

Supplementary Materials: Separation of the α - and β -Anomers of Carbohydrates by Diffusion-Ordered NMR Spectroscopy

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2. Results and Discussion

2.1. DOSY Separation of the α - and β -Anomeric Isomers of Glycopyranosides

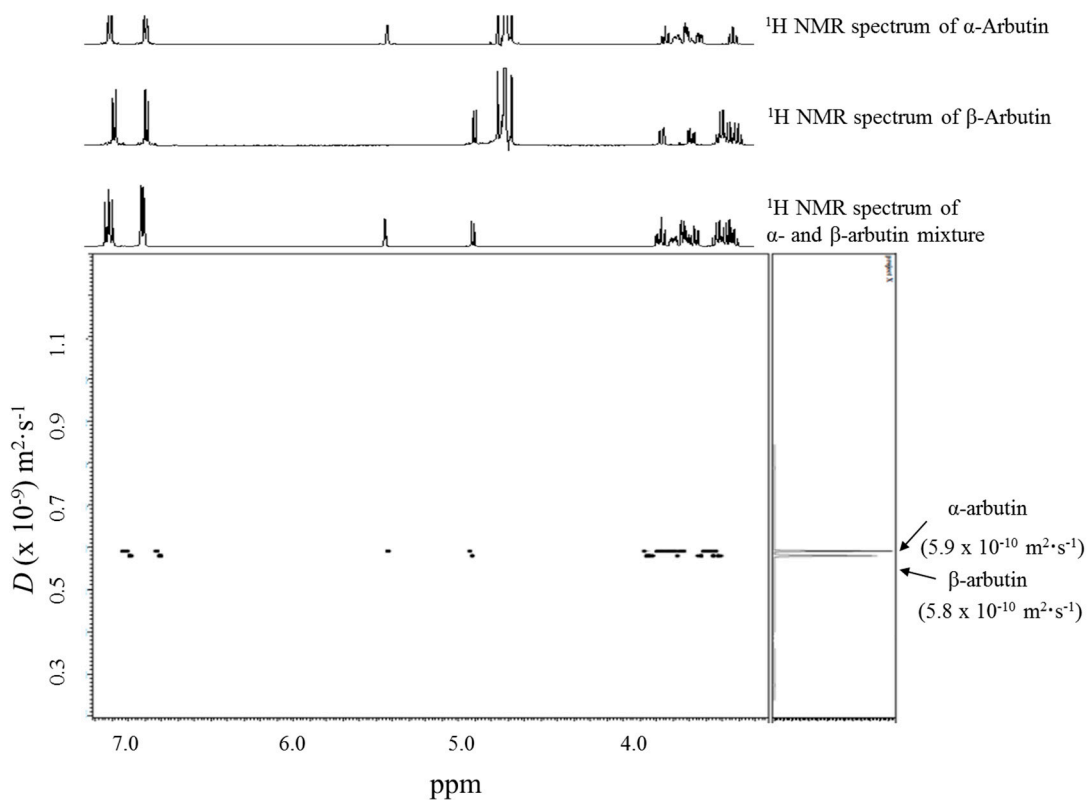


Figure S1. DOSY spectrum of a 10 mM α -arbutin and 10 mM β -arbutin mixture in D_2O at 30 °C.

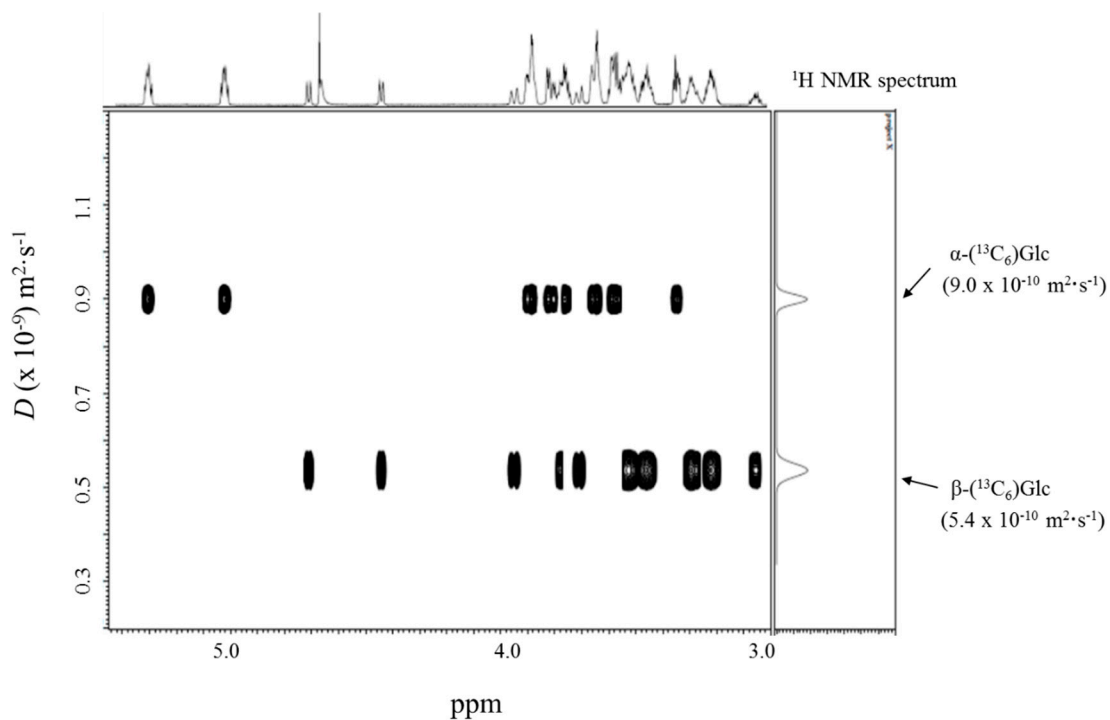
2.2. DOSY Separation of the α - and β -Anomeric Isomers of Glycopyranoses

Figure S2. DOSY spectrum of 20 mM $(^{13}\text{C}_6)\text{Glc}$ in D_2O at $30\text{ }^\circ\text{C}$. The signal of these two anomeric protons was split by the one bond coupling between C-1 and H-1: α -anomer: $J_{\text{C-1, H-1}} = 169.8 \text{ Hz}$; β -anomer: $J_{\text{C-1, H-1}} = 161.5 \text{ Hz}$.

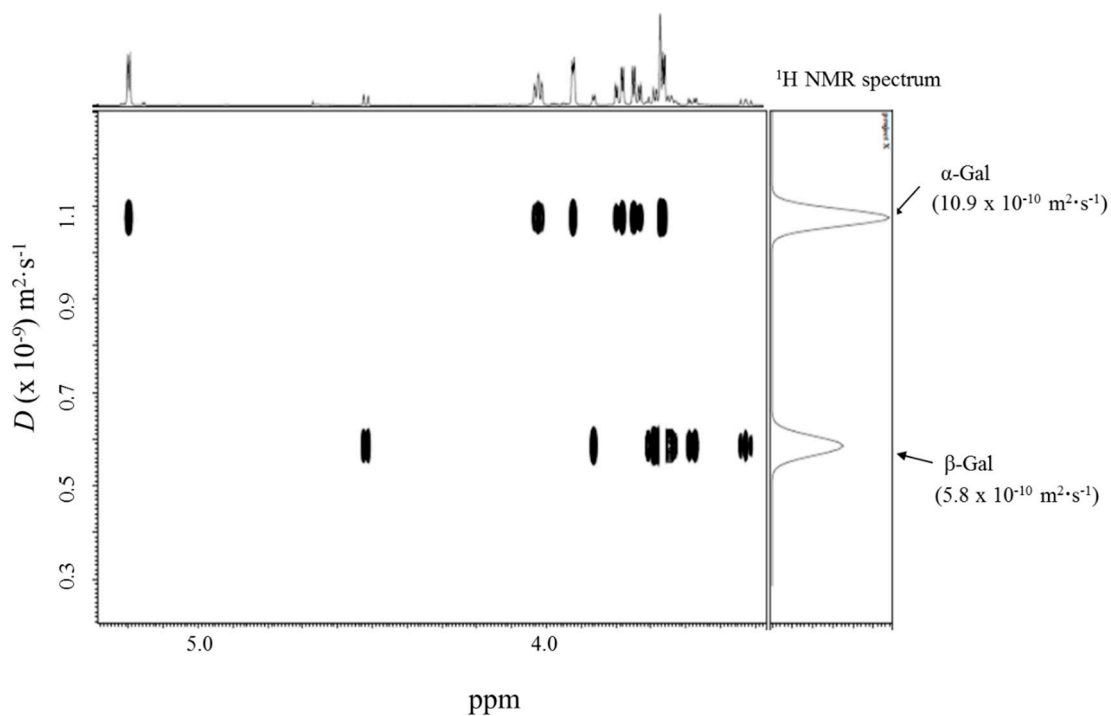


Figure S3. DOSY spectrum of 20 mM Gal in D_2O at $30\text{ }^\circ\text{C}$.

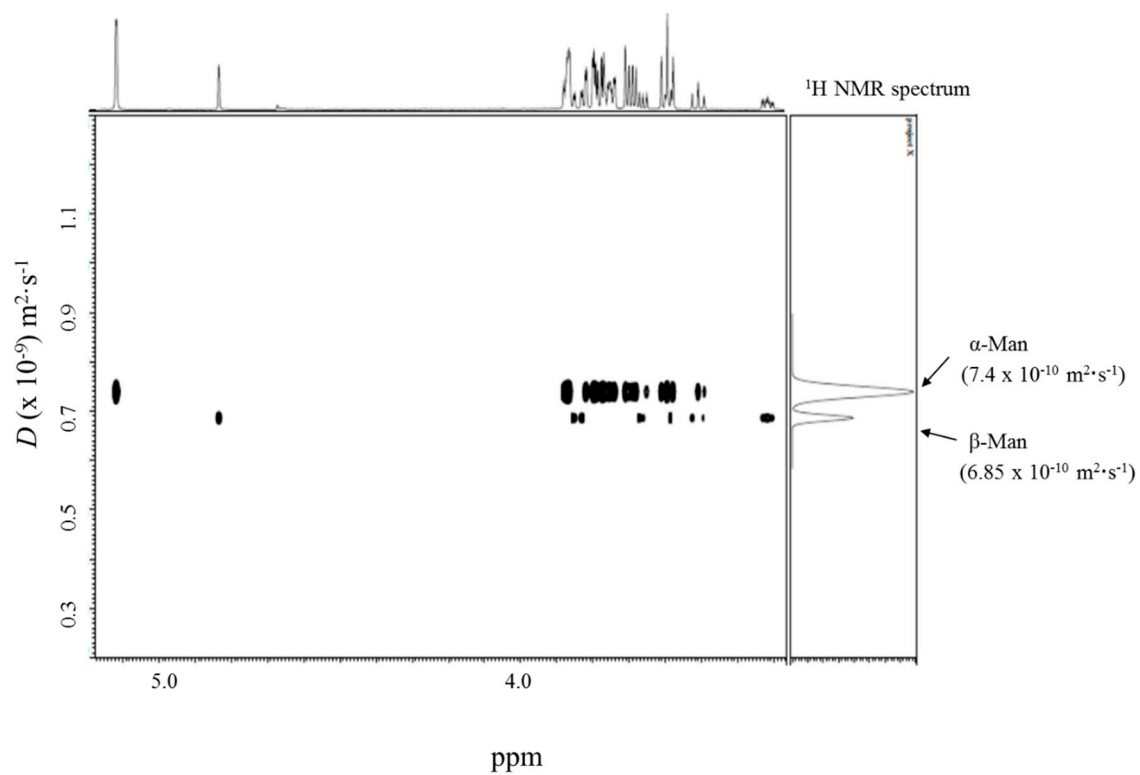


Figure S4. DOSY spectrum of 20 mM Man in D₂O at 30 °C.

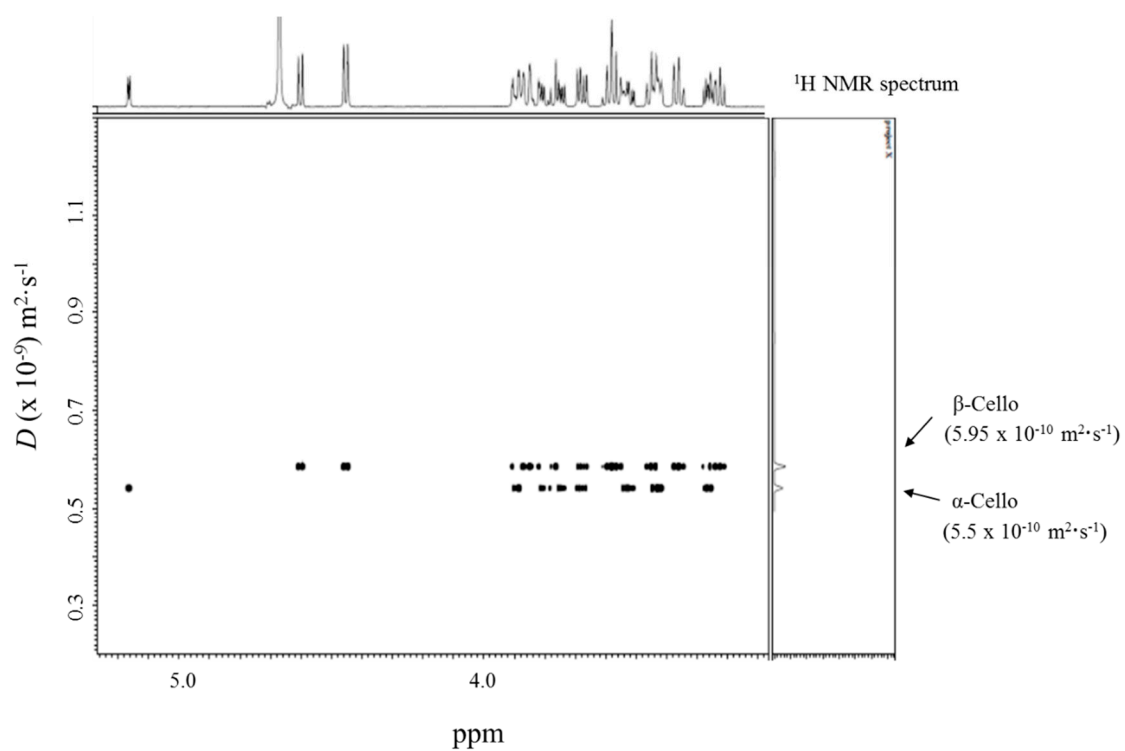


Figure S5. DOSY spectrum of 20 mM Cello in D₂O at 30 °C. The signal of H-1'β in α -Cello is missing.

2.3. DOSY Separation of a Mixture of Two Kinds of Glycopyranosides Having Similar Aglycon Structures

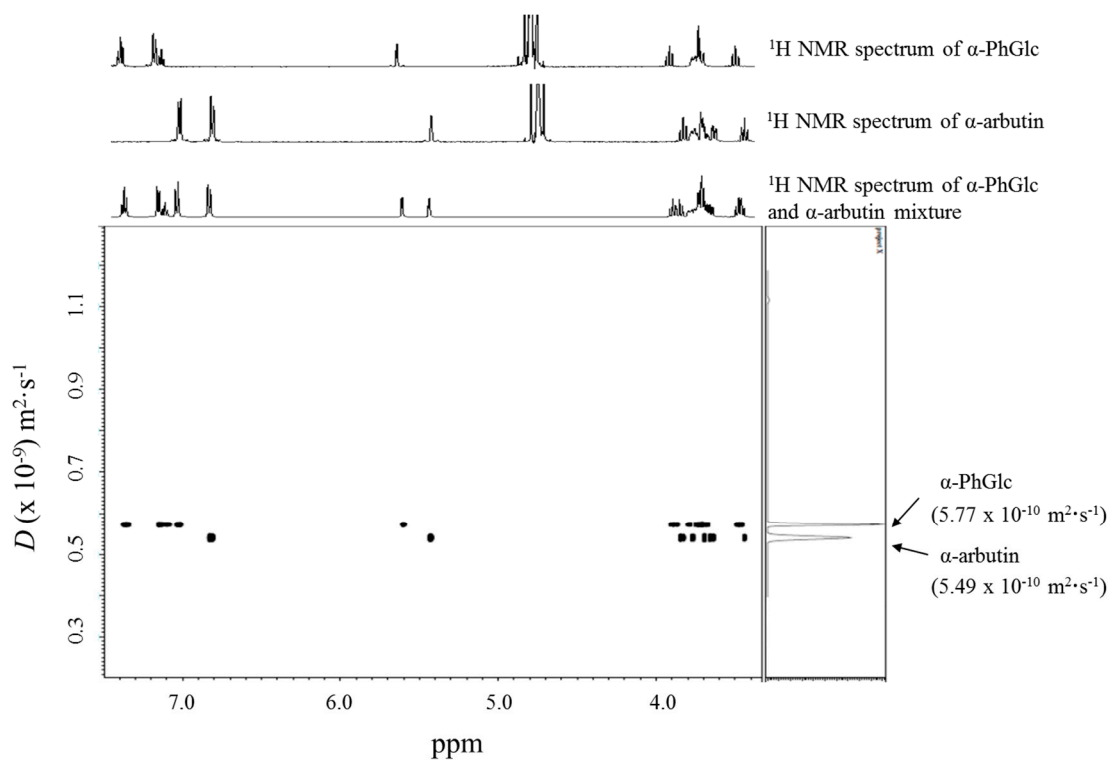


Figure S6. DOSY spectrum of a 10 mM α -PhGlc and 10 mM α -arbutin mixture in D₂O at 30 °C.

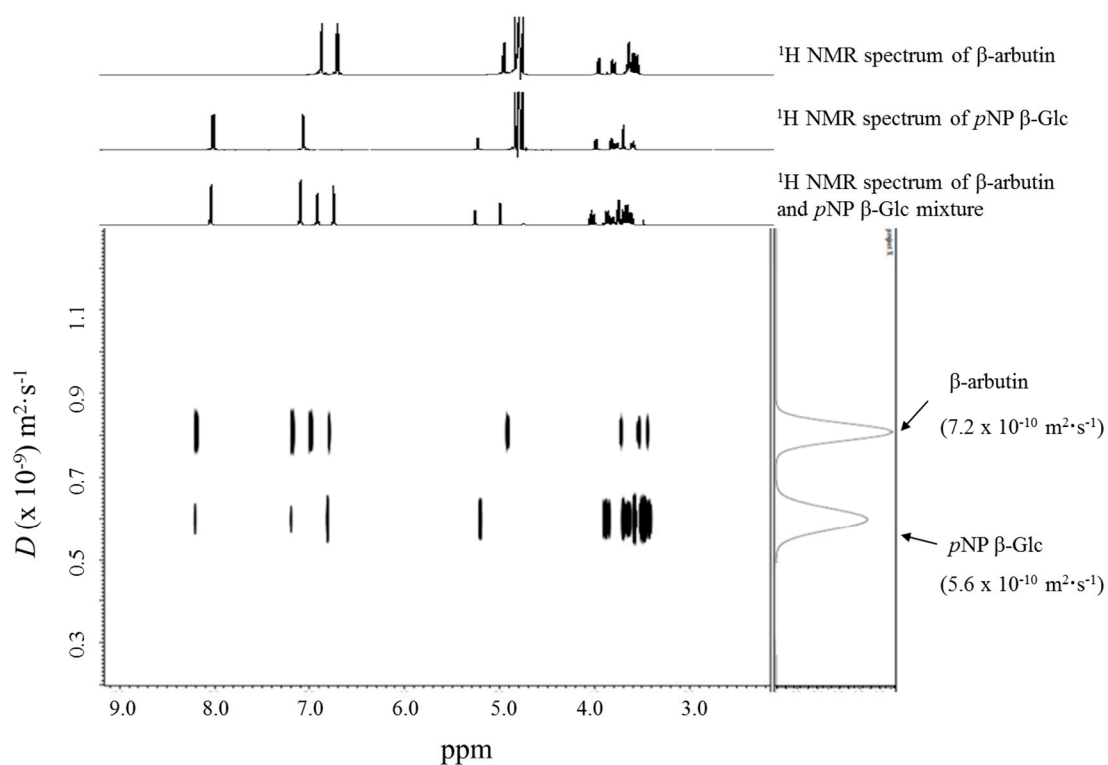


Figure S7. DOSY spectrum of a 10 mM β -arbutin and 10 mM β -*p*NP β Glc mixture in D₂O at 30 °C.