

Moulthrop *et al.* Assignments of the ^{13}C NMR spectra of cellulose and cellulose oligomers in $[\text{C}_4\text{mim}]\text{Cl}/\text{DMSO-d}_6$ solution at 90 °C.

Molecule	Glucose residue	Chemical shifts (ppm) ^{a,b,c}					
		C1	C2	C3	C4	C5	C6
Cellobiose	Reducing end α	93.1	72.2	73.1	81.9	71.0	61.2
	Reducing end β	97.7	75.8	75.9	81.3	76.0	61.2
	Nonreducing end	103.7	75.0	77.7	71.4	77.9	61.9
Cellotetraose	Reducing end α	93.0	72.2	73.1	81.3	71.0	61.0
	Reducing end β	97.7	75.7	75.8	80.2	76.0	61.0
	Internal residues	103.3	74.8	75.9	80.7	76.2	61.0
	Nonreducing end	103.6	75.0	77.7	71.4	77.9	61.9
Cellohexaose	Reducing end α	93.0	72.2	73.2	81.3	71.0	61.1
	Reducing end β	97.7	75.9	75.9	80.7	76.0	61.1
	Internal residues	103.1	74.8	75.8	80.1	76.3	61.1
	Nonreducing end	103.6	75.0	77.7	71.4	77.9	61.9
Cellulose	Internal residues	103.2	74.7	75.8	80.2	76.2	61.1

- a) All spectra were referenced indirectly to the temperature-corrected ^{13}C resonance of dioxane in D_2O solution (reference 12).
- b) Assignments for some of the C2, C3, and C5 carbon resonances are tentative, and were based on the variation of signal intensities observed between oligomers as well as on comparisons to assignments reported in aqueous solution (reference 9).
- c) Resonances for equivalent carbons of the internal and nonreducing glucose residues corresponding to the α and β anomers are either overlapped or reported as the average of the two signals.