

Certificate of Analysis

N-glycolylneuraminic Acid Standard

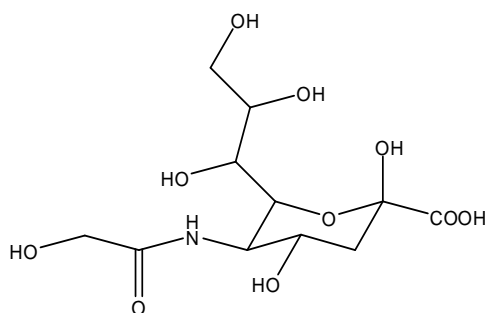
Cat. #: CM-NEUGC-100

Batch: B252-03

Expiry Date: 03 Aug 2022

Size: ~100 nmol

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



Chemical Formula: $C_{11}H_{19}NO_{10}$
Exact Mass: 325.10
Molecular Weight: 325.27
m/z: 325.10 (100.0%), 326.10 (12.3%), 327.11 (2.8%)
Elemental Analysis: C, 40.62; H, 5.89; N, 4.31; O, 49.19

The bulk concentration of NeuGc was calculated independently by weight and by quantitative Nuclear Magnetic Resonance (qNMR). (Table 1) The qNMR analysis was performed in triplicate.

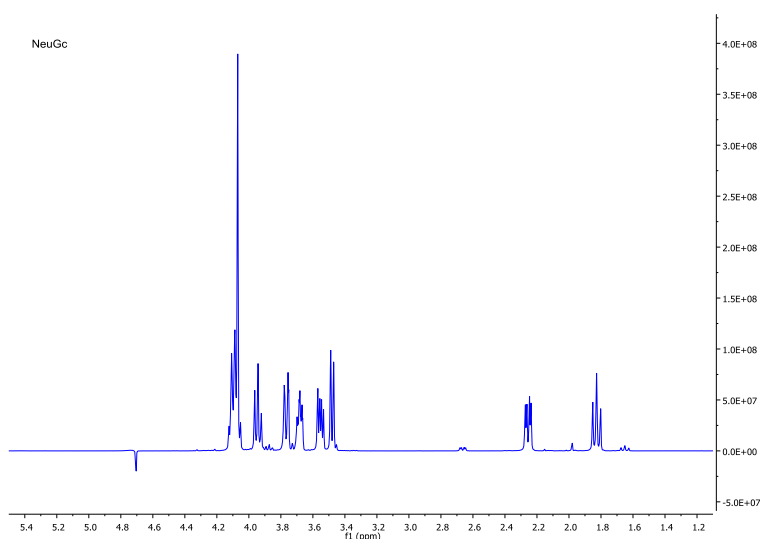


Figure 1. $^1\text{H-NMR}$ (500 MHz) of NeuGc in D_2O .

A: Concentration by weight (mM) of NeuGc Bulk	B: Concentration using by qNMR (mM) of NeuGc Bulk	(B/A Ratio)*100
31.170	30.790± 0.167	98.8

Table 1: Comparison between the concentrations calculated by weight and by qNMR of the NeuGc Bulk solution.

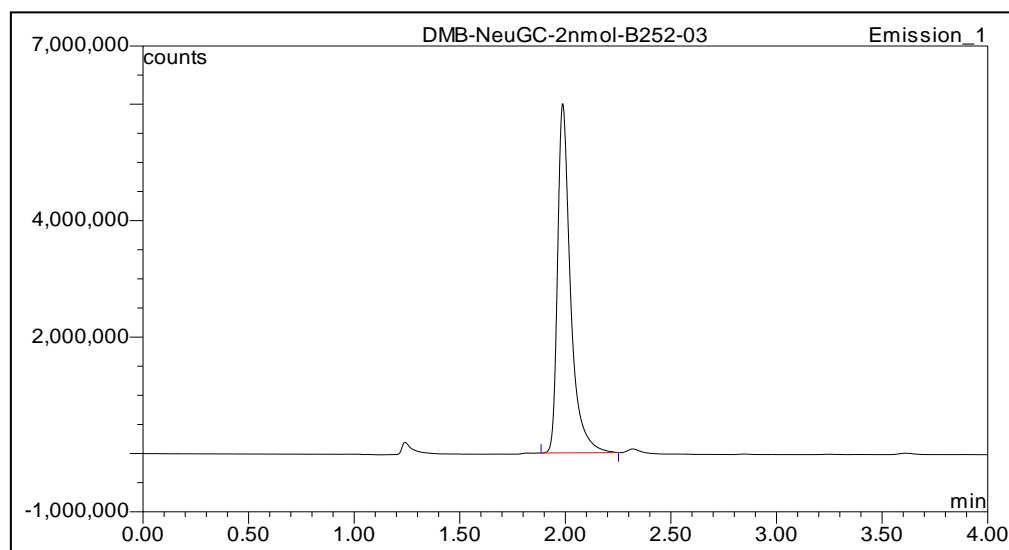


Figure 2. LudgerSep-uR2 HPLC profile of 1,2-diamino-4,5-methylenedioxybenzene.2HCl (DMB) labelled NeuAc standard (Cat. #: CM-NEU-GC-100, Batch B252-03)

This analysis was performed on 5 vials of CM-NEU-AC-100. 2 nmol were labelled. The dispensed pots were dissolved in 500 ml of water and the analysis was performed in 10 µl.

The dispensing error is predicted to be than less 5%.

DMB labelled 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