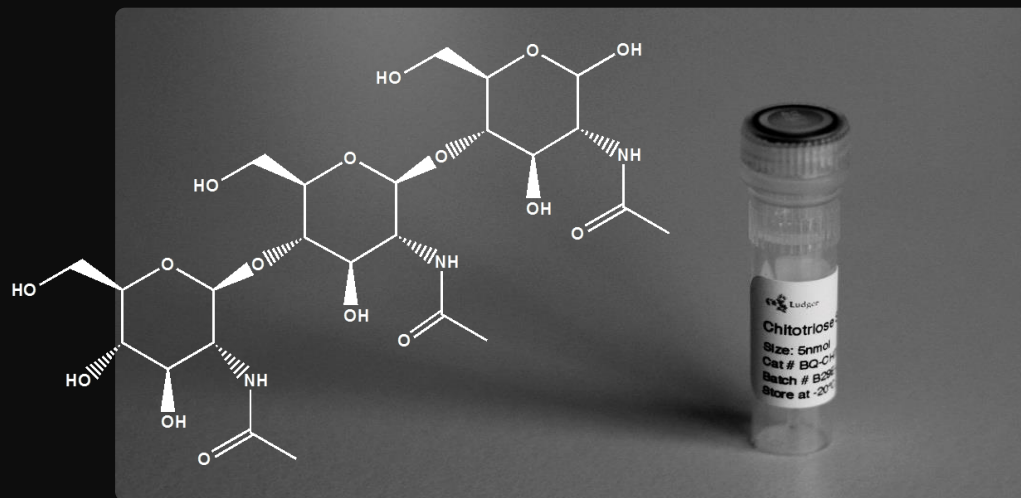
*Support system suitability and drugs regulatory submission by demonstrating consistent and reproducible glycosylation levels*

## 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*

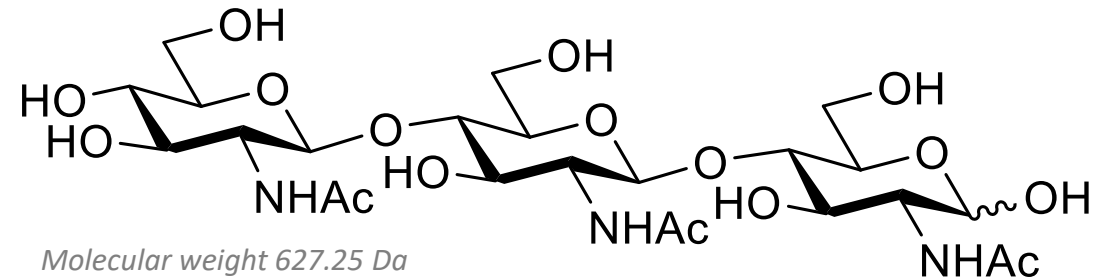
### Accurate Quantity

*Determined by quantitative NMR using BioQuant metrology*

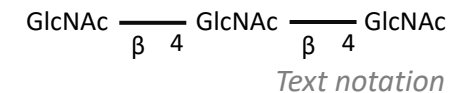
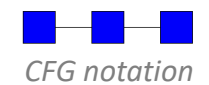
*5nmols of the lyophilised standard supplied in a 0.5mL vial.*

### Ready for LudgerTag

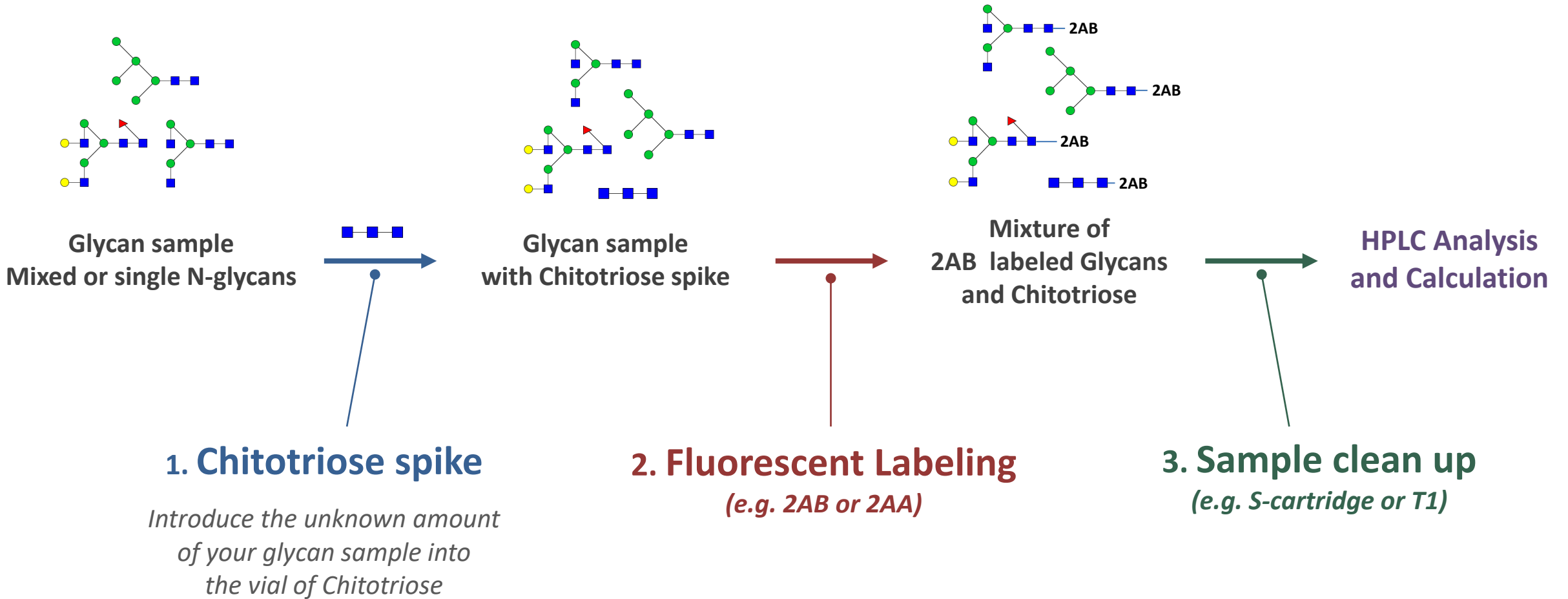
*The sugar has a free reducing end that readily accepts a fluorescent tag*



*Structure of BQ-Chitotriose-01 Standard*



# BioQuant Chitotriose Workflow





# 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*

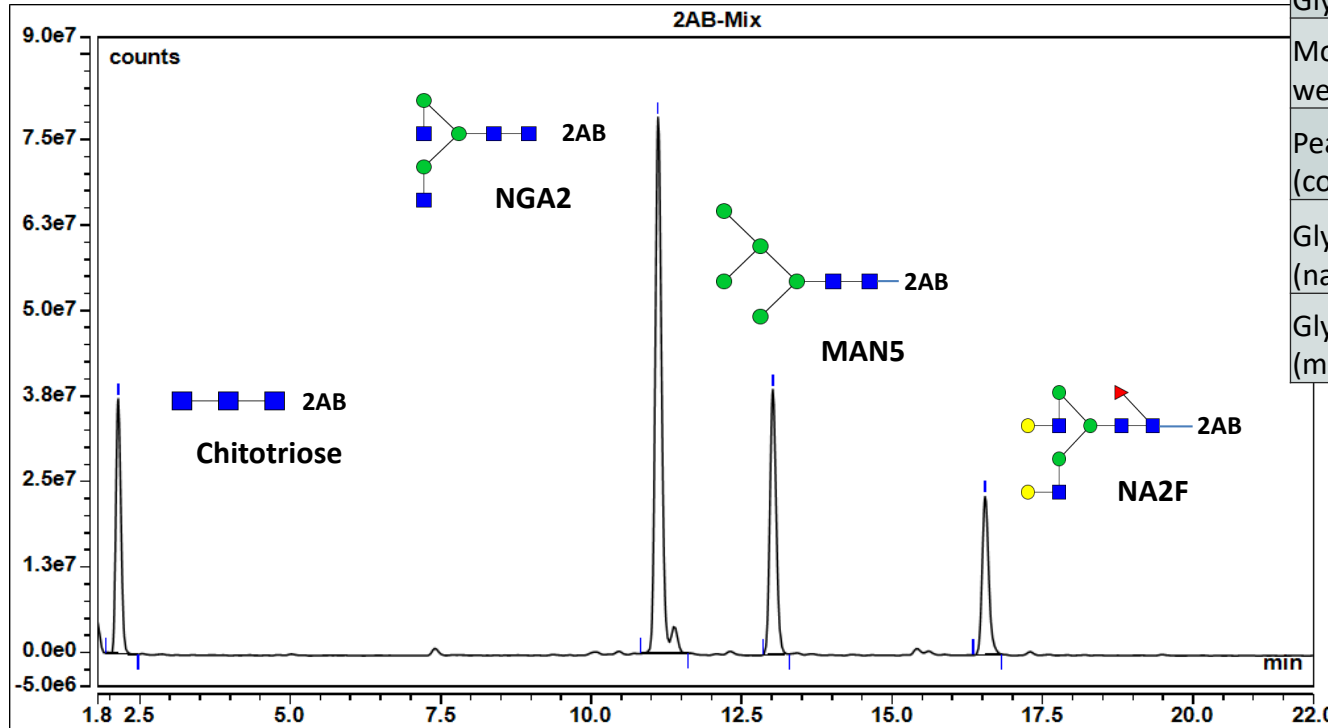


## Analysis using HPLC/UHPLC

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

# BioQuant Chitotriose Data Analysis

## UHPLC Quantitation



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	<b>19.1</b>	<b>8.2</b>	<b>7.4</b>

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

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

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

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

*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



CLICK  
to contact  
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Request a quotation



CLICK  
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