Systemic Investigation on Quinoxaline Derivatization of Sialic Acids and Their Quantitation Applicability using High Performance Liquid Chromatography
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Supporting Information

\textbf{Fig. S1} $^1$H-NMR kinetic spectra of Neu5Ac (SA) derivatization with OPD (A) and DMB (B) at 60 °C from 0 to 6 hr (in D$_2$O)

\textbf{Fig. S2} Fluorescent spectrum of Neu5Ac-DMBA derivative

\textbf{Fig. S3} The structure of Neu5Ac-DMBA derivative

\textbf{Fig. S4} $^1$H-NMR spectrum of Neu5Ac-DMBA derivative (in CD$_3$OD)

\textbf{Fig. S5} $^{13}$C-NMR spectrum of Neu5Ac-DMBA derivative (in CD$_3$OD)

\textbf{Fig. S6} HSQC spectrum of Neu5Ac-DMBA derivative (in CD$_3$OD)

\textbf{Fig. S7} HMBC spectrum of Neu5Ac-DMBA derivative (in CD$_3$OD)

\textbf{Table S1} $^1$H and $^{13}$C-NMR (in CD$_3$OD, 400 MHz) data of Neu5Ac-DMBA derivative

Electronic Supplementary Material (ESI) for RSC Advances.
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Fig. S1  $^1$H-NMR kinetic spectra of Neu5Ac (SA) derivatization with OPD (A) and DMB (B) at 60 °C from 0 to 6 hr. (in D$_2$O).
**Fig. S2** Fluorescent spectrum of Neu5Ac-DMBA derivative.
Fig. S3  The structure of compound Neu5Ac-DMBA: The standard Neu5Ac 50 mg was dissolved in 10 mL water, and mixed with 108 mg DMBA together with 0.8 mL acetic acid. The react solution was heated at 60 °C for 1 hr, and then using the lyophilizer (Labconco Corporation, Kansas, Missouri, USA) to dry the sample. The crud product (130 mg) was subjected to silica gel column (10 g), gradient eluted by CHCl₃: MeOH (15:1~1:1, v/v) to give the compound 1 (Neu5Ac-DMBA, 27 mg, 51.9%).
Fig. S4  $^1$H-NMR spectrum of Neu5Ac-DMBA derivative (in CD$_3$OD)
Fig. S5  $^{13}$C-NMR spectrum of Neu5Ac-DMBA derivative (in CD$_3$OD)
Fig. S6  HSQC spectrum of Neu5Ac-DMBA derivative (in CD$_3$OD)
Fig. S7  HMBC spectrum of Neu5Ac-DMBA derivative (in CD$_3$OD)
### Table S1  The NMR (in CD$_3$OD, 400 MHz) data of Neu5Ac-DMBA derivative

<table>
<thead>
<tr>
<th>Position</th>
<th>$^1$H-NMR ($J$, Hz)</th>
<th>$^{13}$C-NMR</th>
<th>$^1$H-$^1$H COSY</th>
<th>HMBC</th>
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<td>1</td>
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<td>3.20 (1H, m), 3.57 (1H, br.d, 4.9)</td>
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<td>C-2,4,5</td>
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<td>C-4,6,7, C=O</td>
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