

Electronic Supplementary Information

Green mechanical activation-assisted solid phase synthesis of cellulose esters using co-reactant: Effect of chain length of fatty acids on reaction efficiency and structure properties of products

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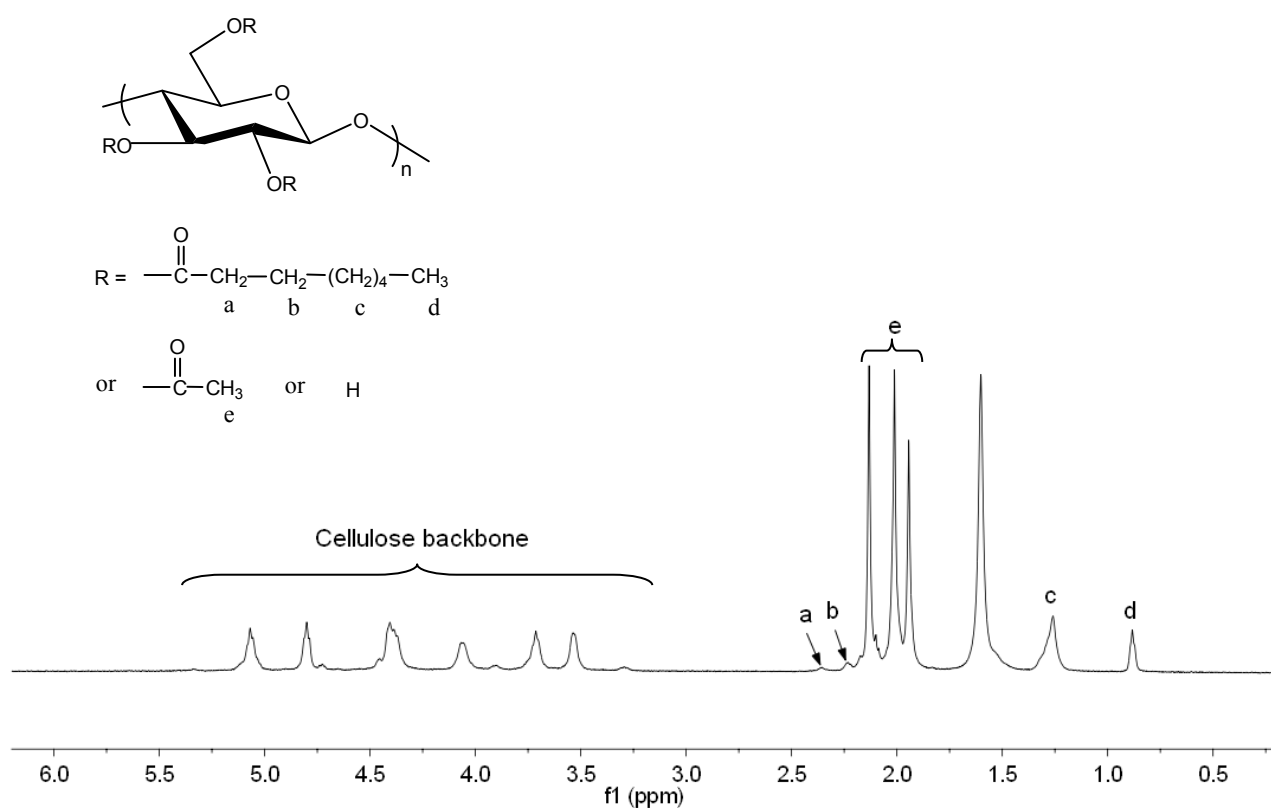


Fig. S1 ¹H NMR spectrum of cellulose acetate-octanoate (milling time = 60 min) in CDCl₃.

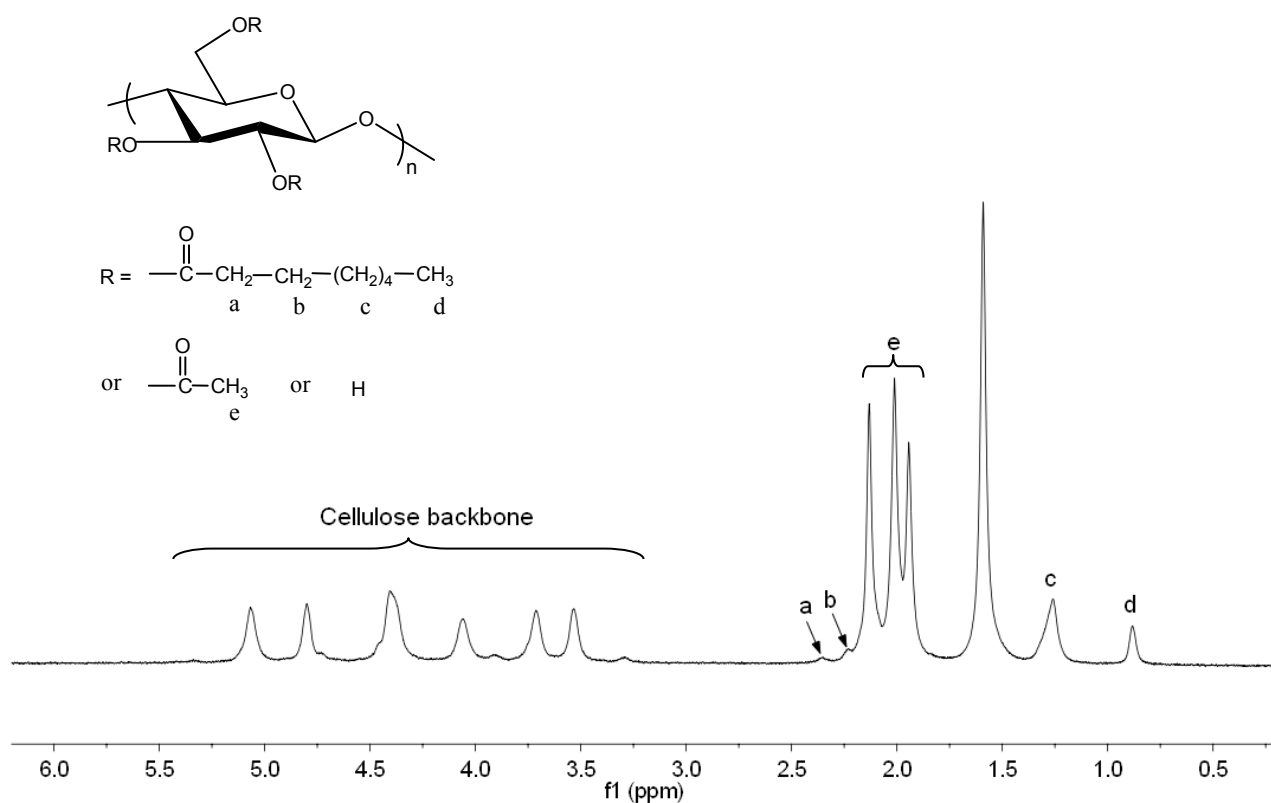


Fig. S2 ¹H NMR spectrum of cellulose acetate-octanoate (milling time = 90 min) in CDCl₃.

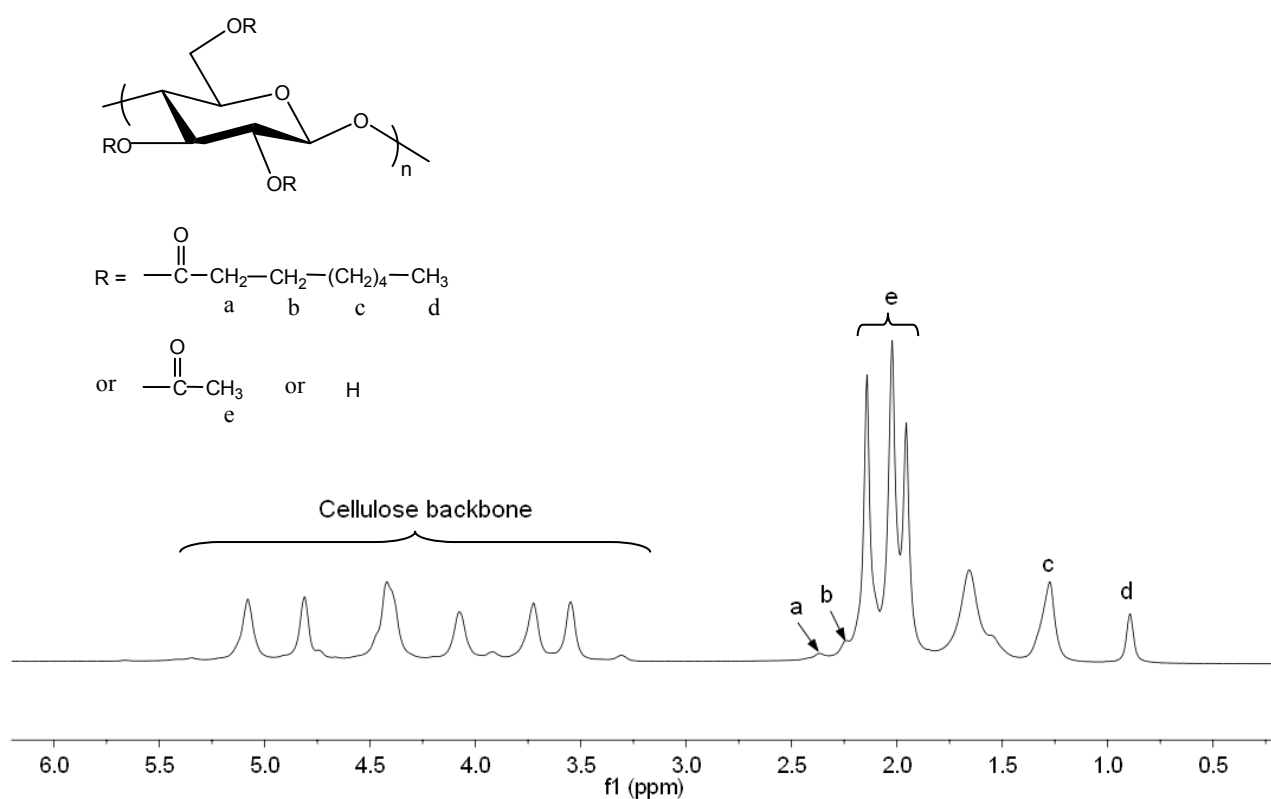


Fig. S3 ^1H NMR spectrum of cellulose acetate-octanoate (milling time = 120 min) in CDCl_3 .

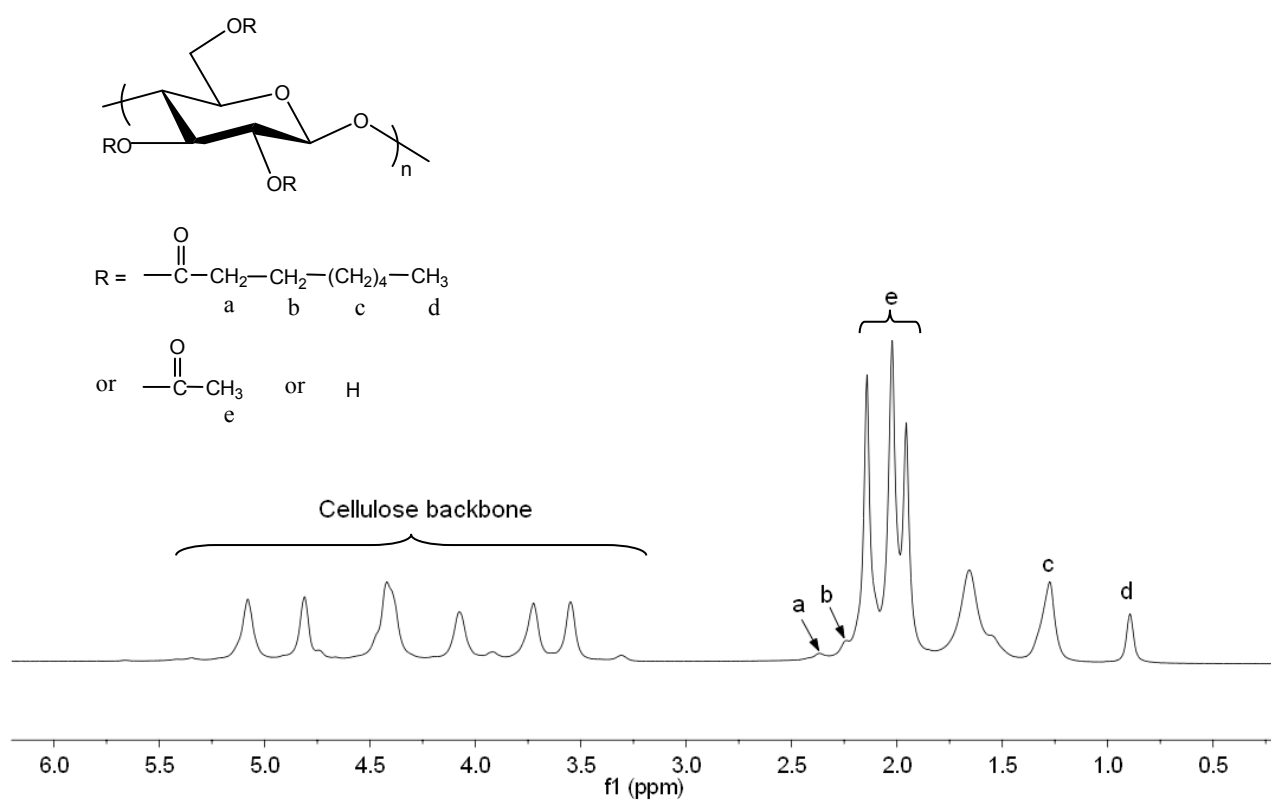


Fig. S4 ^1H NMR spectrum of cellulose acetate-octanoate (milling time = 150 min) in CDCl_3 .

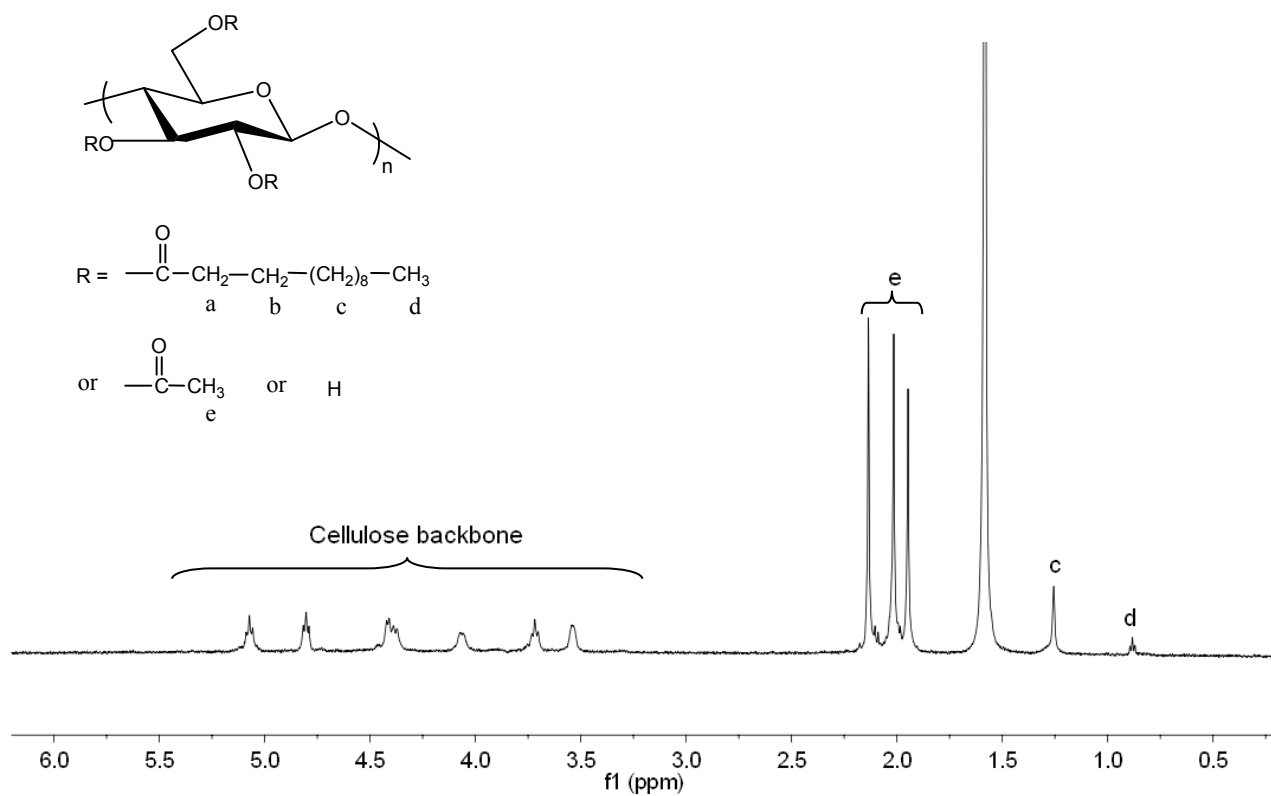


Fig. S5 ^1H NMR spectrum of cellulose acetate-laurate (milling time = 30 min) in CDCl_3 .

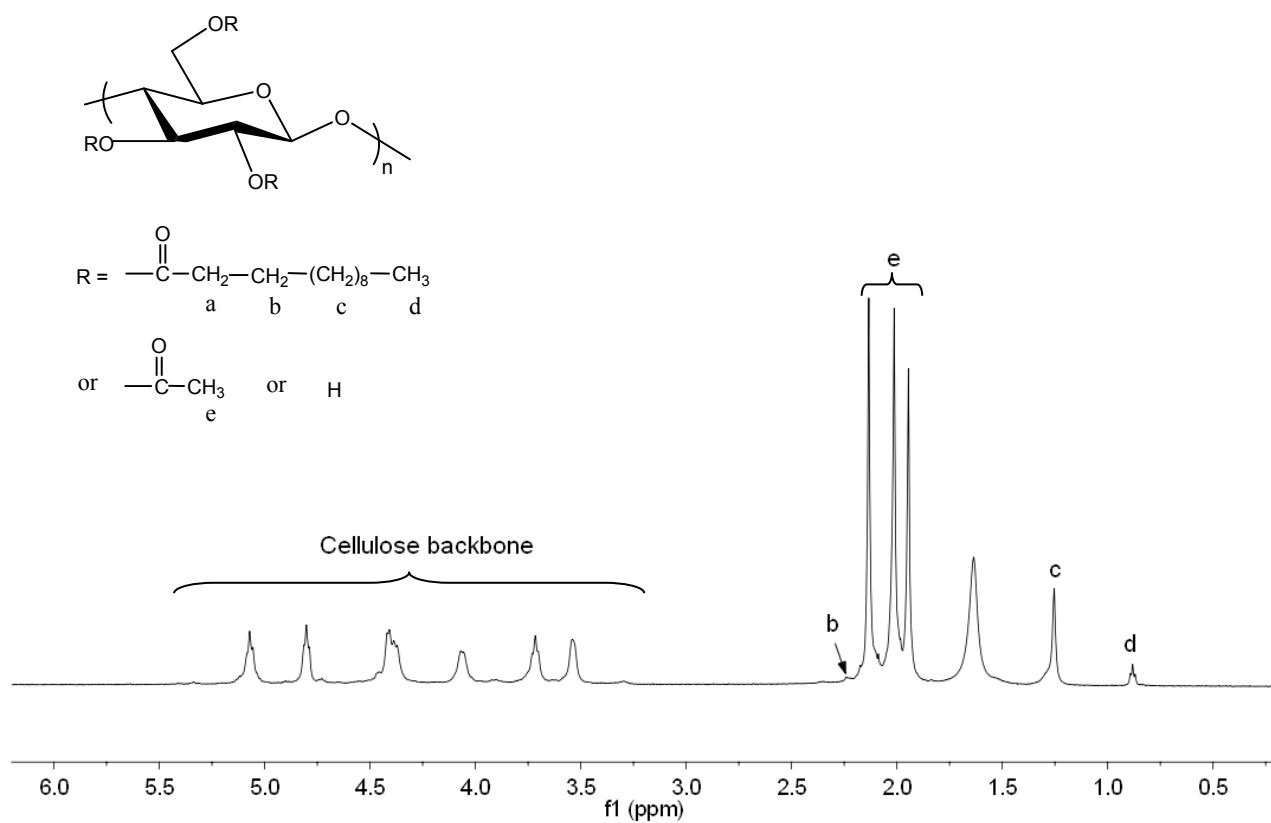


Fig. S6 ^1H NMR spectrum of cellulose acetate-laurate (milling time = 60 min) in CDCl_3 .

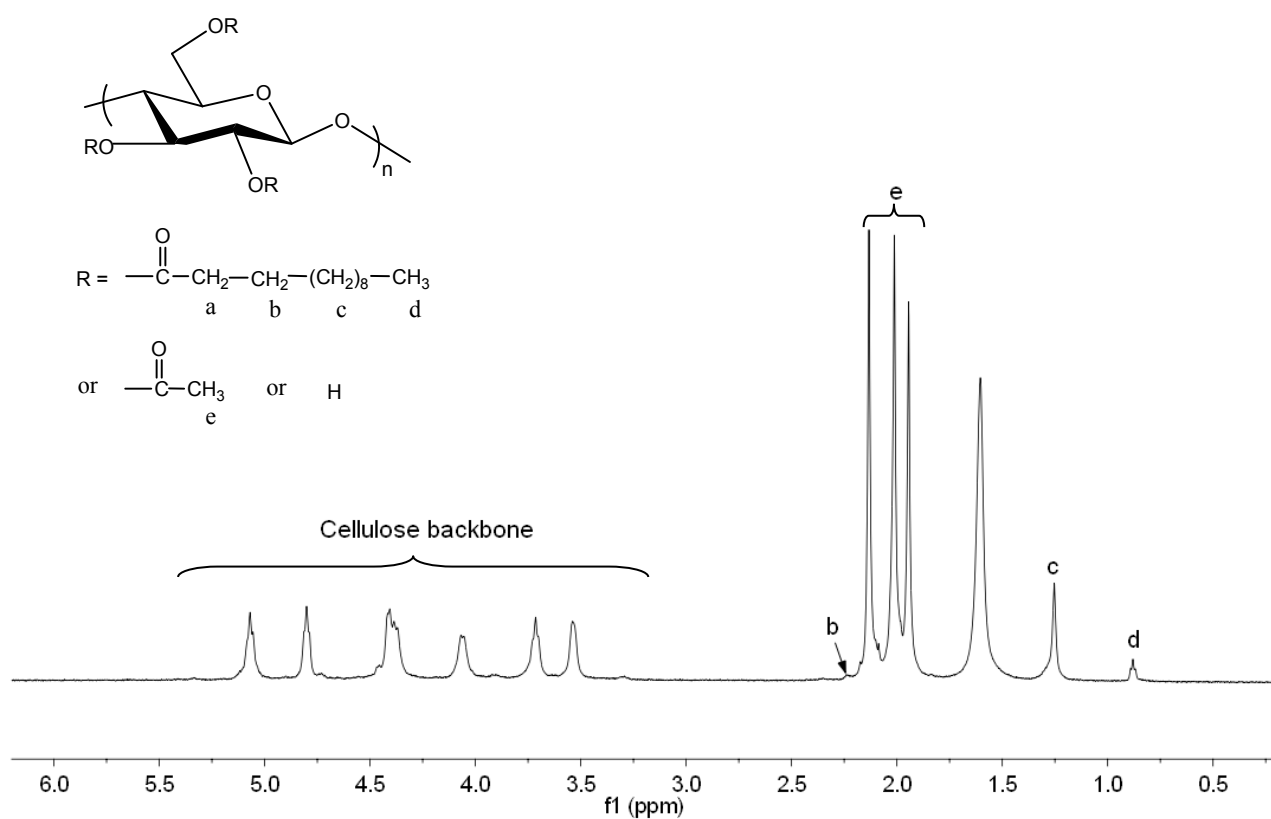


Fig. S7 ^1H NMR spectrum of cellulose acetate-laurate (milling time = 90 min) in CDCl₃.

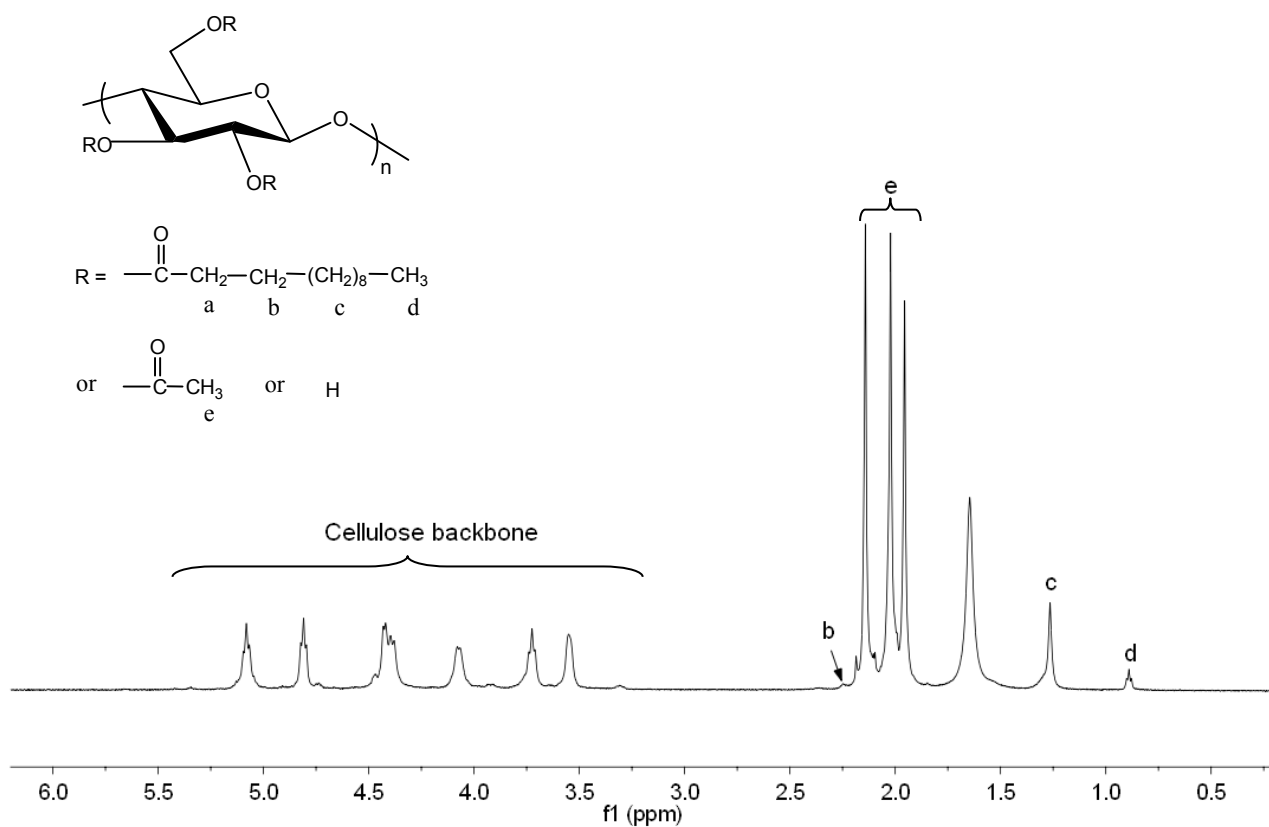
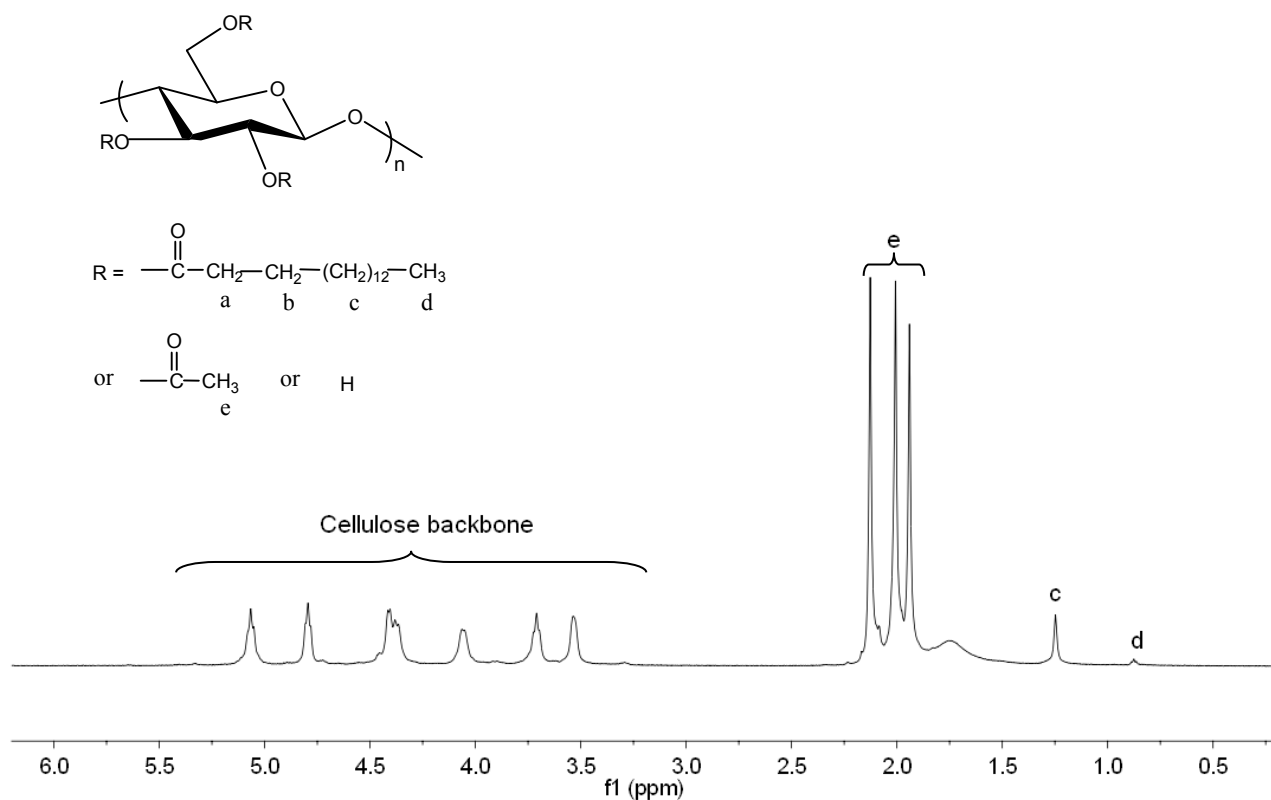
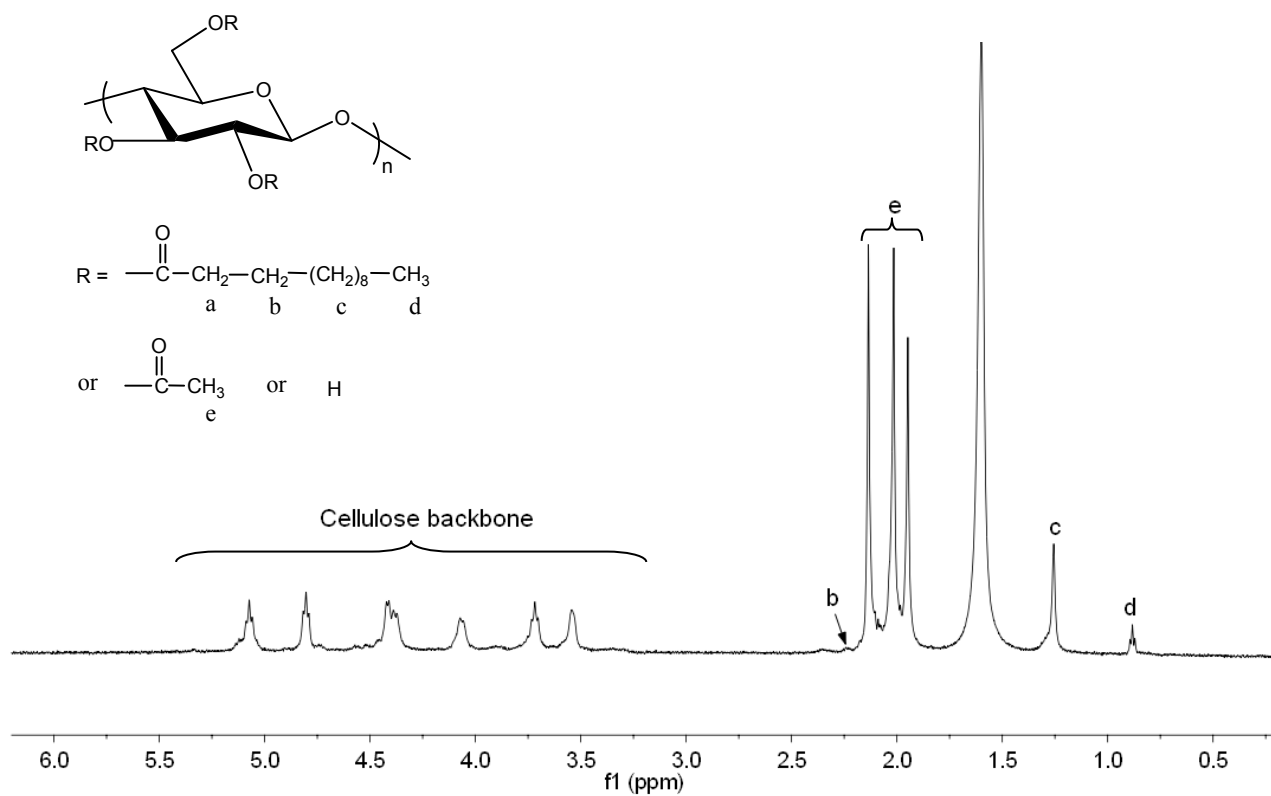


Fig. S8 ^1H NMR spectrum of cellulose acetate-laurate (milling time = 120 min) in CDCl₃.



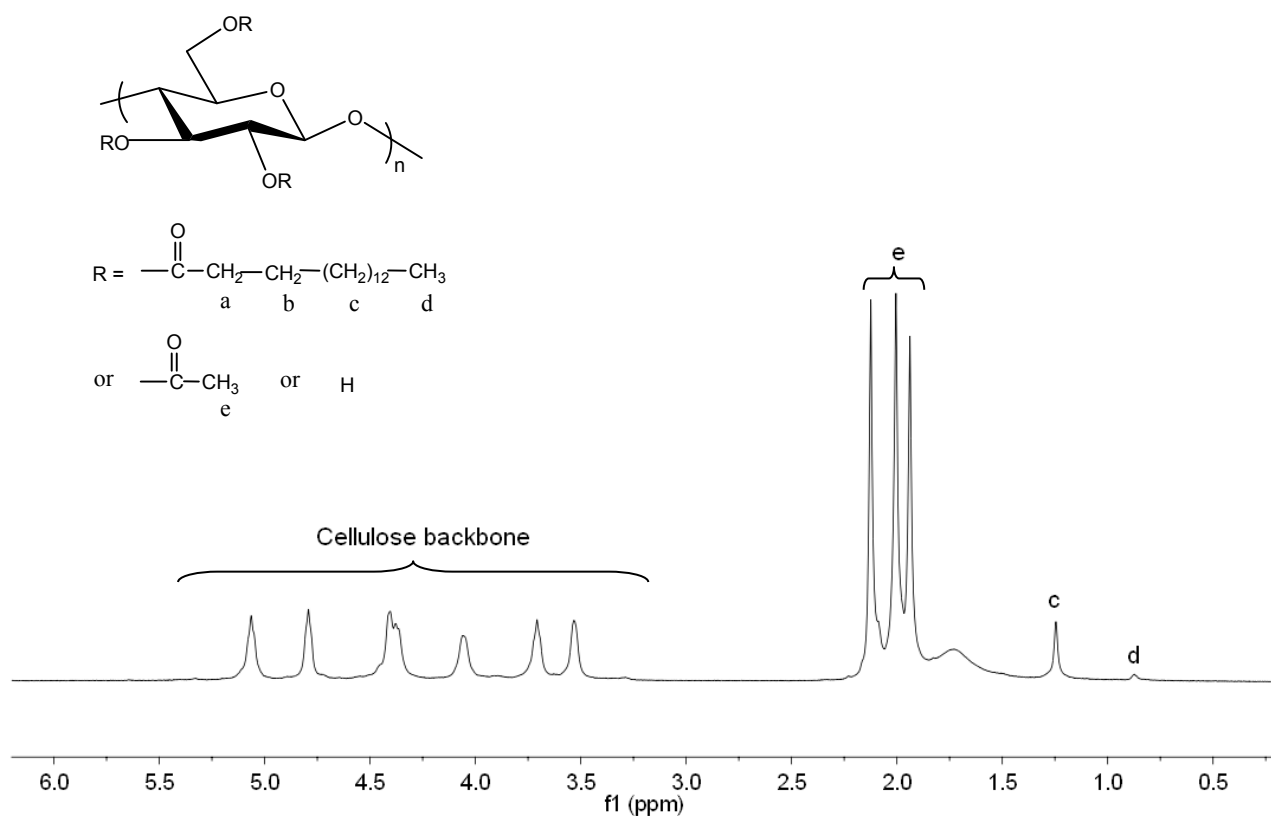


Fig. S11 ^1H NMR spectrum of cellulose acetate-palmitate (milling time = 60 min) in CDCl_3 .

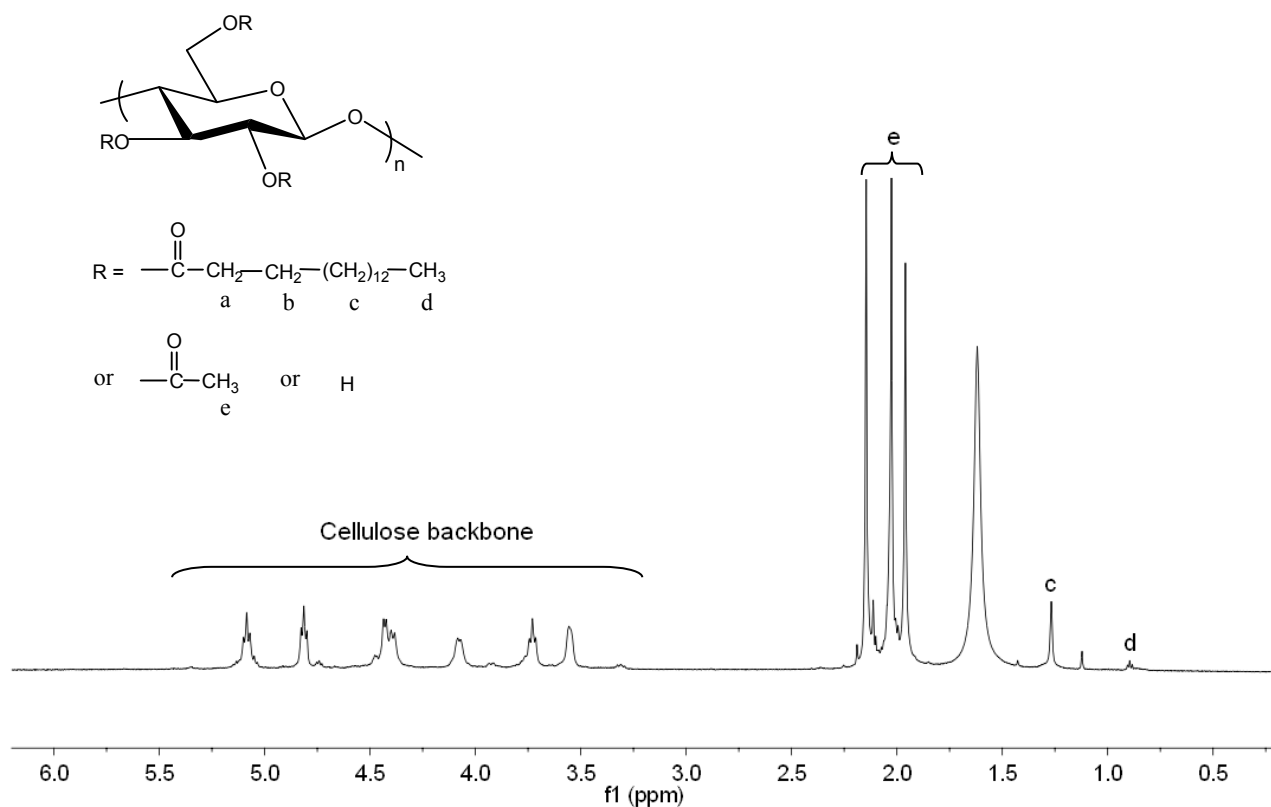


Fig. S12 ^1H NMR spectrum of cellulose acetate-palmitate (milling time = 90 min) in CDCl_3 .

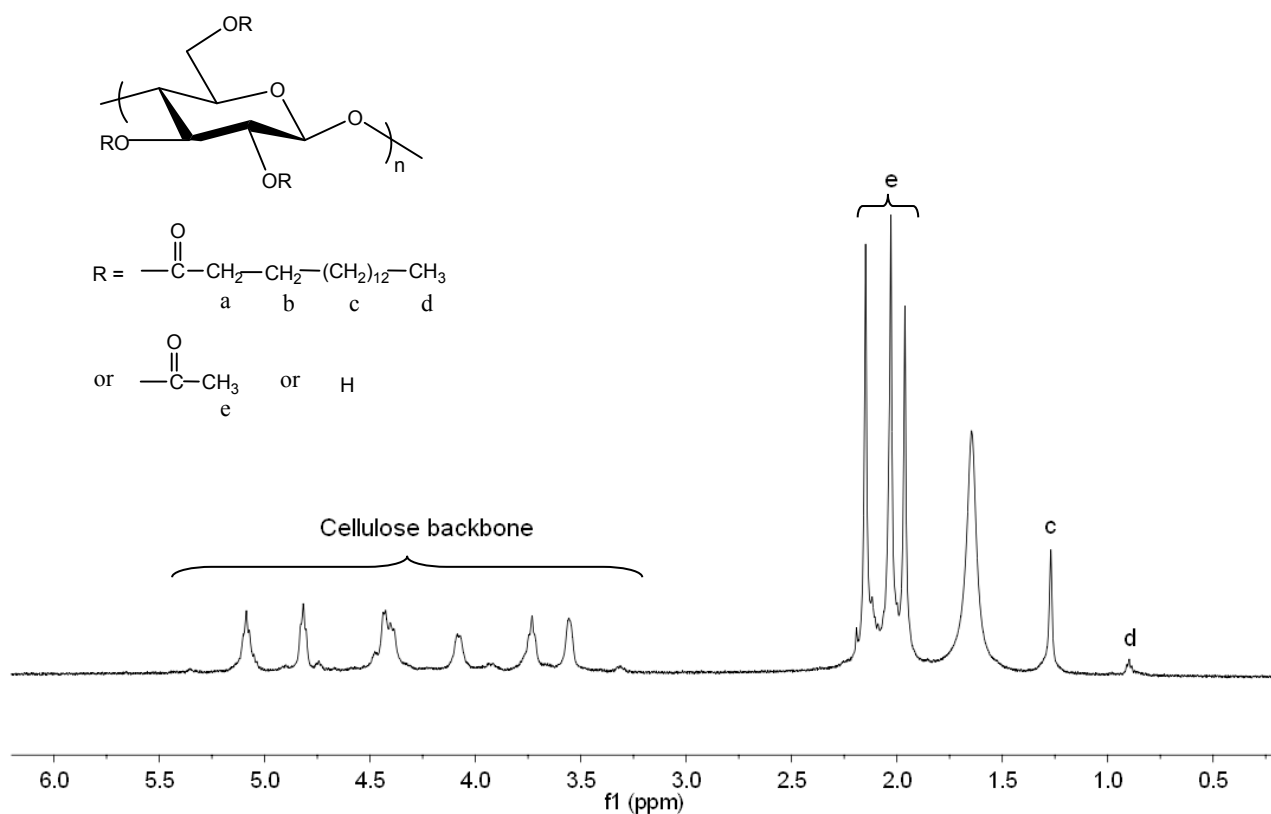


Fig. S13 ^1H NMR spectrum of cellulose acetate-palmitate (milling time = 120 min) in CDCl_3 .

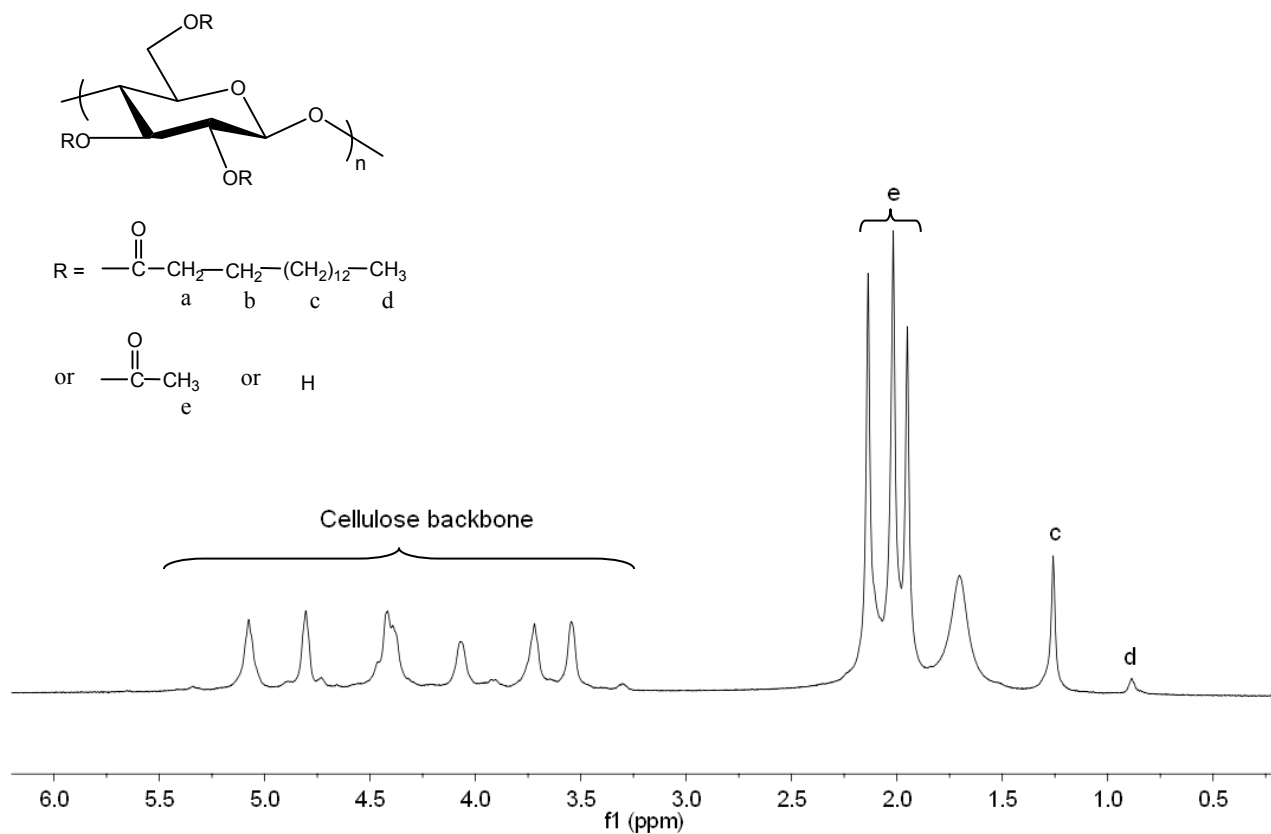


Fig. S14 ^1H NMR spectrum of cellulose acetate-palmitate (milling time = 150 min) in CDCl_3 .

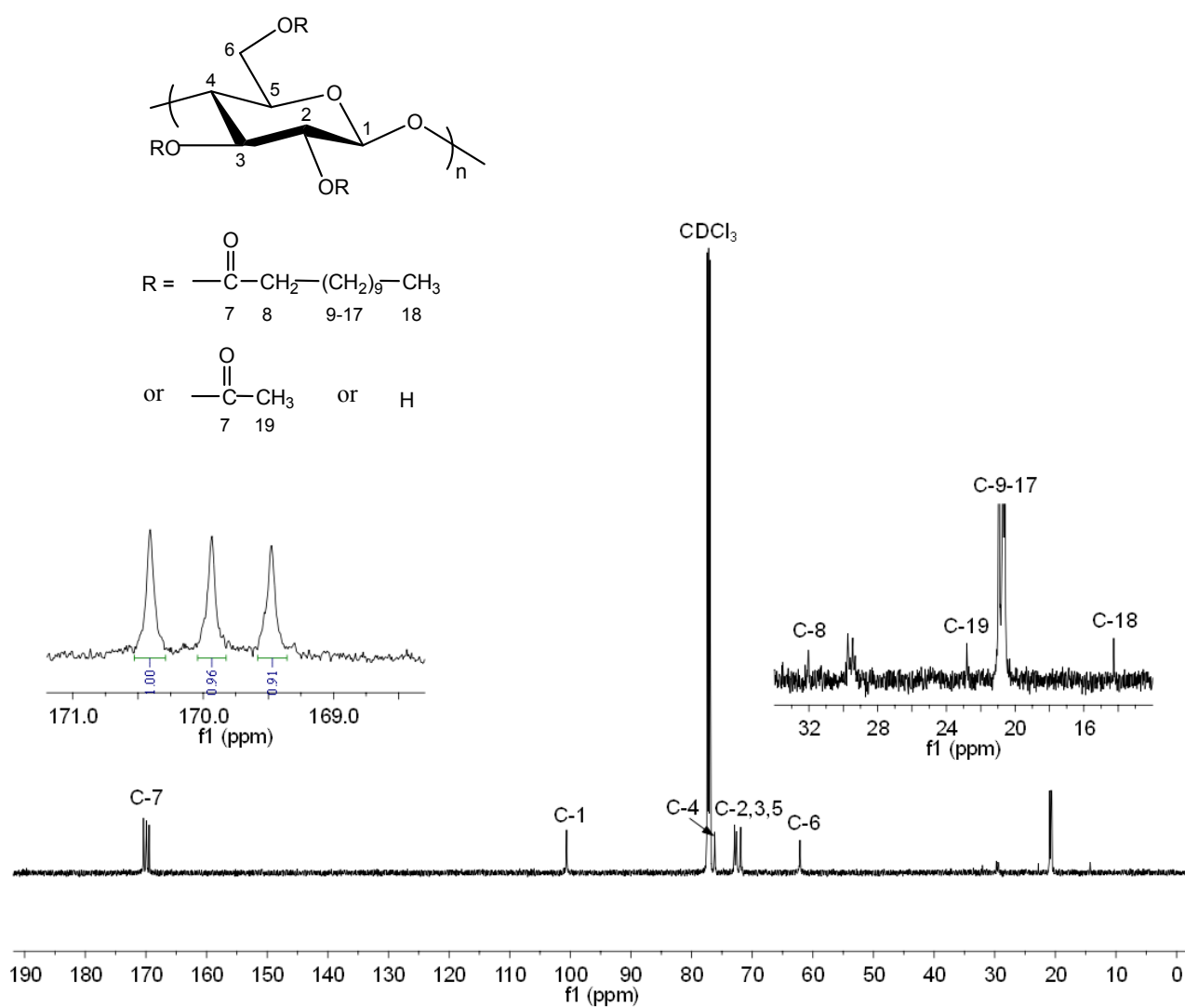


Fig. S15 ^{13}C NMR spectrum of cellulose acetate-laurate (milling time = 120 min) in CDCl₃.

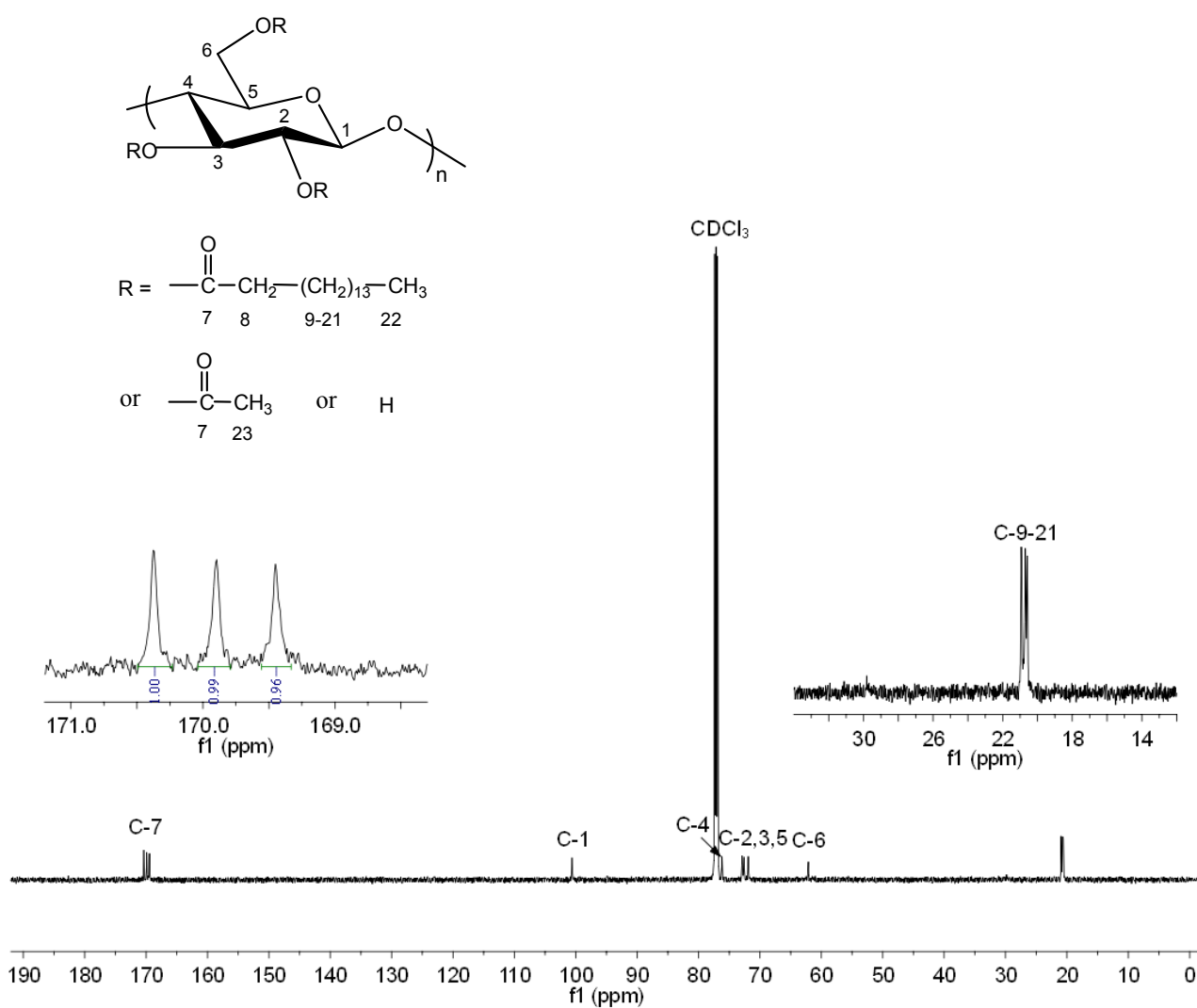


Fig. S16 ^{13}C NMR spectrum of cellulose acetate-palmitate (milling time = 120 min) in CDCl₃.