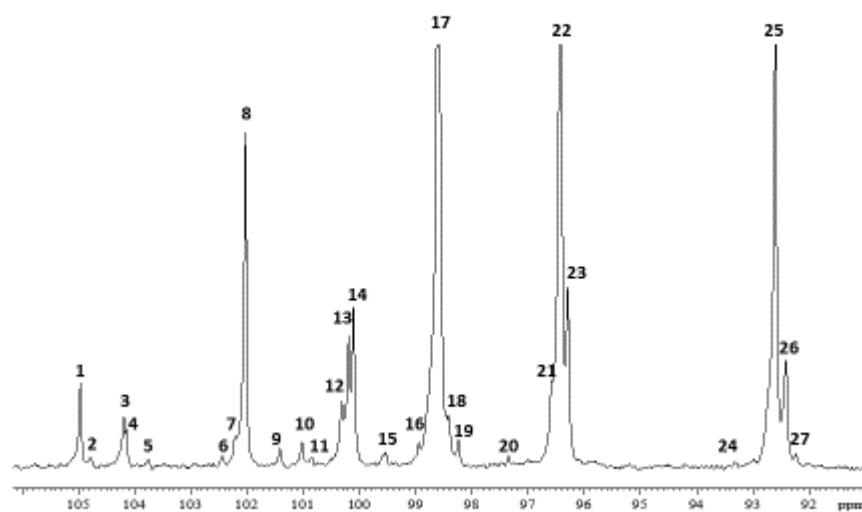
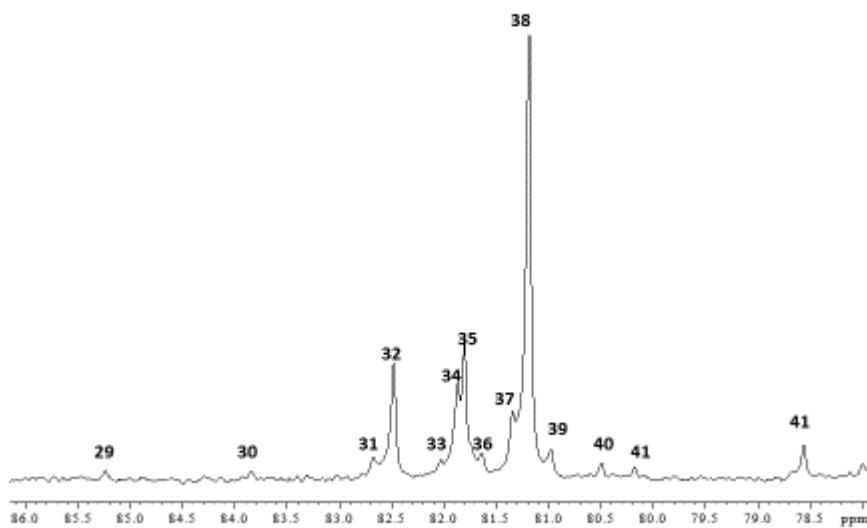


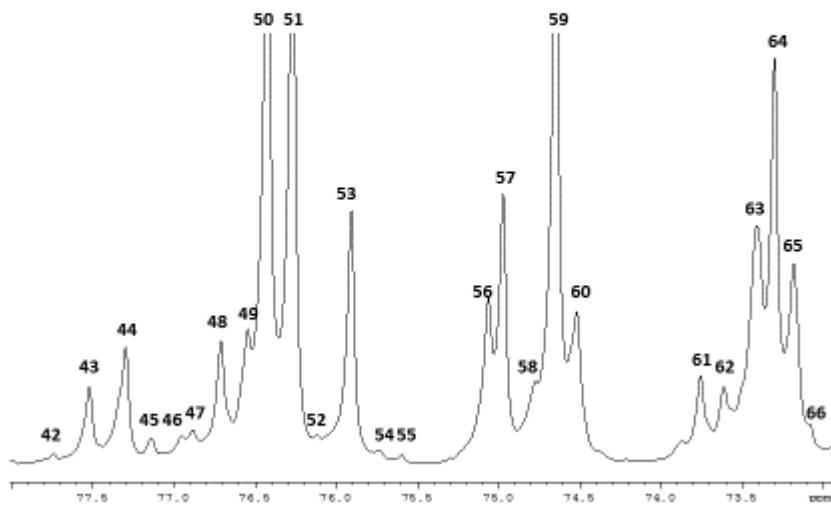
**Fig. S1a.**  $^{13}\text{C}$  NMR subspectrum of the artificial mixture of 14 sugar model compounds; Region 91ppm-106ppm



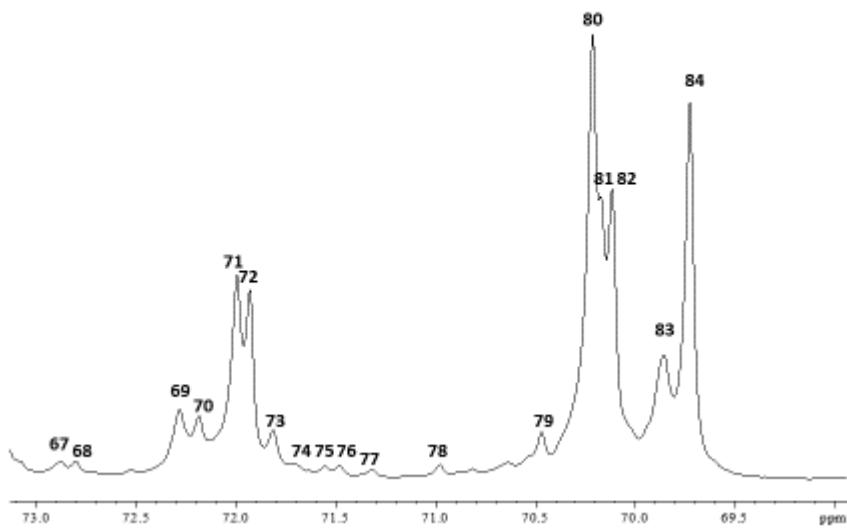
**Fig. S1b.**  $^{13}\text{C}$  NMR subspectrum of the artificial mixture of 14 sugar model compounds; Region 78ppm-96ppm



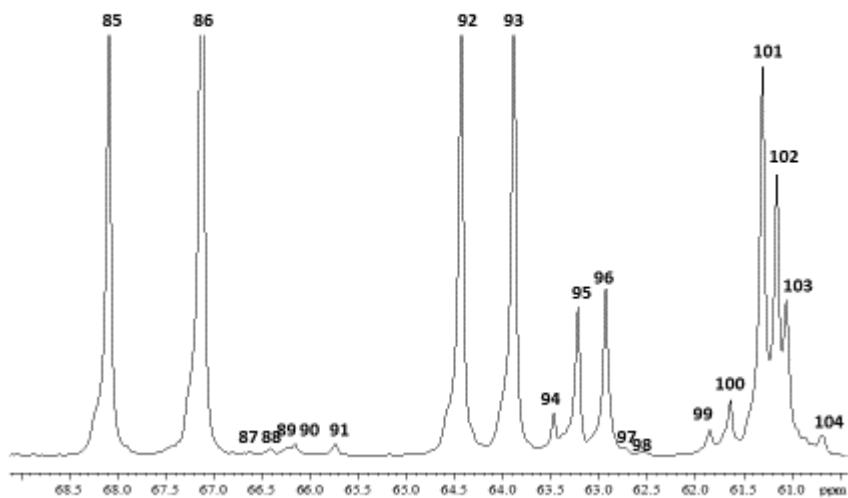
**Fig. S1c.**  $^{13}\text{C}$  NMR subspectrum of the artificial mixture of 14 sugar model compounds; Region 73ppm-78ppm



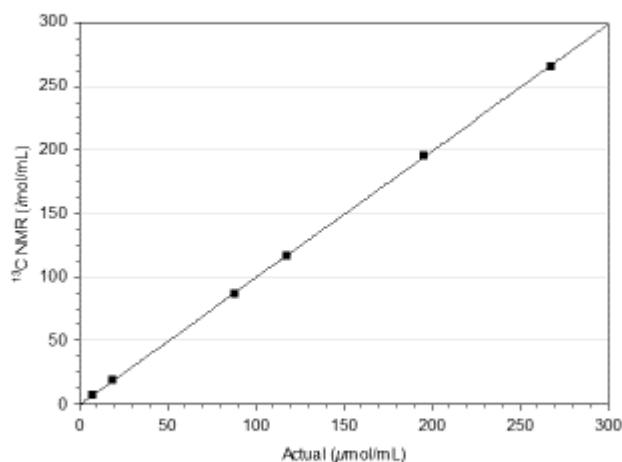
**Fig. S1d.**  $^{13}\text{C}$  NMR subspectrum of the artificial mixture of 14 sugar model compounds; Region 69ppm-73ppm



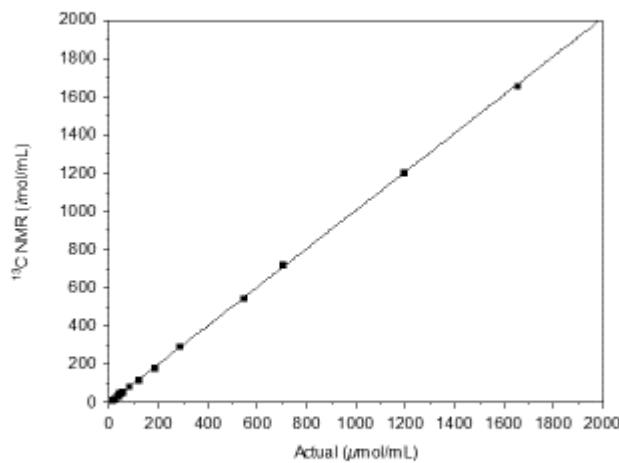
**Fig. S1e.**  $^{13}\text{C}$  NMR subspectrum of the artificial mixture of 14 sugar model compounds; Region 60ppm-69ppm



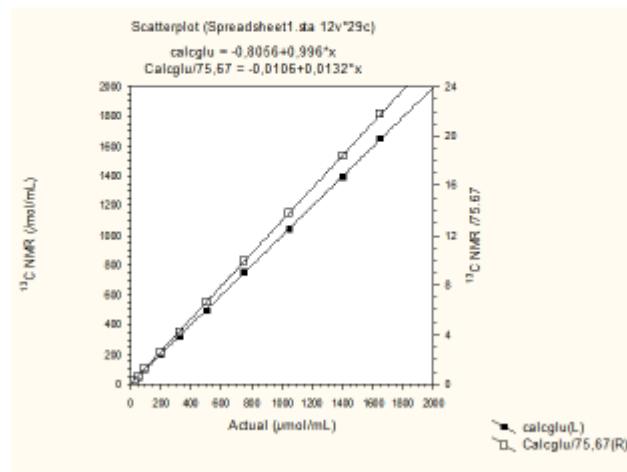
**Fig. S2.** Actual vs.  $^{13}\text{C}$  NMR concentration of isoglucose



**Fig. S3.** Actual vs.  $^{13}\text{C}$  NMR concentration of artificial mixture



**Figure S4.** Actual concentration of  $\beta$ -D-glycopyranose vs.  $^{13}\text{C}$  NMR concentration (left), and the ratio of average signal integrals of  $\beta$ -D-glycopyranose over the signal integral of the internal standard (right) over the whole concentration range.



**Fig. S5.** Average actual concentration of  $\beta$ -D-glycopyranose vs. S/N ratio over the whole concentration range.

