



Certificate of Analysis

LudgerTag Sialic Acid DMB Labeling Kit

Cat. #: LT-KDMB-A1

Batch #: B6B3-01

Size: 1 set of labeling reagents per kit

This kit conforms to the specifications given in Ludger document # LT-KDMB-A1-Guide.

Each kit contains the following components:

Quantity per Kit	Catalogue number	Batch number	Component Name
2	LT-ACETIC2M-01	B6AP-02	AceticAcid 2Molar
1	LT-MERCAPTO-01	B6AQ-01	Mercaptoethanol
1	LT-DITHIO-01	B6AR-01	Sodium Dithionite
1	LT-DMB-01	B6AO-01	DMB Dye
1	CM-SRP-01	B69E-01	Sialic Acid Reference Panel
1	CM-NEUAC-01	B696-01	N-Acetyl Neuraminic acid
1	CM-NEUGC-01	B6A4-01	N-Glycolyl Neuraminic acid

Expiry Date: October 2018

Sialic Acid Reference Panel

Cat. #: CM-SRP-01

Batch: B69E-01

Size: approx. 1.25 nmols

The sialic acid reference panel is a mixture of different sialic acids forms (as detailed on chromatogram below) sourced from bovine submaxillary mucin.

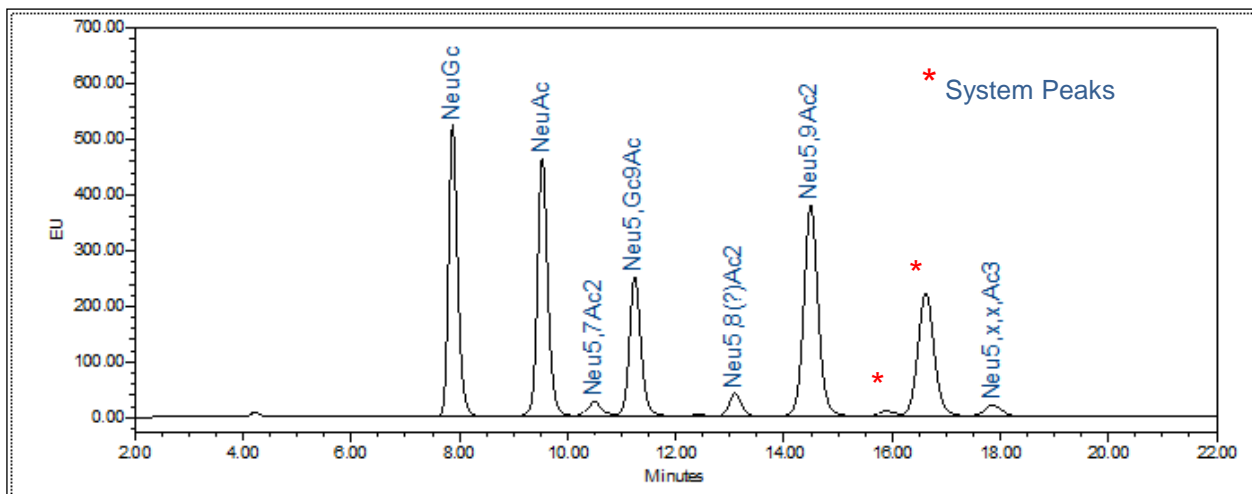


Figure 1: LudgerSep R1 HPLC profile of DMB labeled Sialic acid Reference Panel (Cat. #: CM-SRP-01, Batch B69E-01).

DMB labeled SRP peaks seen above eluted under the following HPLC conditions:

Column: LudgerSep R1 (LS-R1-4.6X150, B43I-04)

Flow: 0.5 ml/min.

Temperature: 30 °C

Solvent: Methanol:Acetonitrile:Water (7:9:84 v/v)

Fluorescence detector: Waters 2475 Excitation wavelength: 373 nm Emission wavelength: 448 nm

NeuAc Standard

Cat. #: CM-NEUAC-01

Batch: B696-01

Size: 1.05 ± 0.04 nmol

The N-acetylneuraminic acid standard is a quantitative standard of NIST-F and USP traceable Neu5Ac monosaccharide.

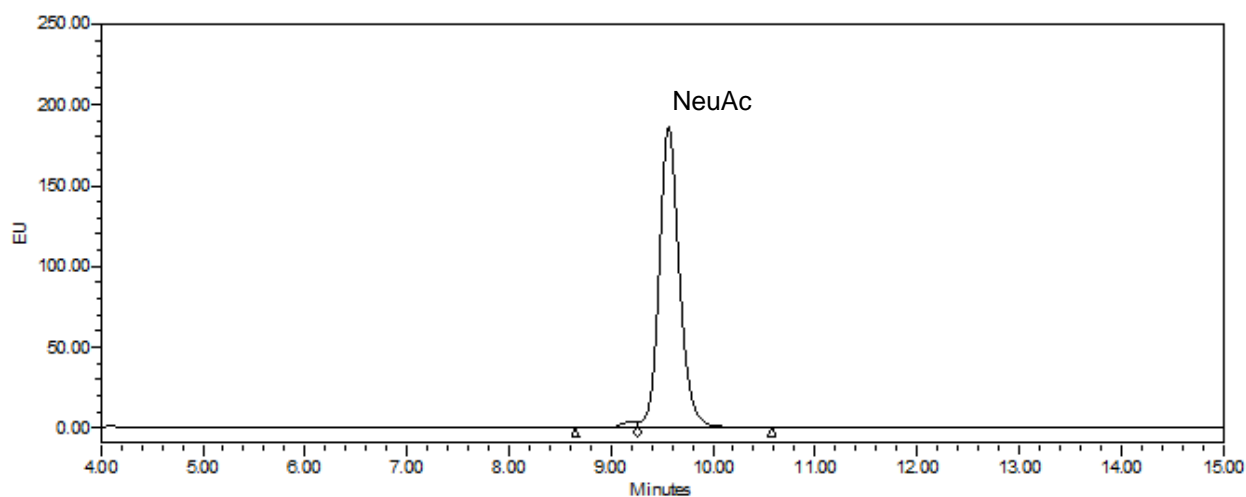
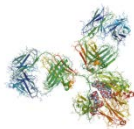


Figure 1: LudgerSep-uR2 HPLC profile of 1,2-diamino-4,5-methylenedioxybenzene.2HCl (DMB) labeled NeuAc standard (Cat. #: CM-NEUAC-01, Batch B696-01).

Accuracy: This analysis was performed on 12 vials of CM-NEUAC-01.

The dispensed amount was determined as 1.05 ± 0.04 nmol NeuAc per vial.

Values are in nmols $\pm 95\%$ confidence interval.



Ludger

DMB labeled sialic acid standards eluted under the following HPLC conditions:

Column: LudgerSep uR2 (Cat. #: LS-R2-4.6x150)

Flow: 0.5 ml/min.

Temperature: 30 °C

Solvent A: methanol:acetonitrile:water (7:9:84)

Solvent B: acetonitrile

Gradient:

Time (min)	%B
0.0	0.0
19.0	0.0
19.5	90.0
23.5	90.0
24.0	0.0
30.0	0.0
35.0	0.0

Detector: Fluorescence

Excitation wavelength: 373 nm

Emission wavelength: 448 nm

NeuGc Standard

Cat. #: CM-NEUGC-01

Batch: B6A4-01

Size: 1.07 ± 0.02 nmol

The N-glycolylneuraminic acid standard is a quantitative standard of NIST-F and USP traceable Neu5Gc monosaccharide.

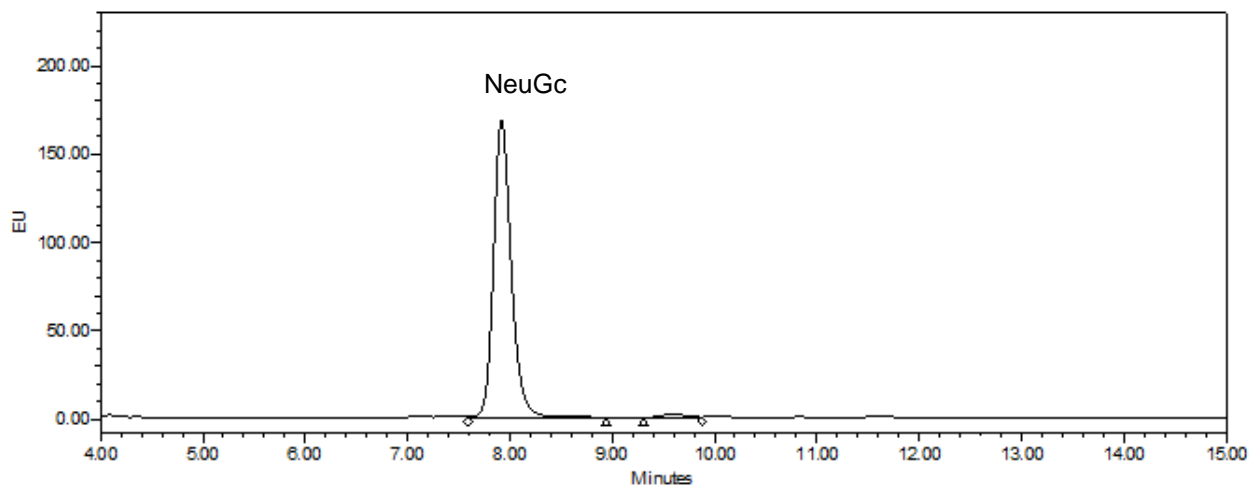
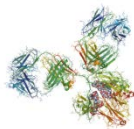


Figure 1: LudgerSep-uR2 HPLC profile of 1,2-diamino-4,5-methylenedioxybenzene.2HCl (DMB) labeled NeuGc standard (Cat. #: CM-NEUGC-01, Batch B6A4-01).

Accuracy: This analysis was performed on 12 vials of CM-NEUGC-01.

The dispensed amount was determined as 1.07 ± 0.02 nmol NeuGc per vial.

Values are in nmols $\pm 95\%$ confidence interval.



Ludger

DMB labeled sialic acid standards eluted under the following HPLC conditions:

Column: LudgerSep uR2 (Cat. #: LS-R2-4.6x150)

Flow: 0.5 ml/min.

Temperature: 30 °C

Solvent A: methanol:acetonitrile:water (7:9:84)

Solvent B: acetonitrile

Gradient:

Time (min)	%B
0.0	0.0
19.0	0.0
19.5	90.0
23.5	90.0
24.0	0.0
30.0	0.0
35.0	0.0

Detector: Fluorescence

Excitation wavelength: 373 nm

Emission wavelength: 448 nm