



Certificate of Conformity

LudgerTag Sialic Acid DMB Labeling Kit

Cat. #: LT-KDMB-A1

Batch #: B4A9-01

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	B4A8-02	AceticAcid 2Molar
1	LT-MERCAPTO-01	B465-01	Mercaptoethanol
1	LT-DITHIO-01	B42H-01	Sodium Dithionite
1	LT-DMB-01	B4A6-01	DMB Dye
1	CM-SRP-01	B425-01	Sialic Acid Reference Panel
1	CM-NEUAC-01	B3C5-02	N-Acetyl Neuraminic acid
1	CM-NEUGC-01	B3C9-02	N-Glycolyl Neuraminic acid

Expiry Date: 06th October 2016



Certificate of Analysis

NeuAc Standard

Cat. #: CM-NEUAC-01

Batch: B3C5-02

Size: 1.31 ± 0.03 nmol

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

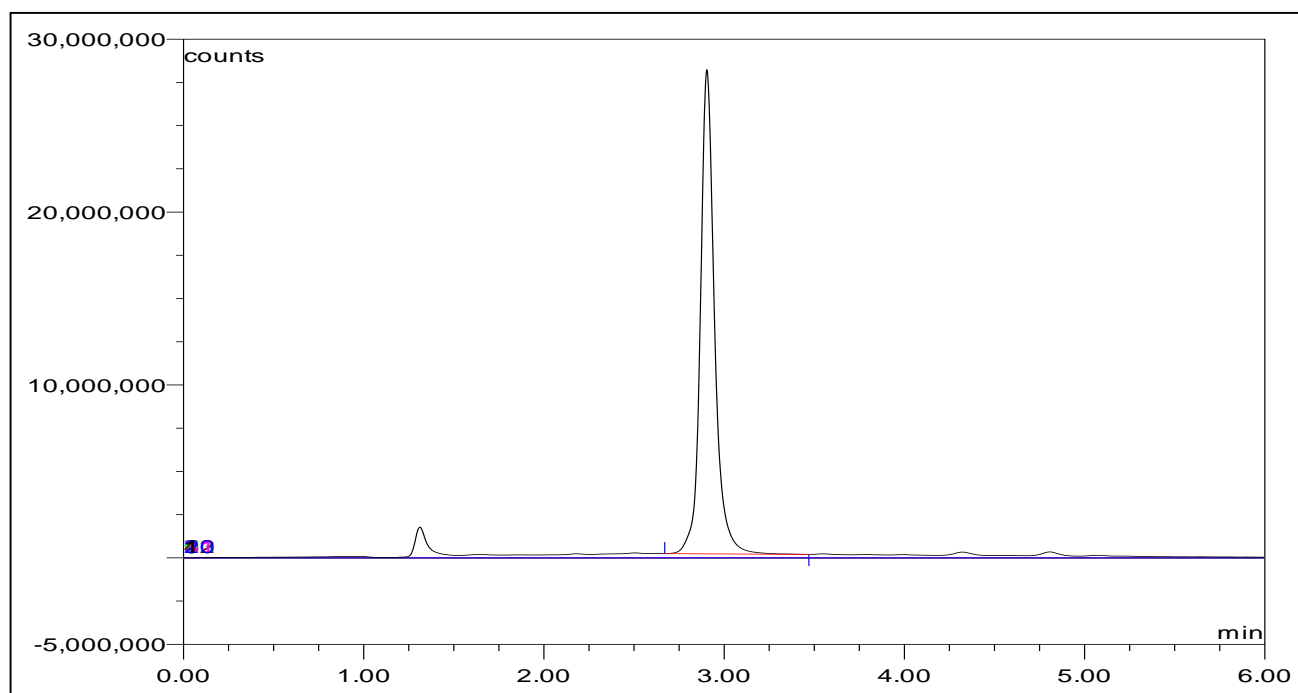


Figure 1: LudgerSep-uR2 HPLC profile of 1,2-diamino-4,5-methylenedioxybenzene.2HCl (DMB) labeled NeuAc standard (Cat. #: CM-NEUAC-01, Batch B3C5-02).

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

The dispensed amount was determined as 1.31 ± 0.03 Nmols NeuAc per vial*.

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

***NOTE:** this product was re-tested on 09 May 2014 against a qNMR quantified NeuAc standard. The quantity values was adjusted following this analysis to 1.31 ± 0.03 nmol.



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

Column: LudgerSep uR2 (Cat. #: LS-uR2-2.1x100)

Flow: 0.25 ml/min.

Temperature: 30 °C

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

Gradient: 0-10 min: 100% Solvent A

HPLC: Dionex U3000 UHPLC Detector: U3000 FD

Excitation wavelength: 373 nm Emission wavelength: 448 nm



Certificate of Analysis

NeuGc Standard

Cat. #: CM-NEUGC-01

Batch: B3C9-02

Size: 1.13 ± 0.02 nmol

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

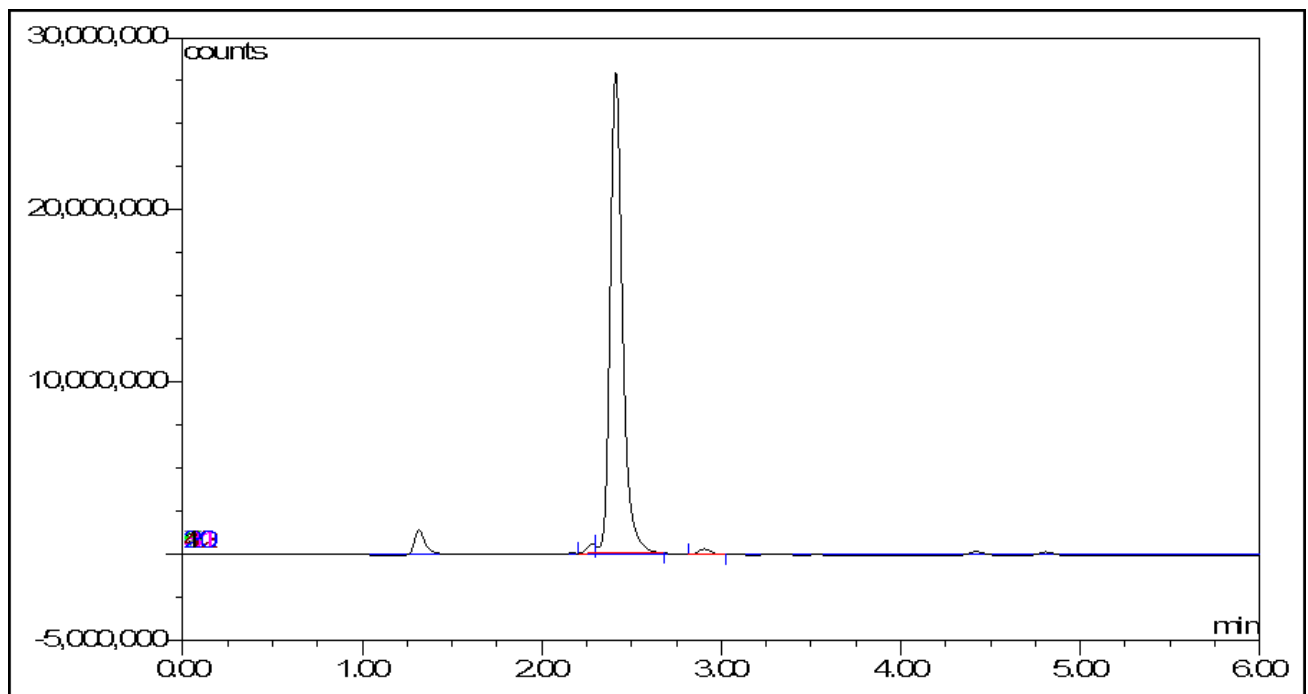


Figure 1: LudgerSep-uR2 HPLC profile of 1,2-diamino-4,5-methylenedioxybenzene.2HCl (DMB) labeled NeuGc standard (Cat. #: CM-NEUGC-01, Batch B3C9-02).

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

The dispensed amount was determined as 1.13 ± 0.02 Nmole NeuGc per vial.

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



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

Column: LudgerSep uR2 (Cat. #: LS-uR2-2.1x100)

Flow: 0.25 ml/min.

Temperature: 30 °C

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

Gradient: 0-10 min: 100% Solvent A

HPLC: Dionex U3000 UHPLC Detector: U3000 FD

Excitation wavelength: 373 nm Emission wavelength: 448 nm

Certificate of Analysis

Sialic Acid Reference Panel

Cat. #: CM-SRP-01

Batch: B425-01

Size: approx. 0.125 nmols

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

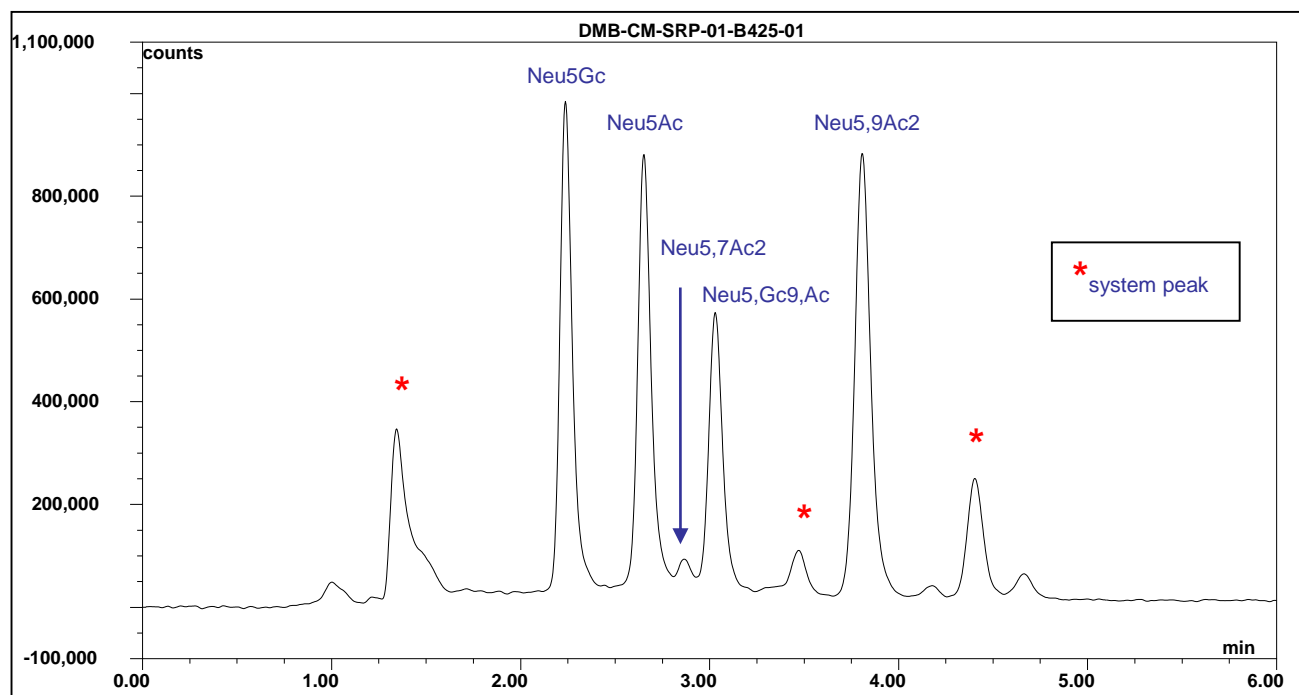


Figure 1: LudgerSep UR2 HPLC profile of DMB labeled Sialic acid Reference Panel (Cat. #: CM-SRP-01, Batch B425-01).

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

Column: LudgerSep UR2 (1.9 μ m, 2.1x100mm)

Flow: 0.35 ml/min.

Temperature: 30 °C

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

Fluorescence detector: Dionex U3000 Excitation wavelength: 373 nm Emission wavelength: 448 nm