

Stingless Bee Honey, a Novel Source of Trehalulose: A Biologically Active Disaccharide with Health Benefits

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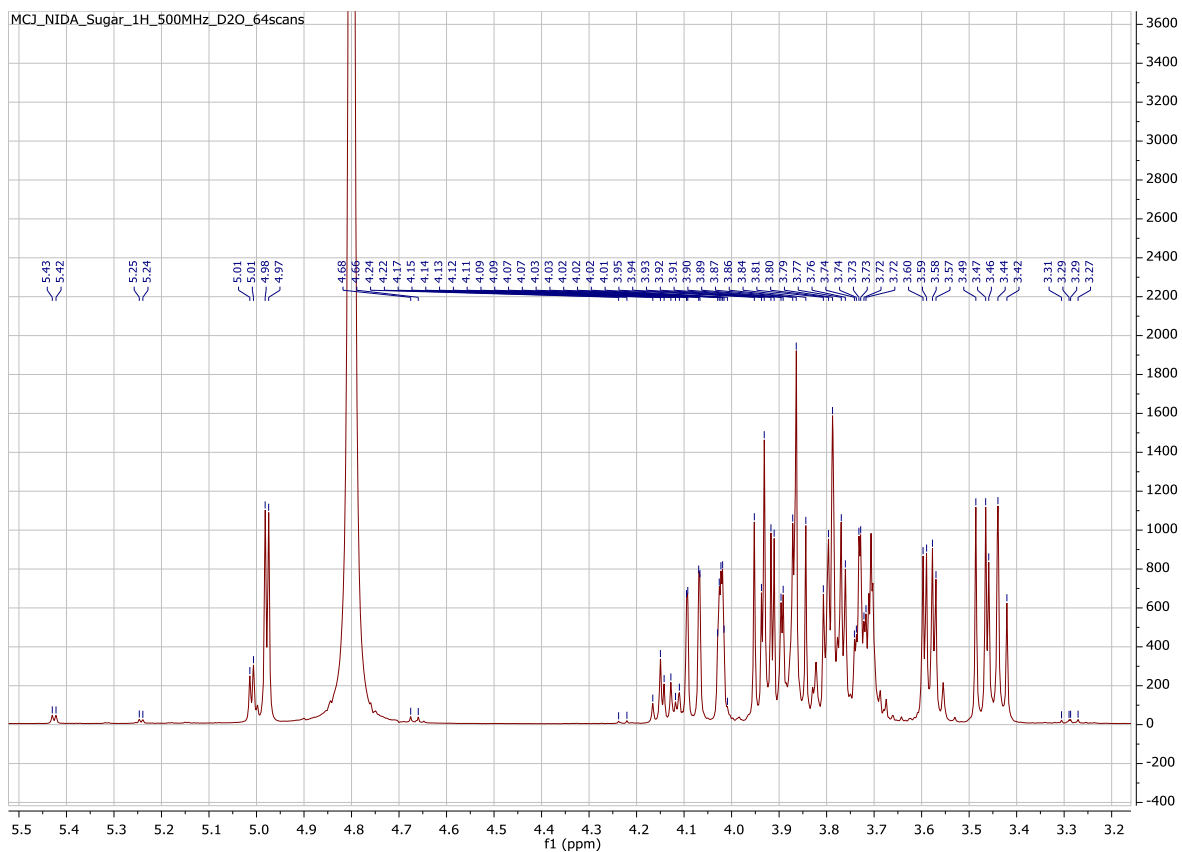


Fig. S1: ^1H NMR spectrum of trehalulose (**1**) isolated from *Geniotrigona thoracica* in D_2O (500 MHz)

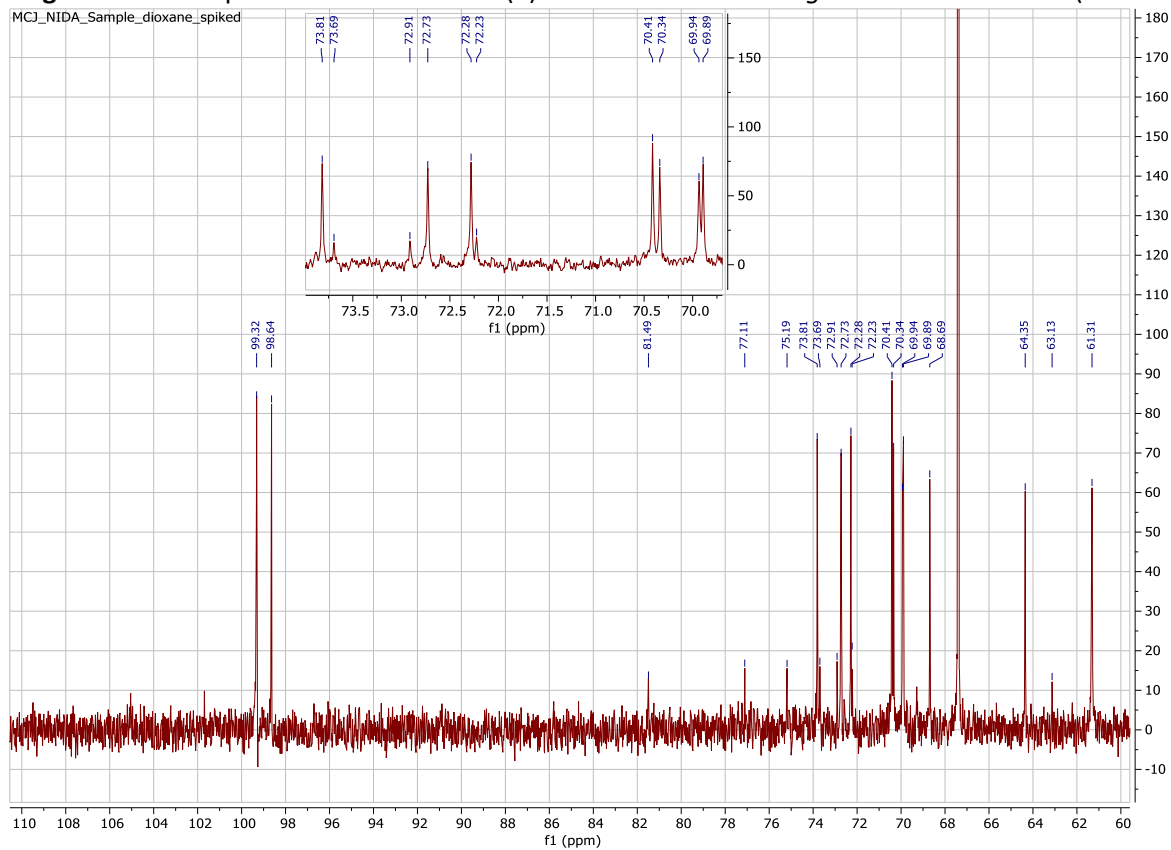


Fig. S2: ^{13}C NMR spectrum of trehalulose (**1**) isolated from *Geniotrigona thoracica* in D_2O (125 MHz) with 1,4-dioxane ($\delta 67.4$) for ^{13}C reference

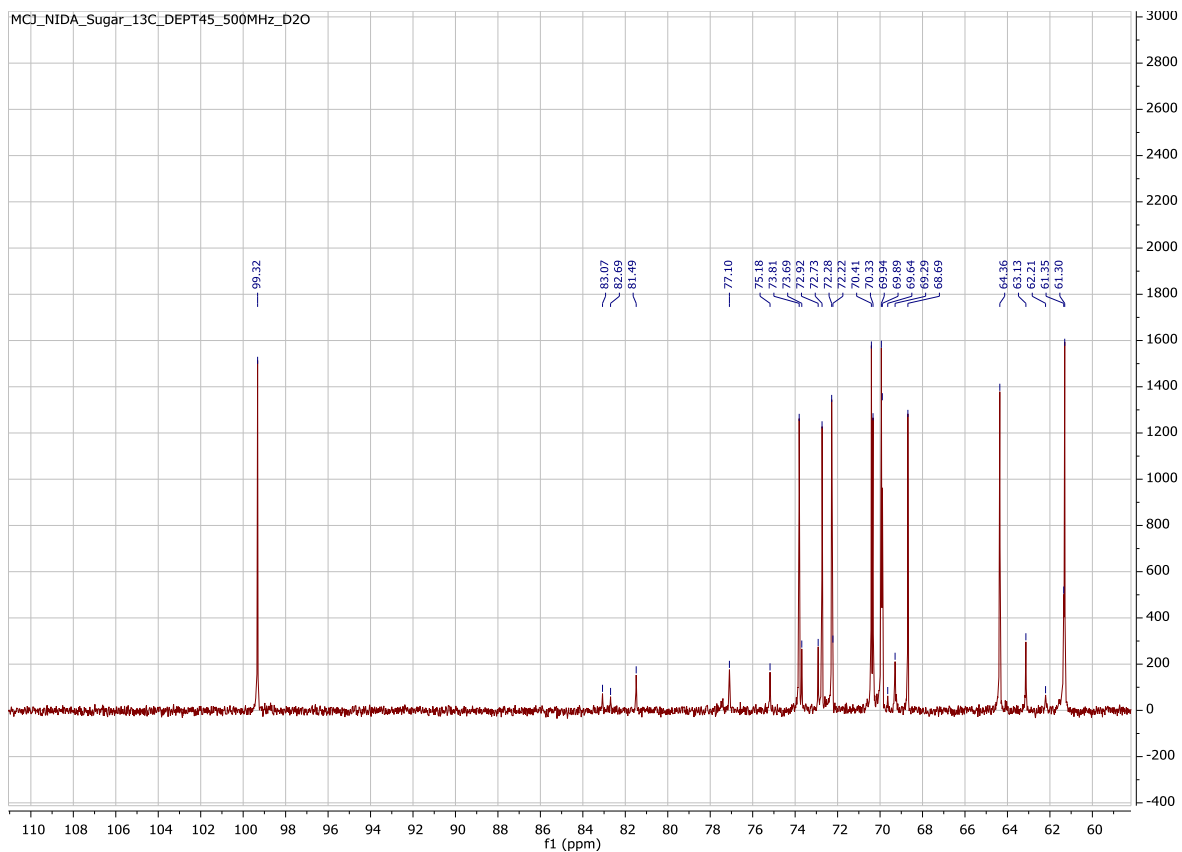


Fig. S3: ^{13}C NMR DEPT45 spectrum of trehalulose (**1**) isolated from *Geniotrigena thoracica* in D_2O (125 MHz) with 1,4-dioxane ($\delta_{67.4}$) for ^{13}C reference

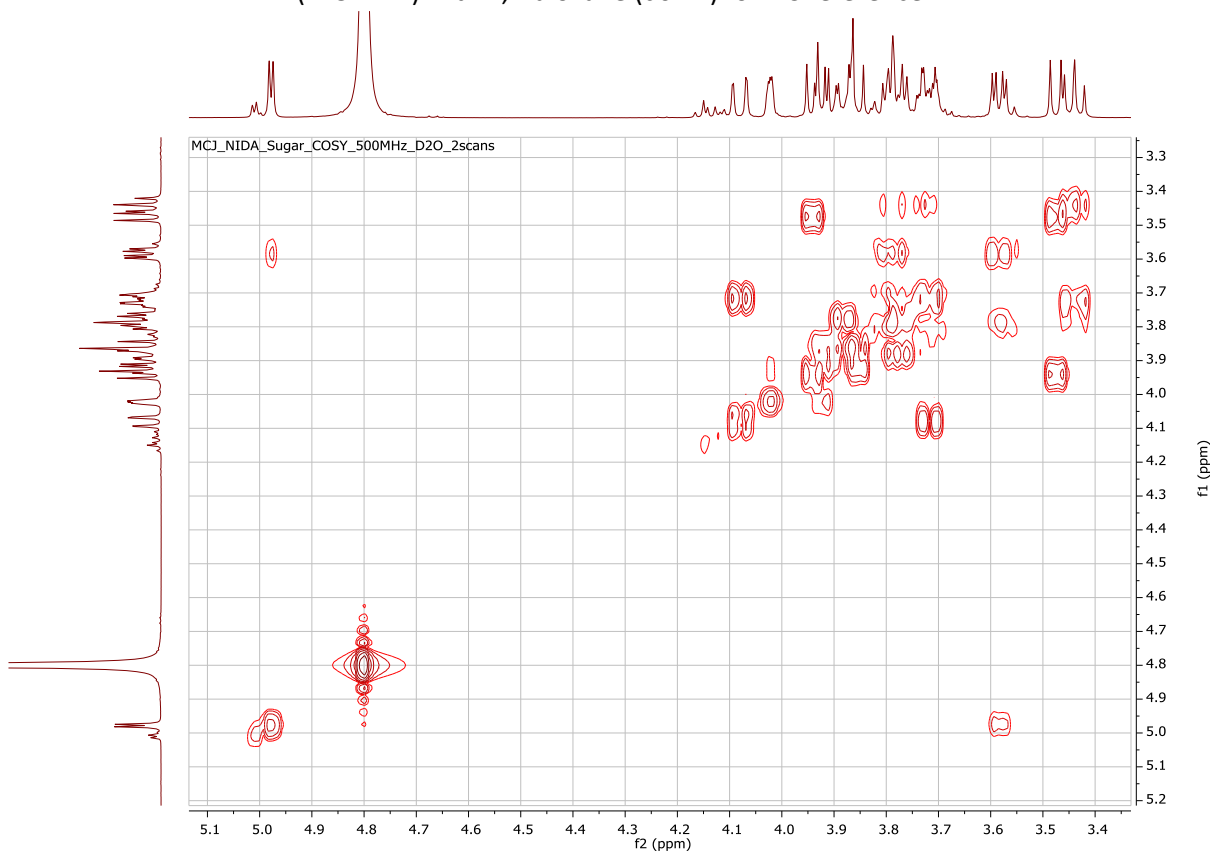


Fig. S4: COSY spectrum of trehalulose (**1**) in D_2O (500 MHz)

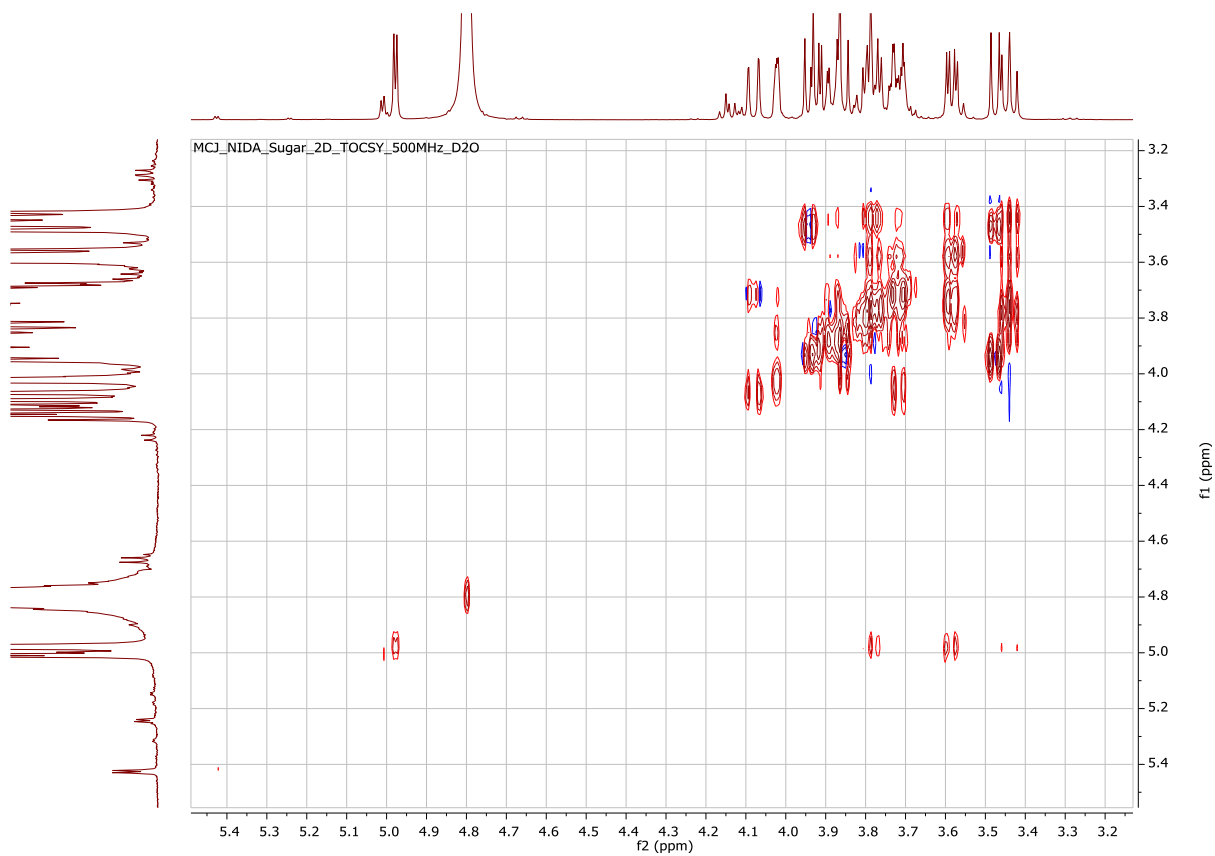


Fig. S5: 2D TOCSY spectrum of trehalulose (**1**) in D_2O (500 MHz)

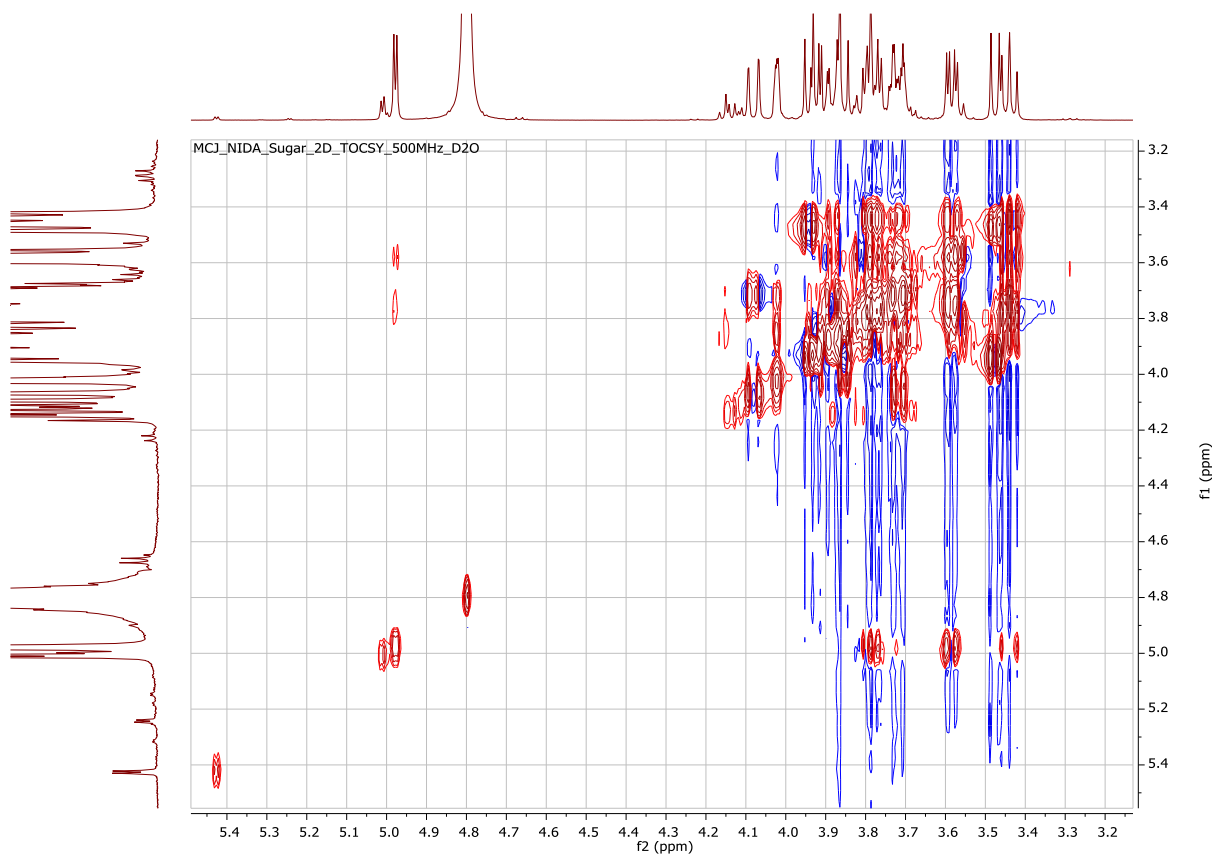


Fig. S6: 2D TOCSY spectrum of trehalulose (**1**) in D_2O (500 MHz), expanded to show signals of less abundant conformer

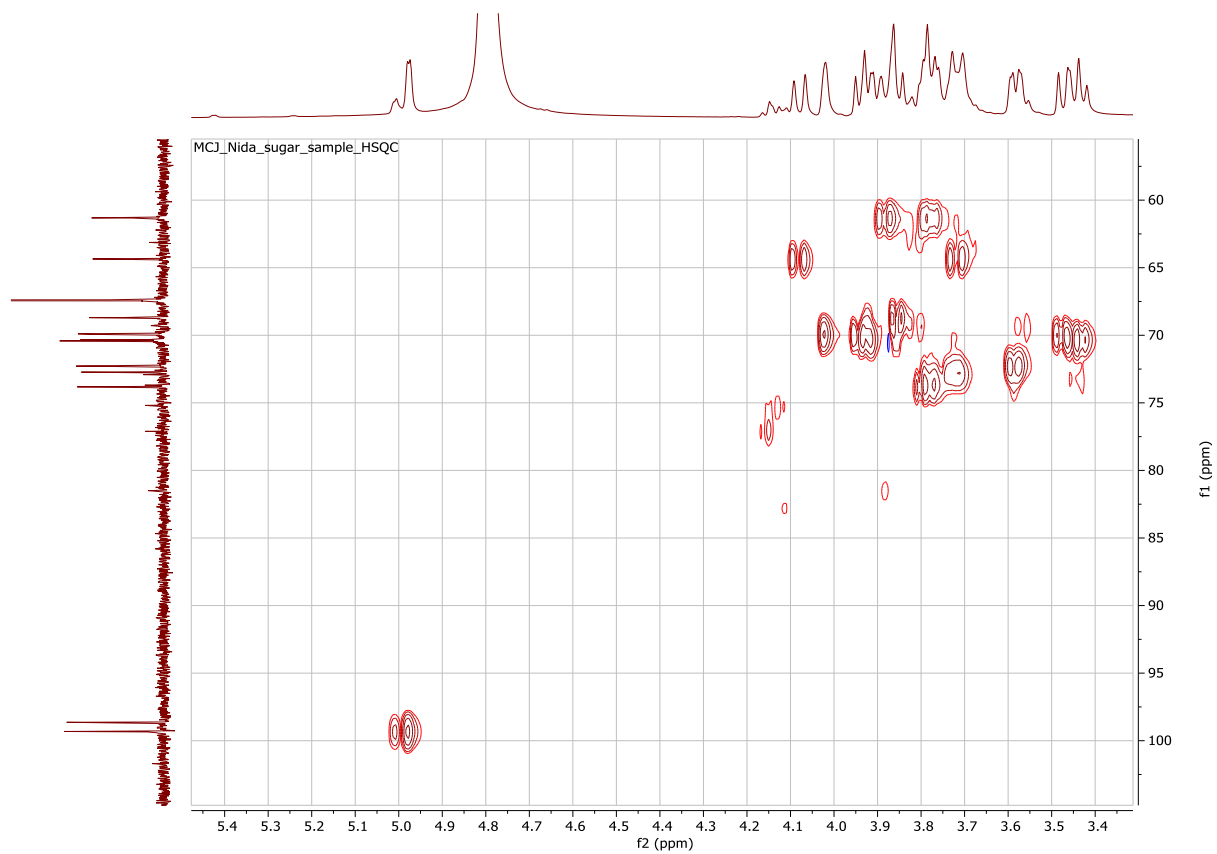


Fig. S7: HSQC spectrum of trehalulose (**1**) in D₂O (500 MHz)

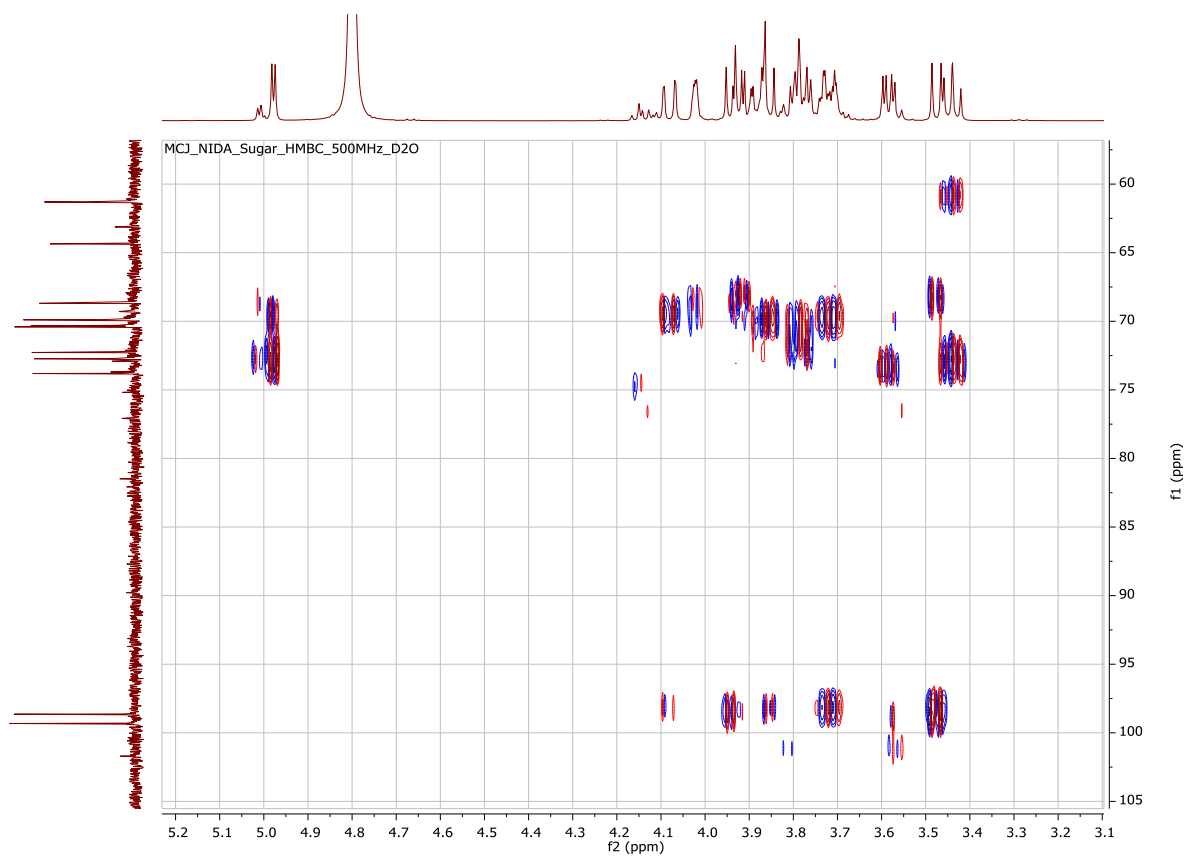


Fig. S8: HMBC spectrum of trehalulose (**1**) in D₂O (500 MHz)

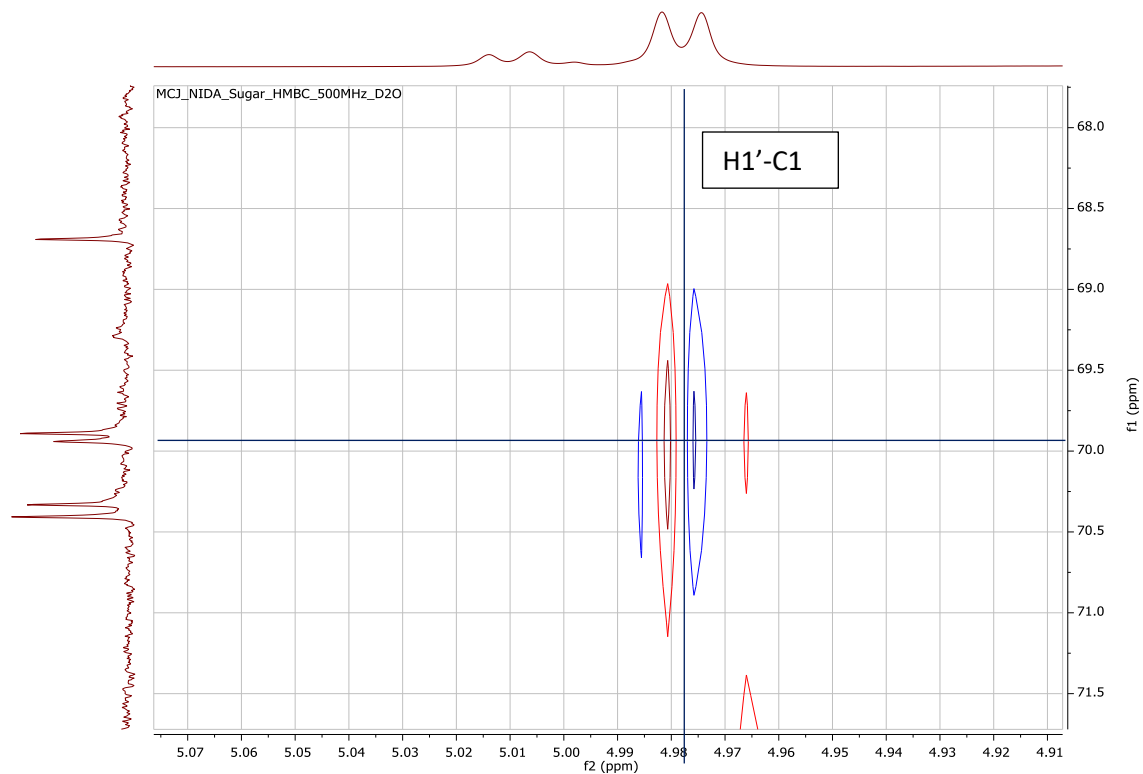


Fig. S9: HMBC spectrum of trehalulose (**1**) in D_2O (500 MHz), expansion of H1'-C1 correlation

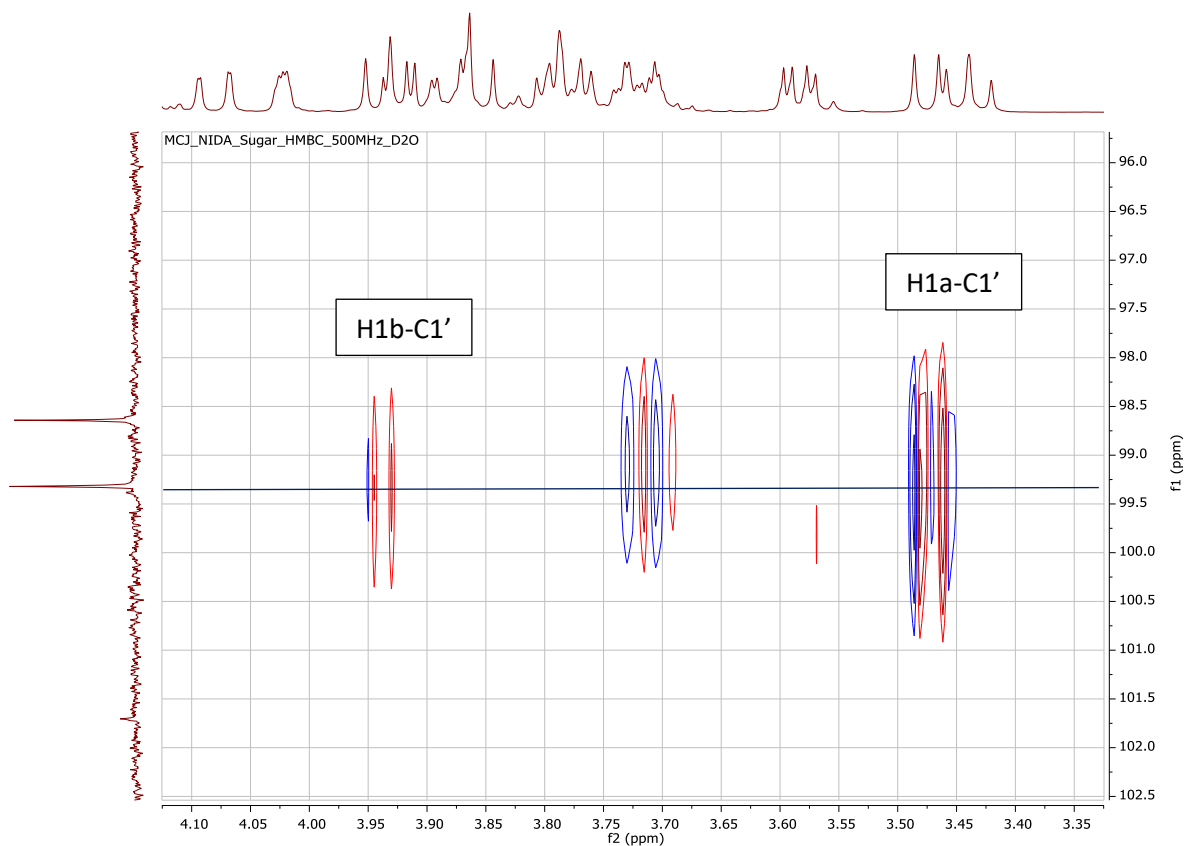


Fig. S10: HMBC spectrum of trehalulose (**1**) in D_2O (500 MHz), H1b-C1' (left), H6-C2 (Centre), H1a-C1' (right)

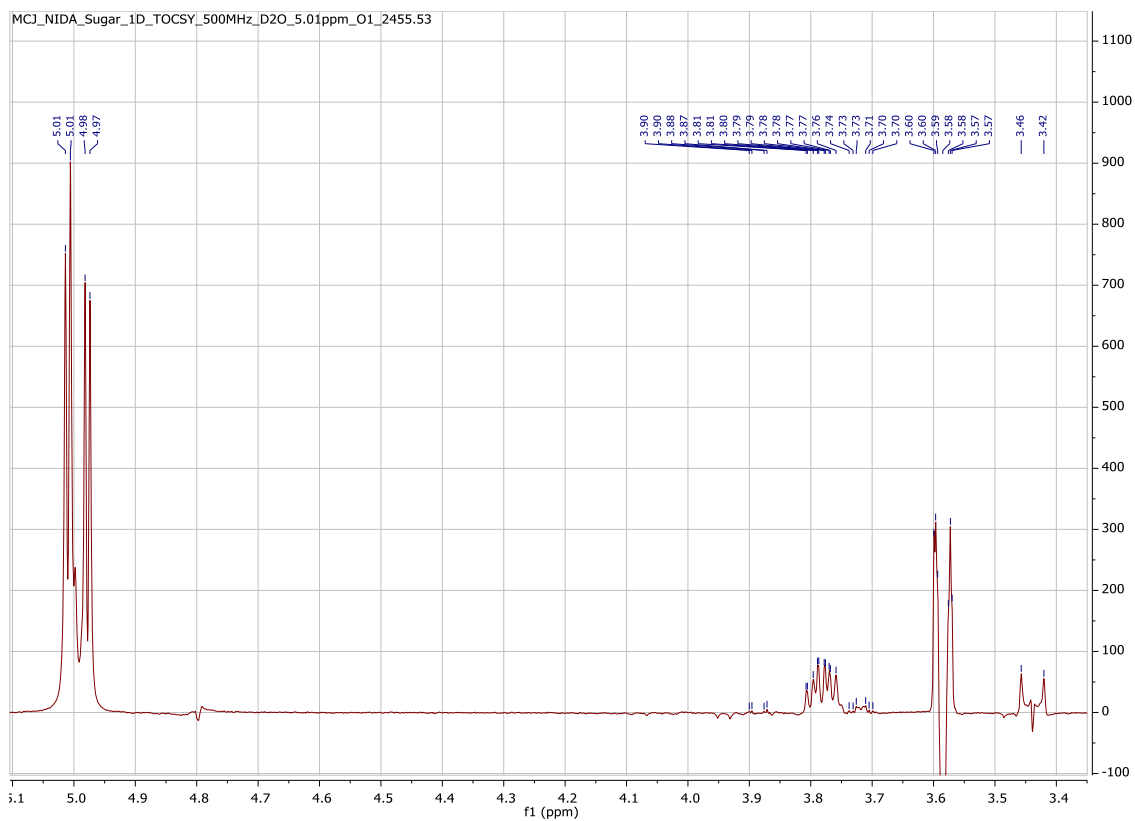


Fig. S11: 1D TOCSY spectrum of trehalulose (**1**) in D_2O (500 MHz), O1 2455.53, chemical shift at 5.01 ppm irradiated

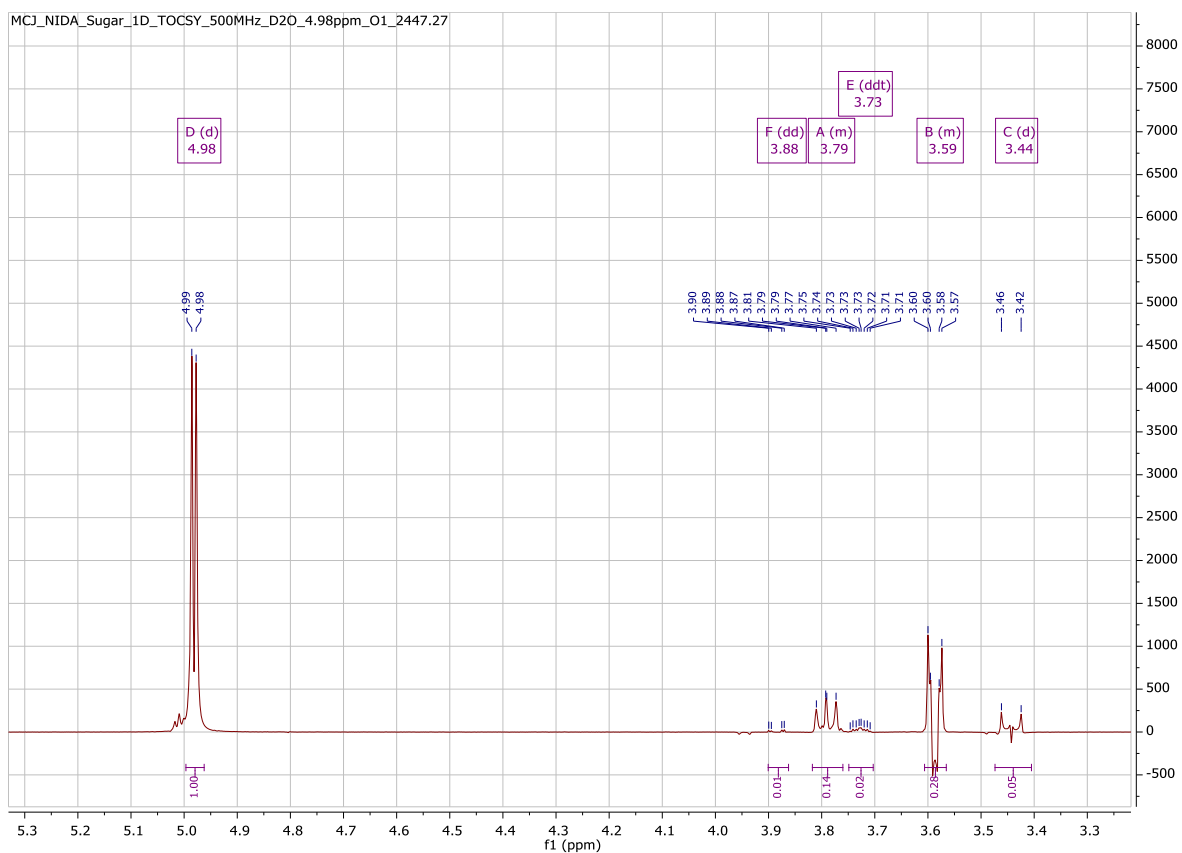


Fig. S12: 1D TOCSY spectrum of trehalulose (**1**) in D_2O (500 MHz), O1 2447.27, chemical shift at 4.98 ppm irradiated

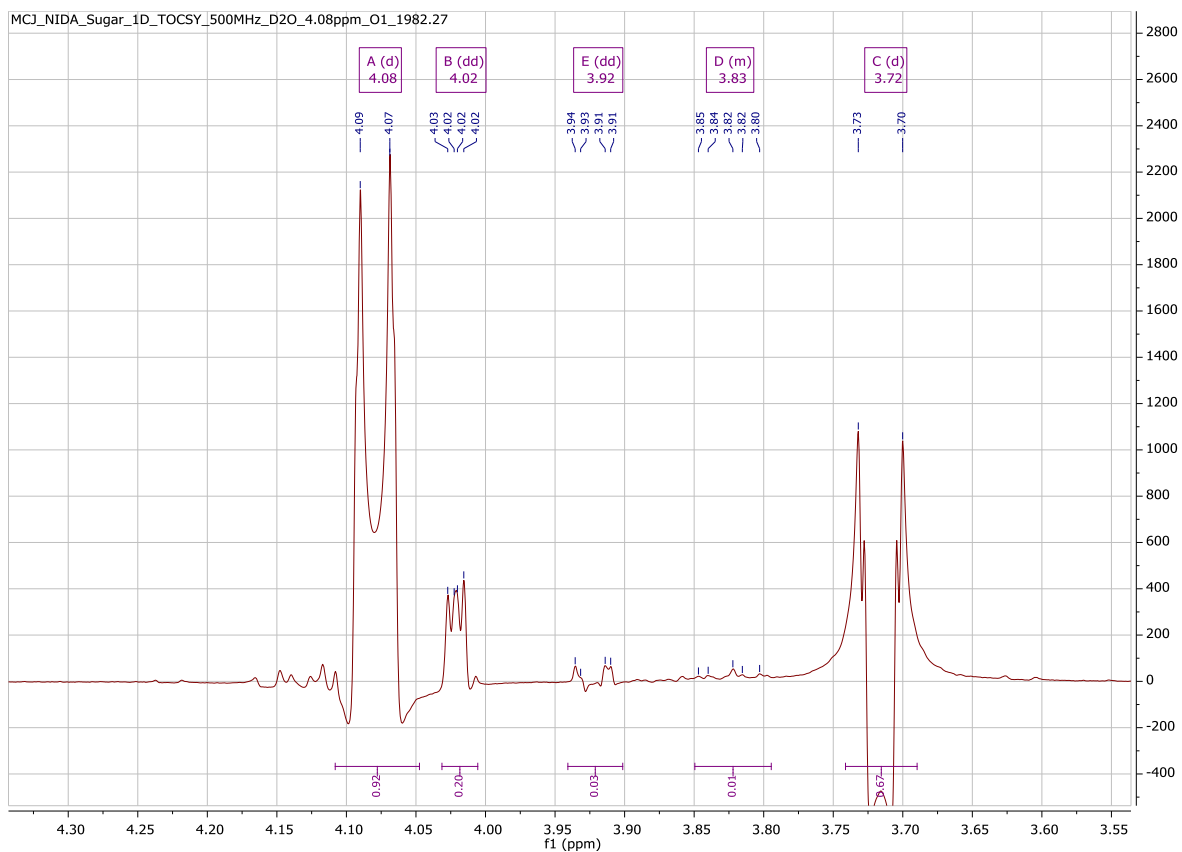


Fig. S13: 1D TOCSY spectrum of trehalulose (**1**) in D_2O (500 MHz), O1 1982.27, chemical shift at 4.08 ppm irradiated

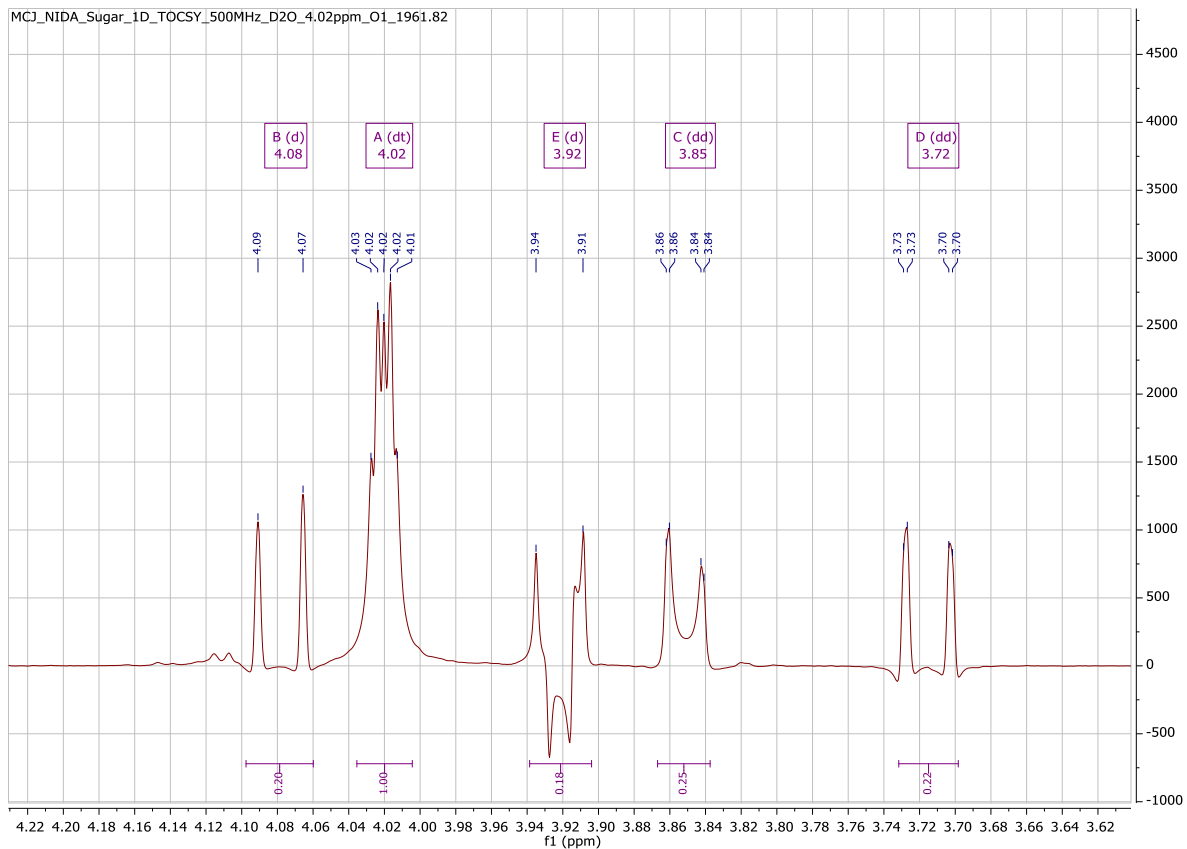


Fig. S14: 1D TOCSY spectrum of trehalulose (**1**) in D_2O (500 MHz), O1 1961.82, chemical shift at 4.02 ppm irradiated

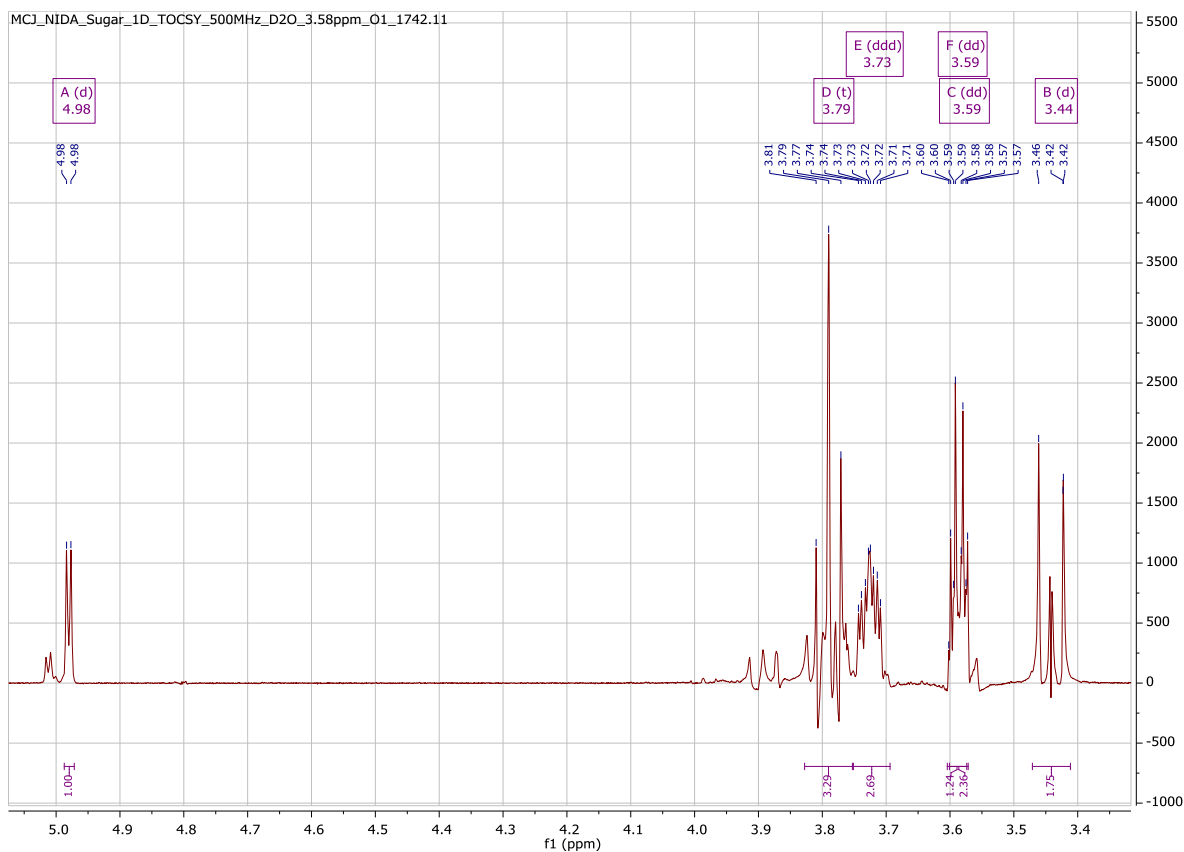


Fig. S15: 1D TOCSY spectrum of trehalulose (**1**) in D_2O (500 MHz), O1 1742.11, chemical shift at 3.59 ppm irradiated

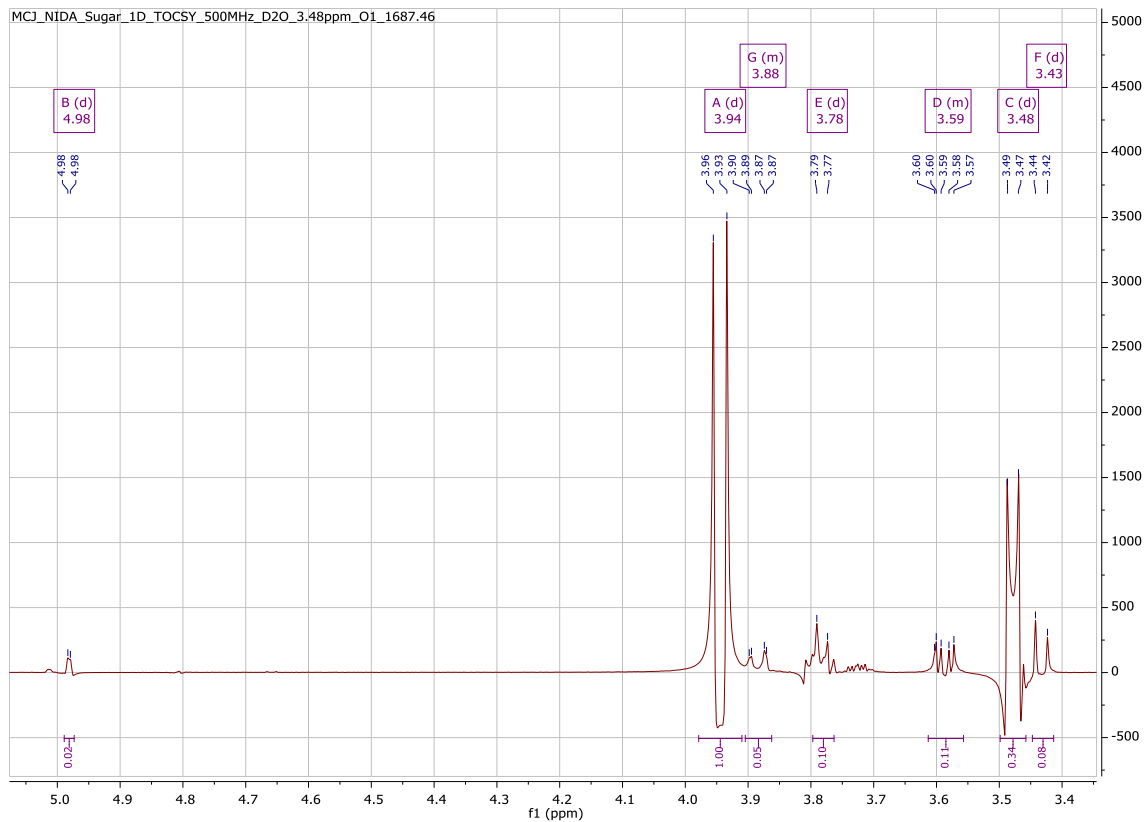


Fig. S16: 1D TOCSY spectrum of trehalulose (**1**) in D_2O (500 MHz), O1 1687.46, chemical shift at 3.48 ppm irradiated

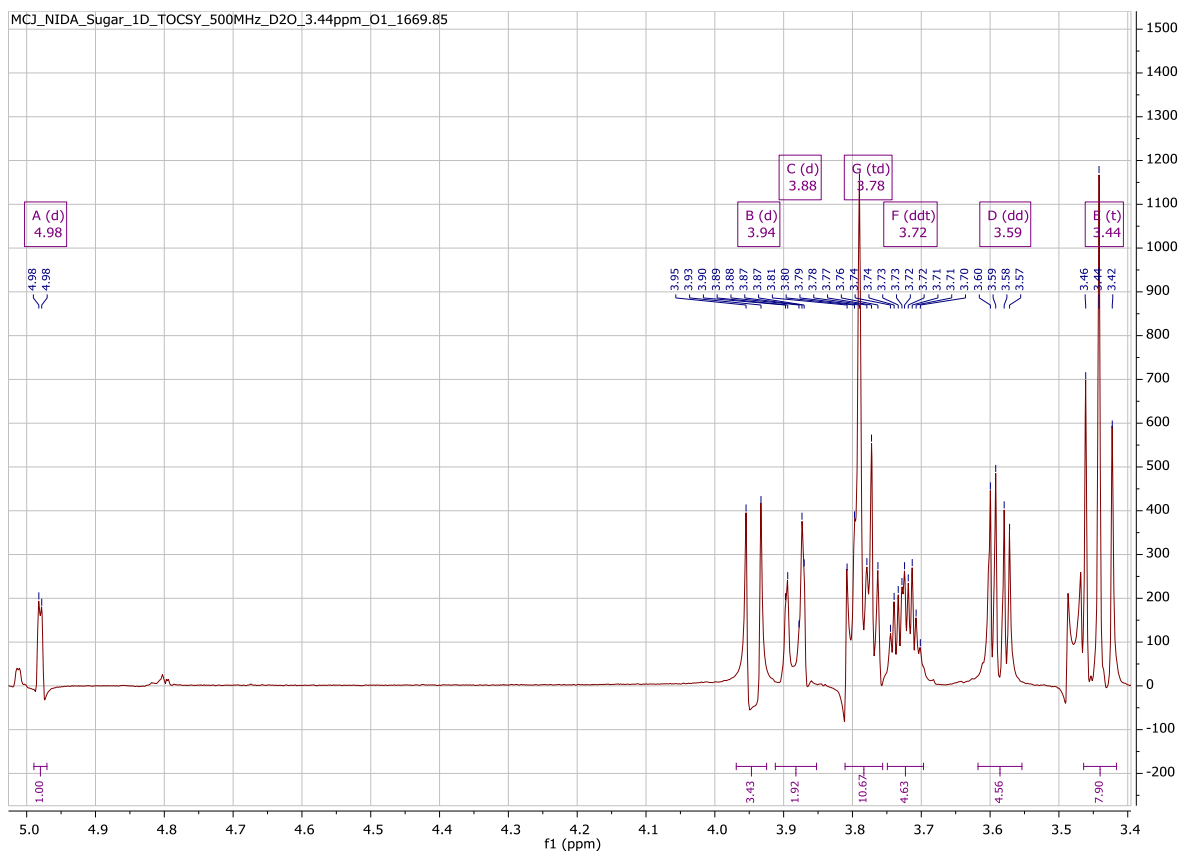


Fig. S17: 1D TOCSY spectrum of trehalulose (**1**) in D₂O (500 MHz), O1 1669.85, chemical shift at 3.44 ppm irradiated