Electronic Supplementary Material (ESI) for RSC Advances.

Supporting Information

Preparation of cellulose and pulp carbamates through a reactive dissolution approach

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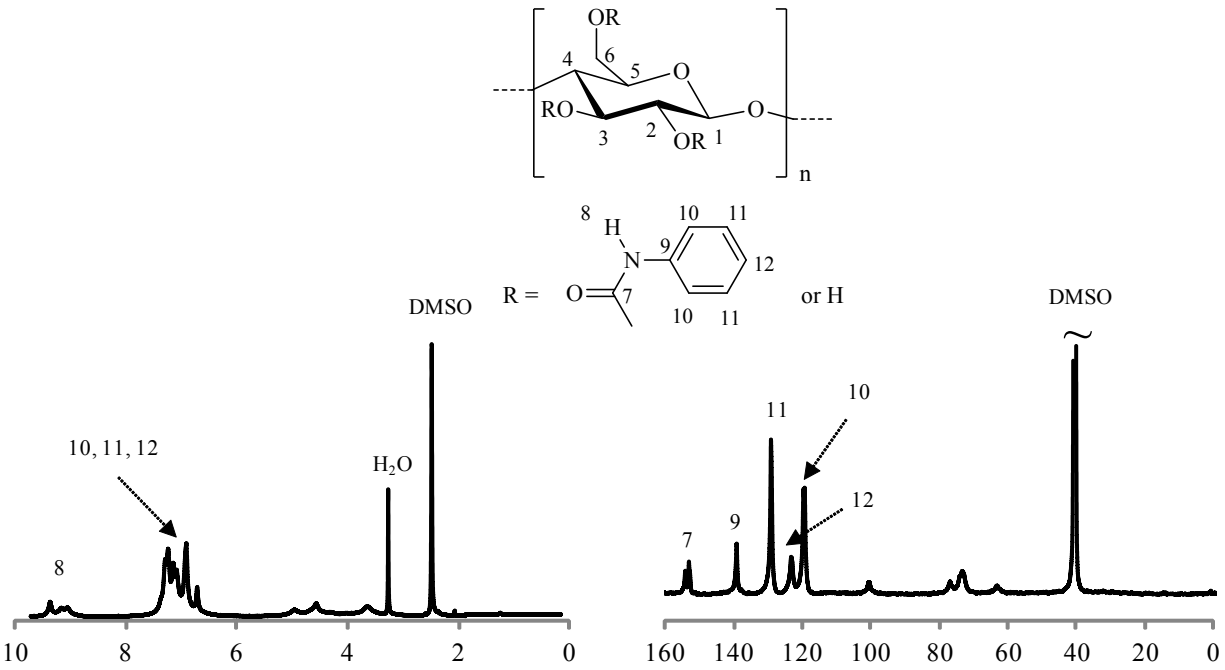

Fig. 1 ^{1}H and ^{13}C NMR spectrum of treated MCC with phenyl isocyanate.

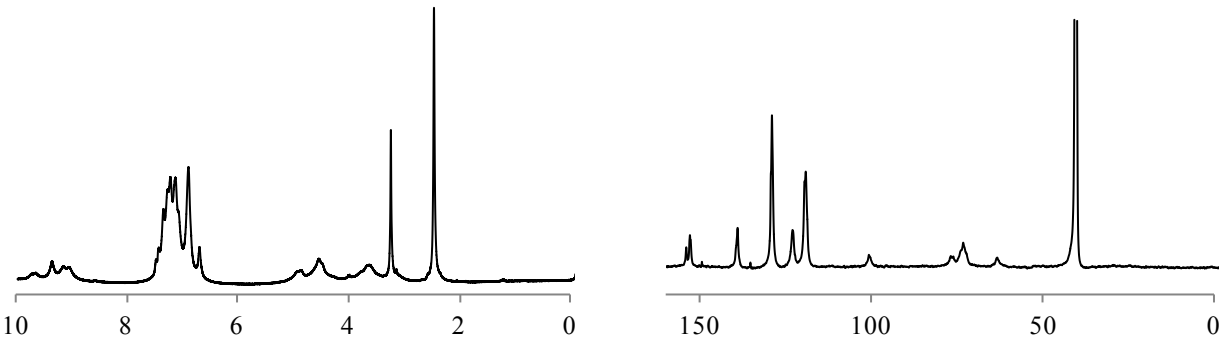

Fig. 1a ^{1}H and ^{13}C NMR spectrum of treated HKP with phenyl isocyanate.

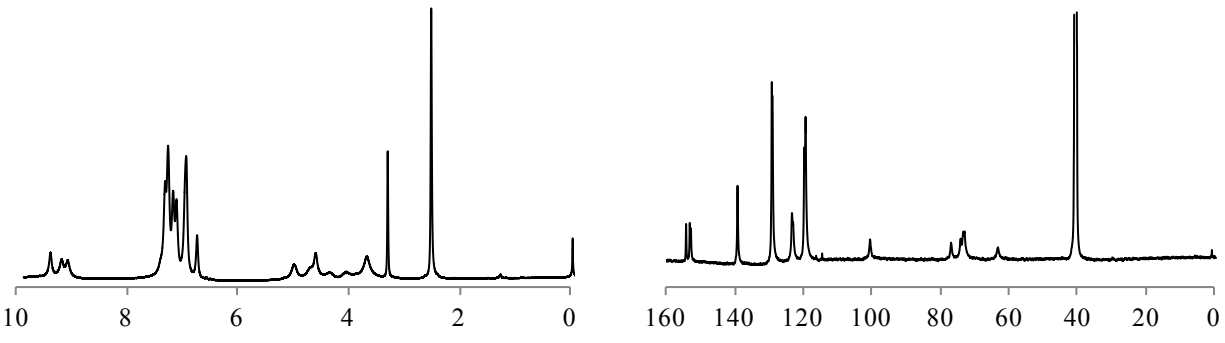

Fig. 1b ^{1}H and ^{13}C NMR spectrum of treated HPHKP with phenyl isocyanate.

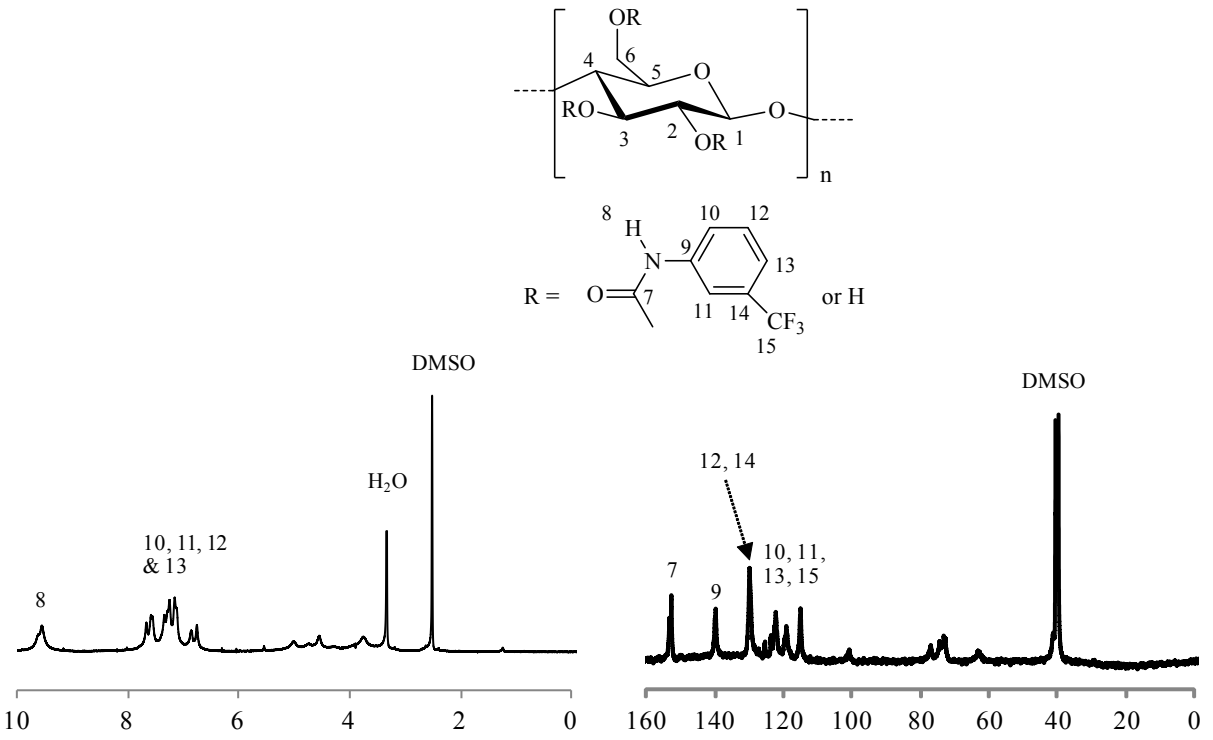

Fig. 2 ^{1}H and ^{13}C NMR spectrum of treated MCC with 3-(trifluoromethyl)phenyl isocyanate.

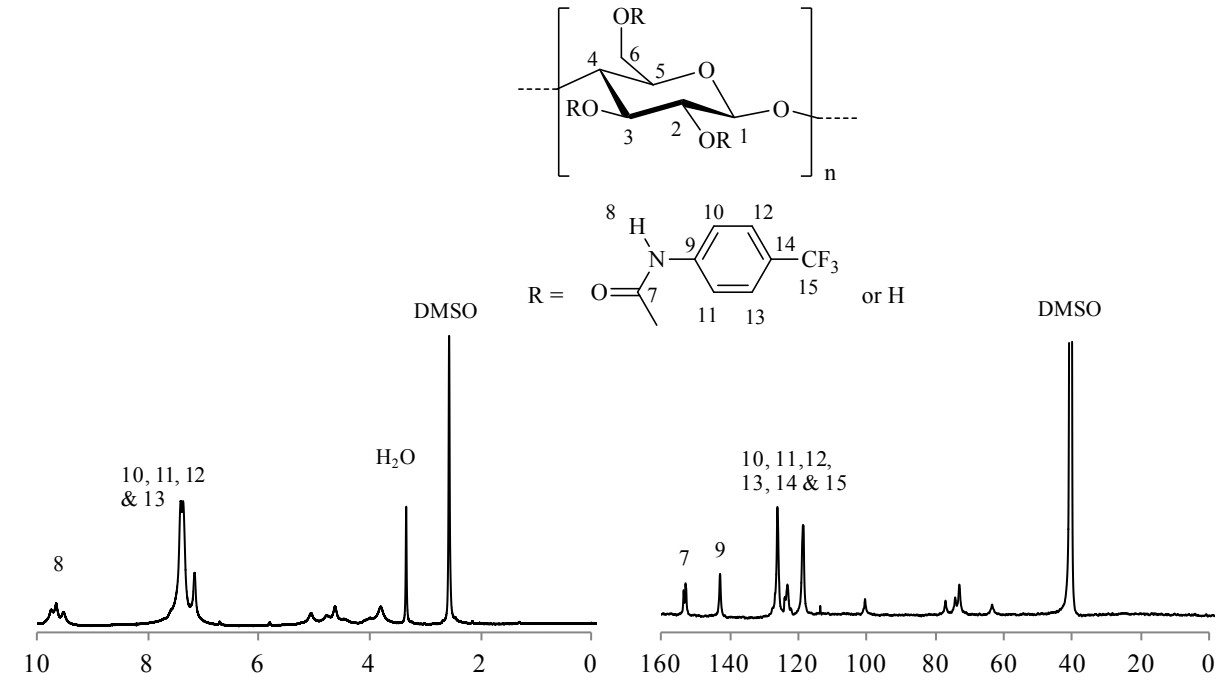

Fig. 3 ^{1}H and ^{13}C NMR spectrum of treated MCC with 4-(trifluoromethyl)phenyl isocyanate.

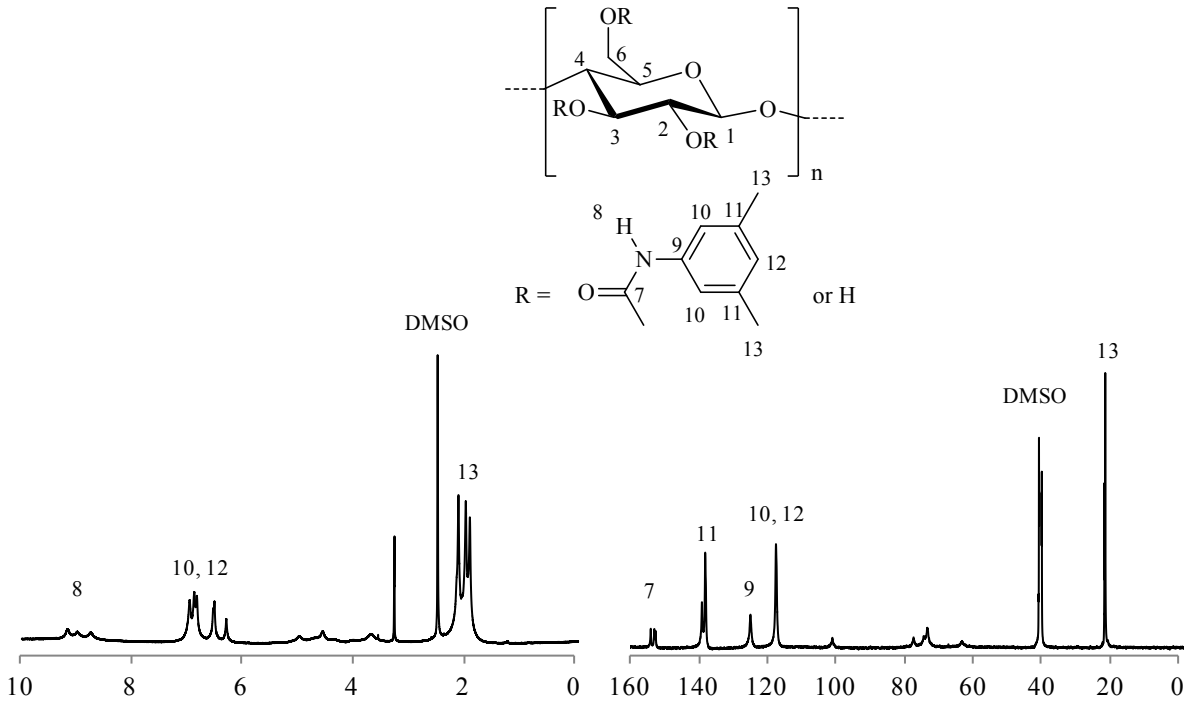

Fig. 4 ^{1}H and ^{13}C NMR spectrum of treated MCC with 2,4-dimethylphenyl isocyanate.

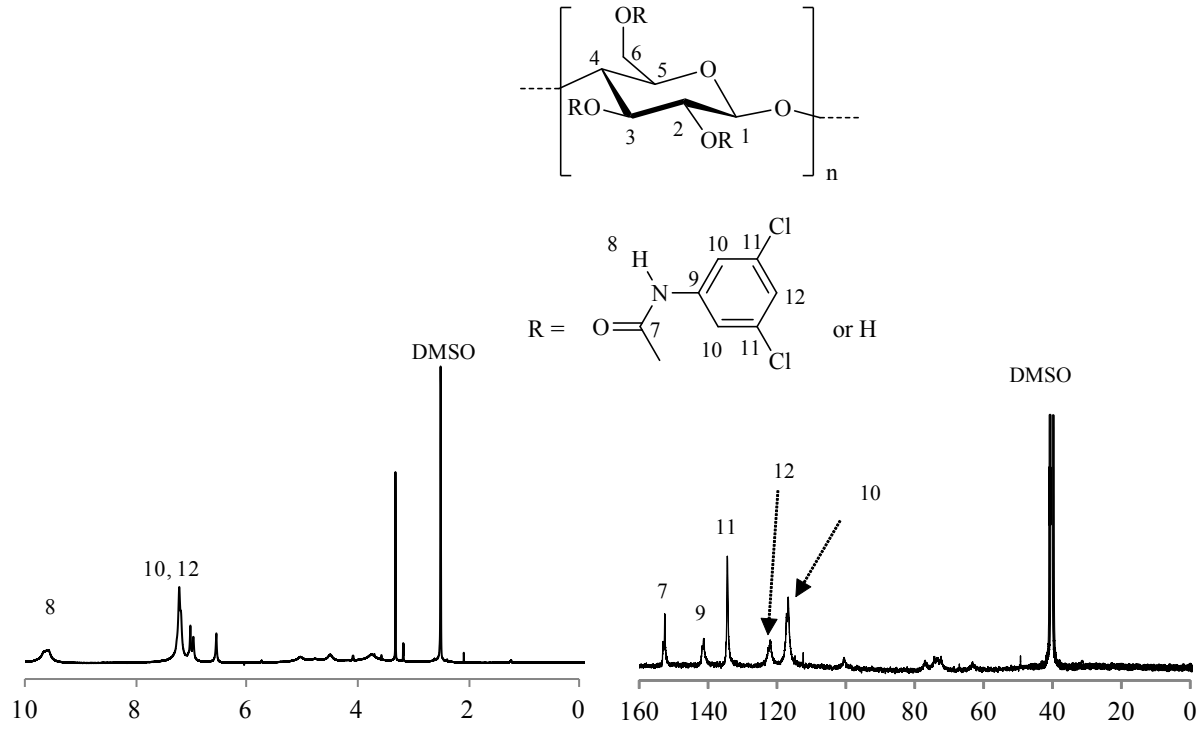

Fig. 5 ^{1}H and ^{13}C NMR spectrum of treated MCC with 3,5-dichlorophenyl isocyanate.

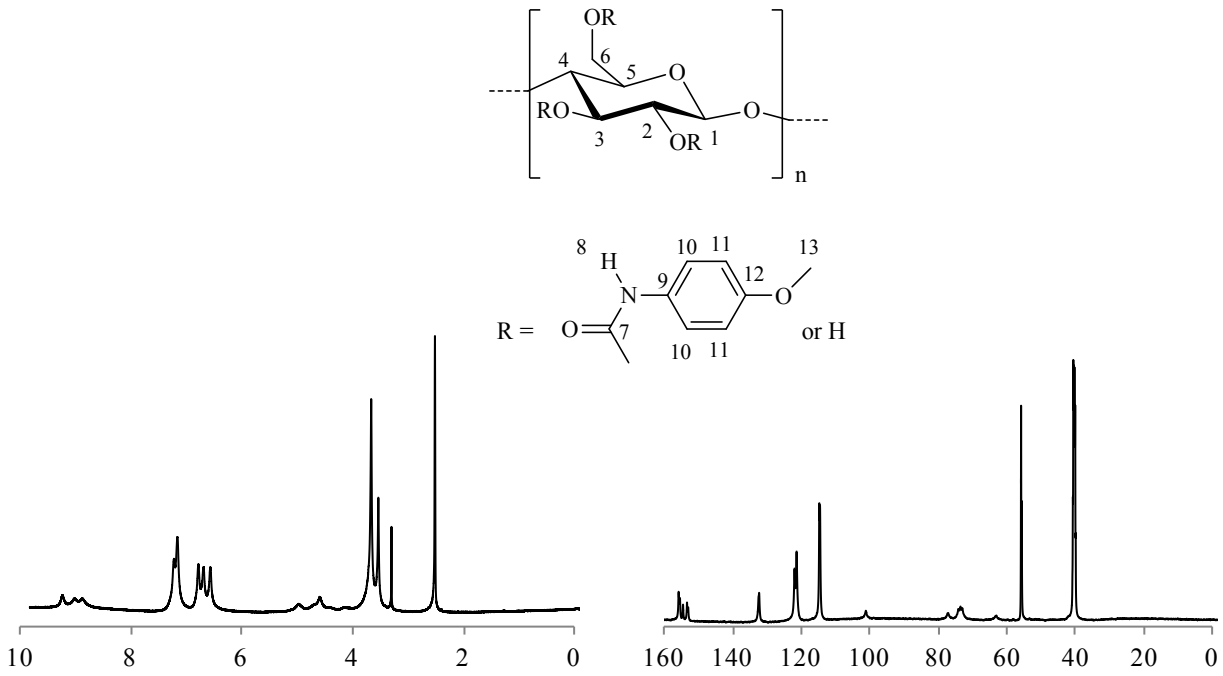

Fig. 6 ^{1}H and ^{13}C NMR spectrum of treated MCC with 4-methoxyphenyl isocyanate.

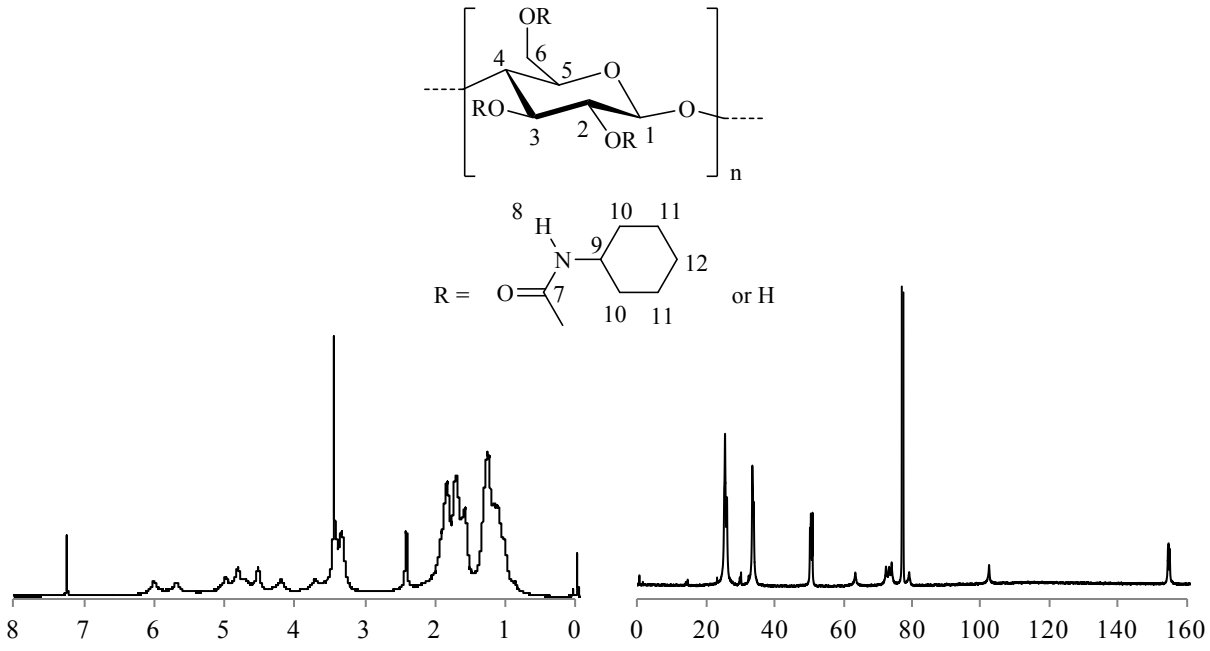

Fig. 7 ^{1}H and ^{13}C NMR spectrum of treated MCC with cyclohexyl isocyanate.

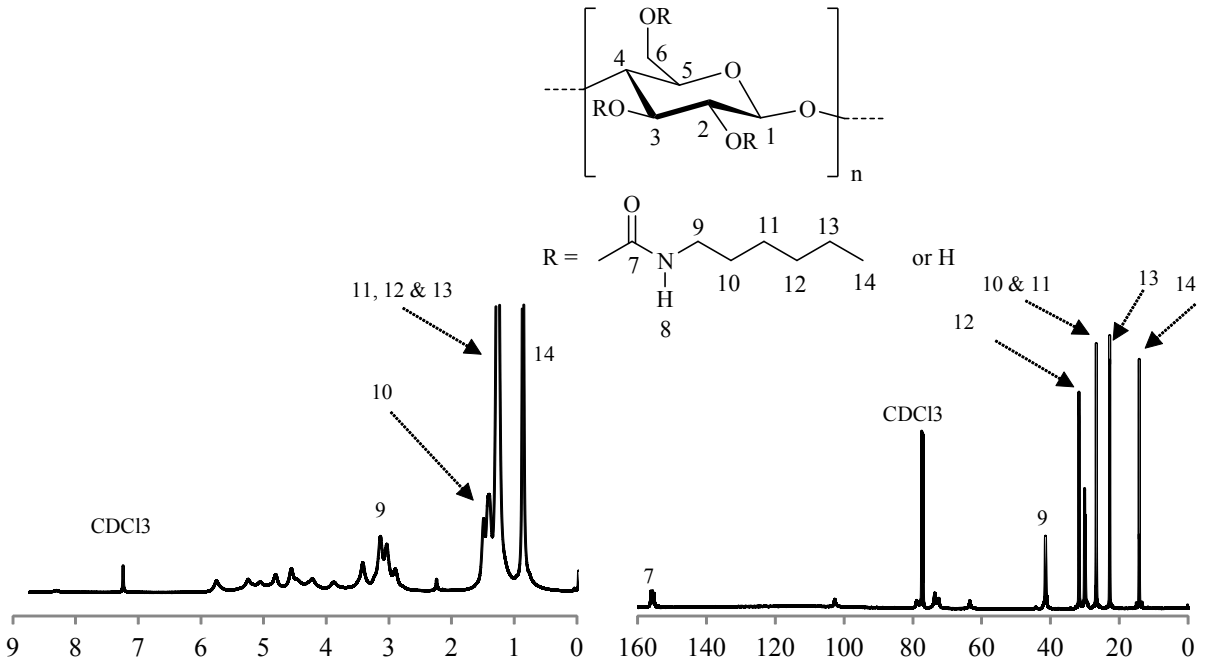

Fig. 8 ^{1}H and ^{13}C NMR spectrum of treated MCC with hexyl isocyanate.

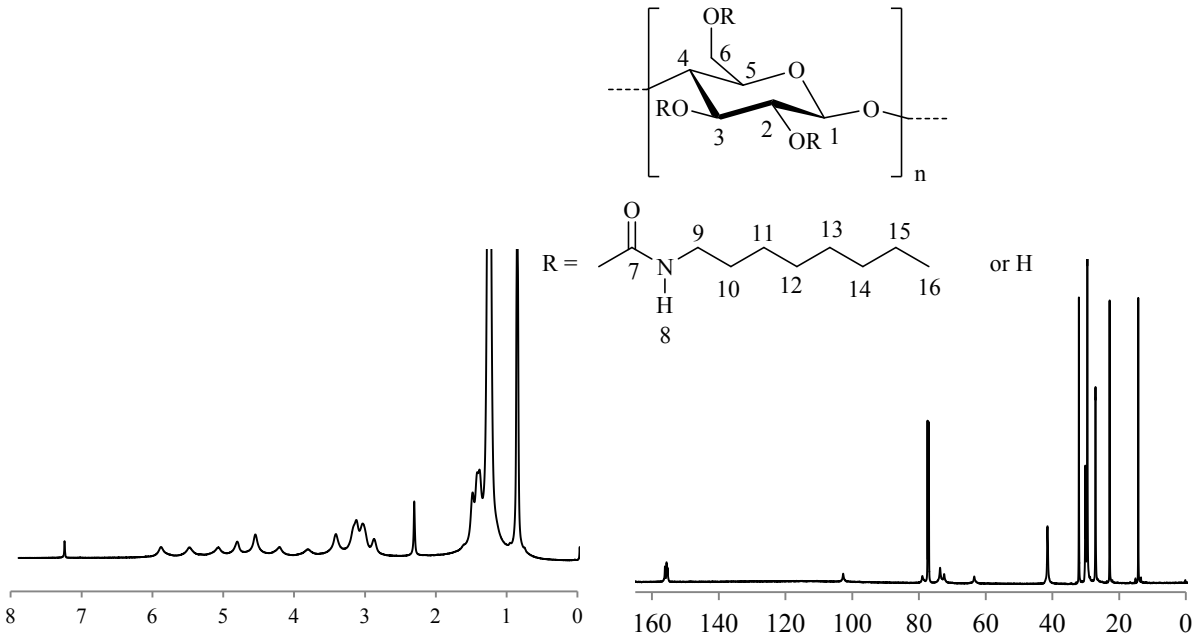

Fig. 9 ^{1}H and ^{13}C NMR spectrum of treated MCC with octyl isocyanate.

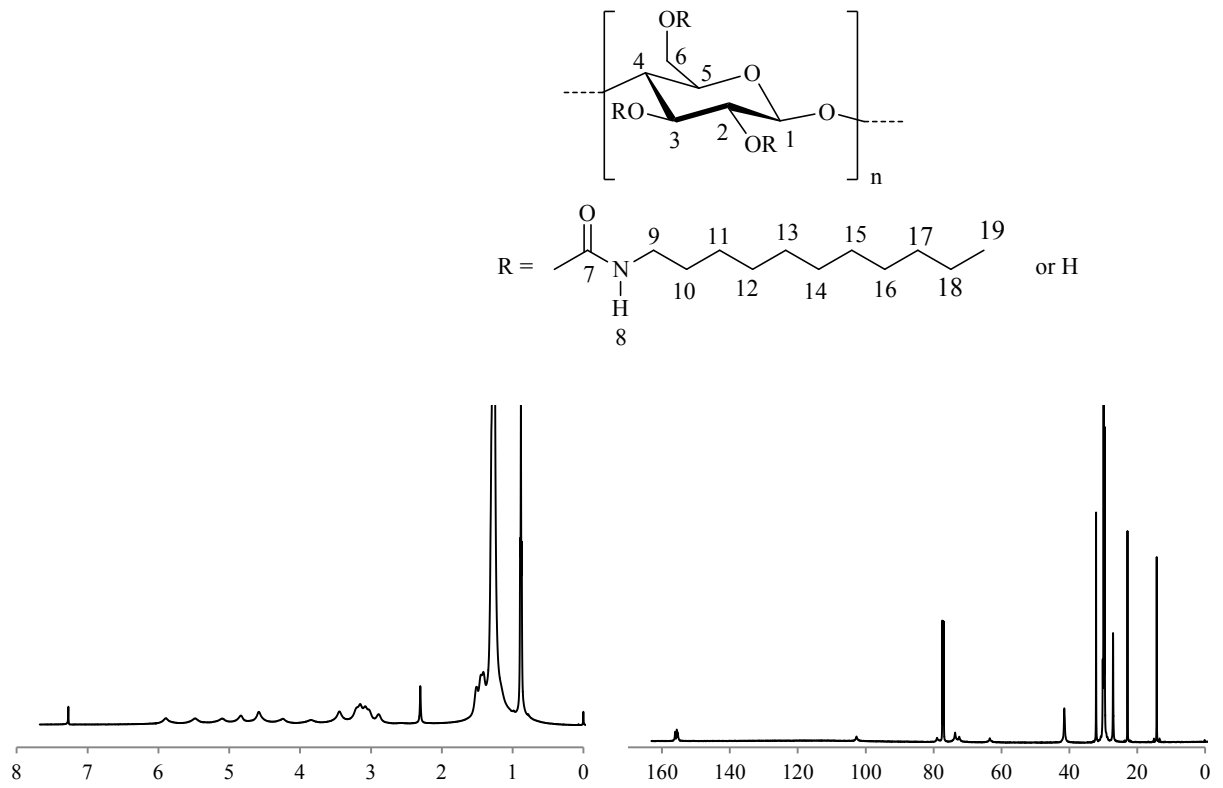

Fig. 10 ^{1}H and ^{13}C NMR spectrum of treated MCC with undecyl isocyanate.

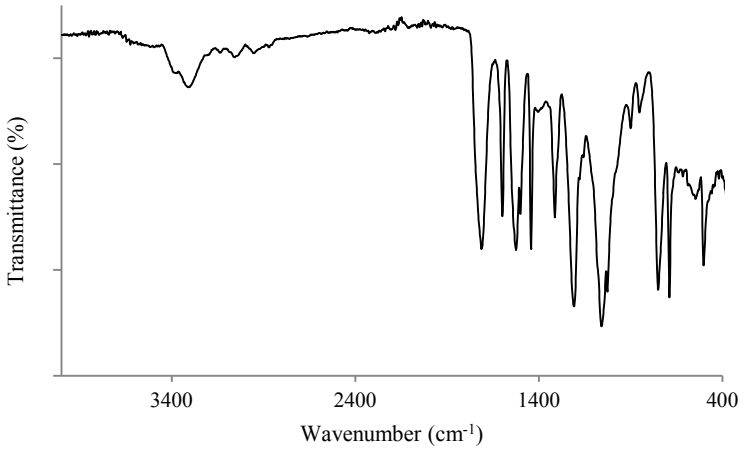

Fig. 11 FTIR spectra of modified HKP with phenyl isocyanate.

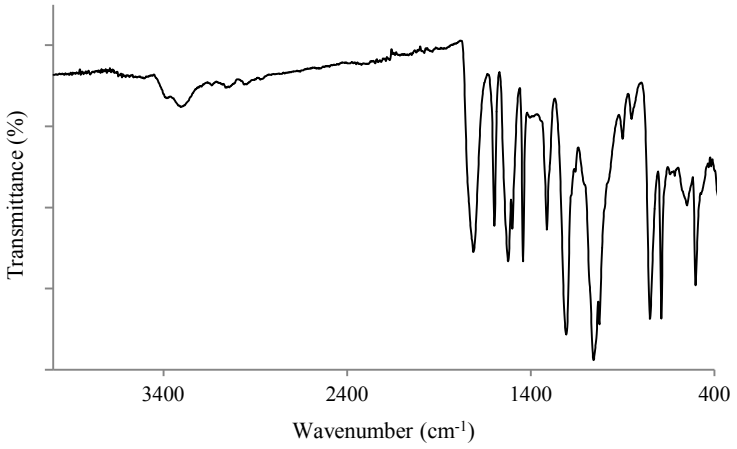

Fig. 12 FTIR spectra of modified HPHKP with phenyl isocyanate.

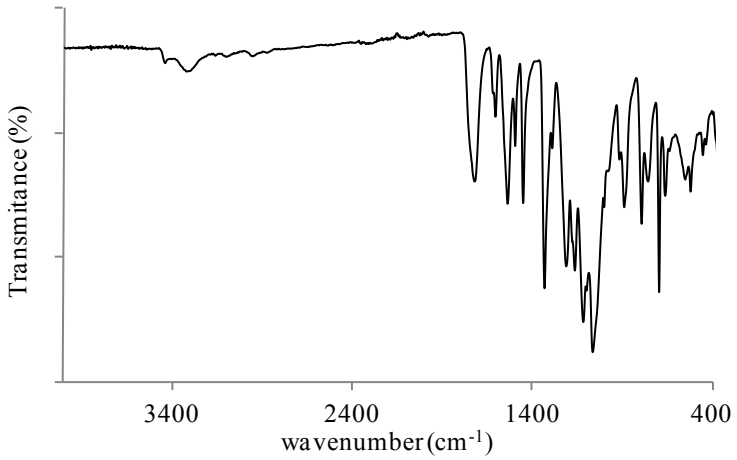

Fig. 13 FTIR spectra of modified MCC with 3-(trifluoromethyl)phenyl isocyanate.

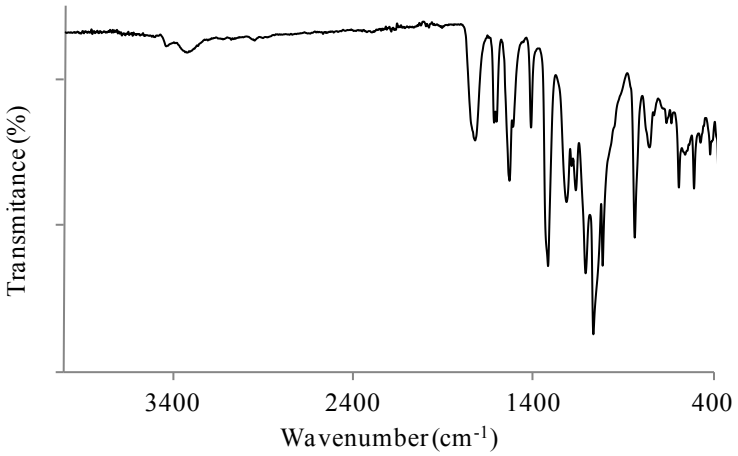

Fig. 14 FTIR spectra of modified MCC with 4-(trifluoromethyl)phenyl isocyanate.

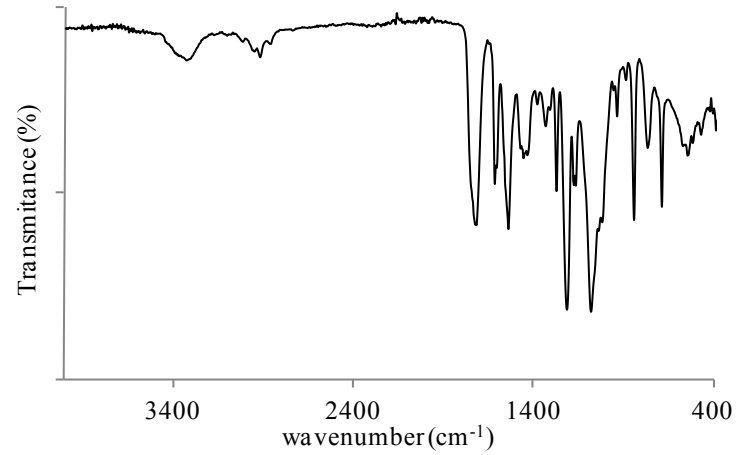

Fig. 15 FTIR spectra of modified MCC with 2,4-dimethylphenyl isocyanate.

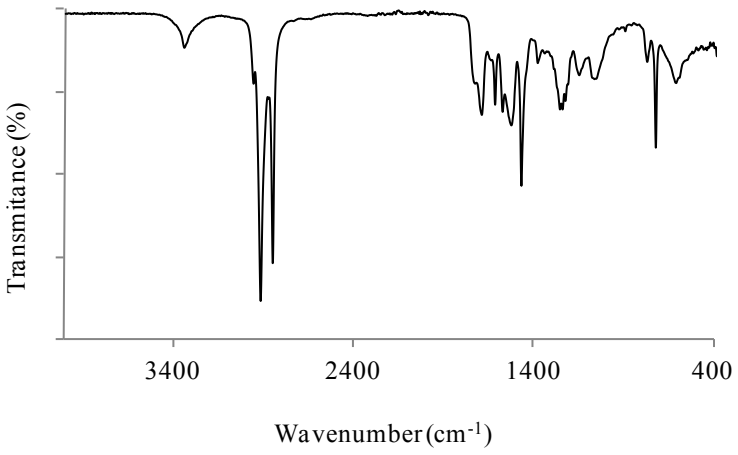

Fig. 16 FTIR spectra of modified MCC with 3,5-dichlorophenyl isocyanate.

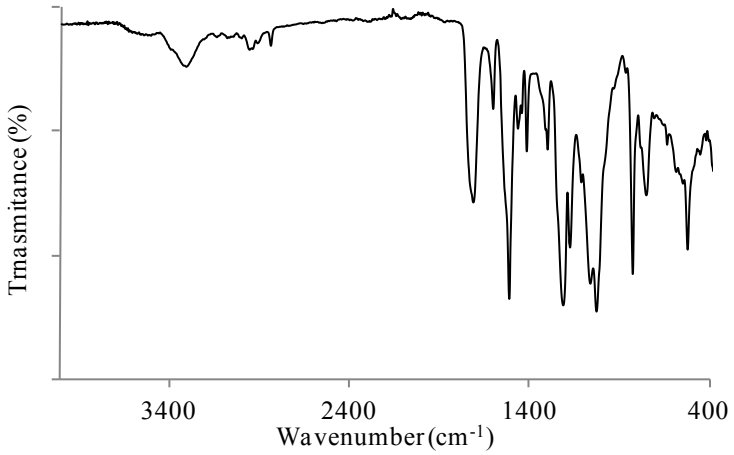

Fig. 17 FTIR spectra of modified MCC with 4-methoxyphenyl isocyanate.

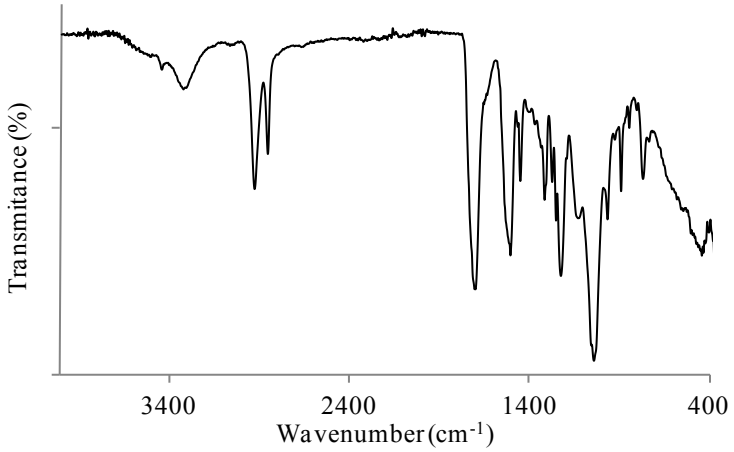

Fig. 18 FTIR spectra of modified MCC with cyclohexyl isocyanate.

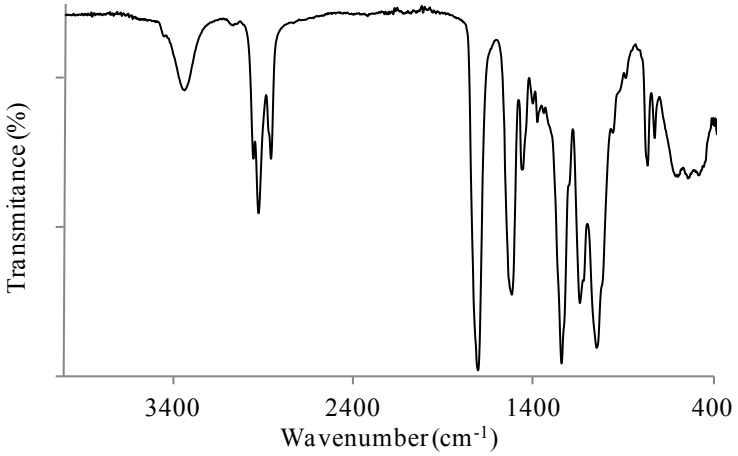

Fig. 19 FTIR spectra of modified MCC with hexyl isocyanate.

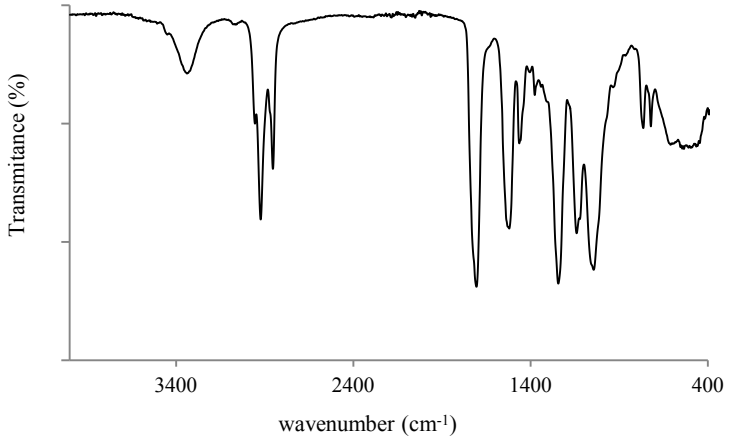

Fig. 20 FTIR spectra of modified MCC with octyl isocyanate.

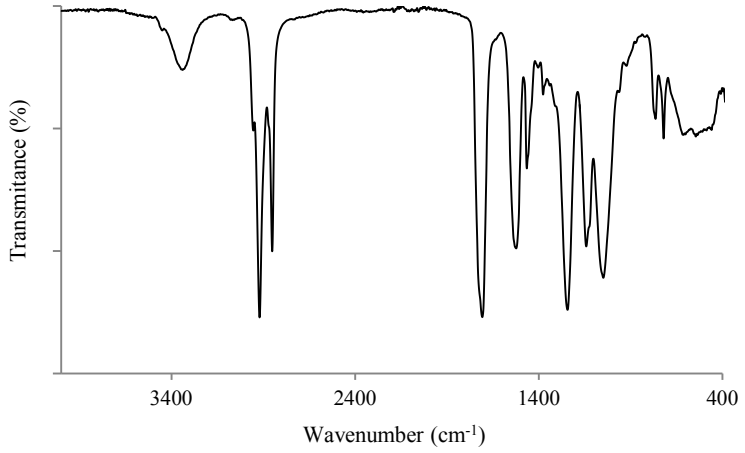

Fig. 21 FTIR spectra of modified MCC with undecyl isocyanate.

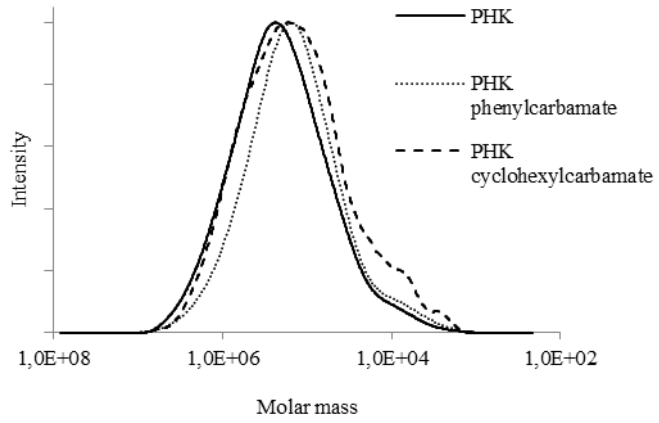

Fig. 22 Molar mass distribution of unmodified and phenyl isocyanate modified PHK.

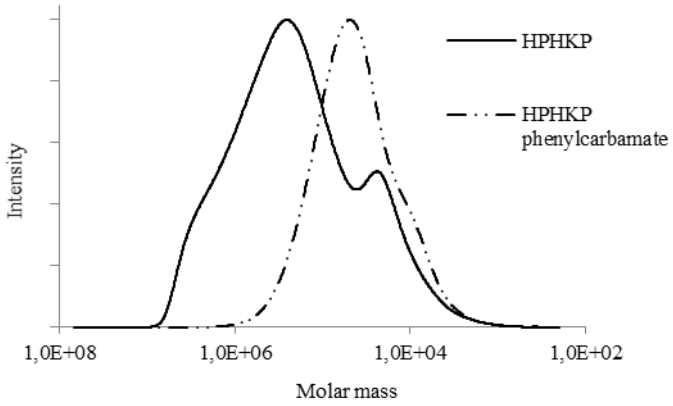

Fig. 23 Molar mass distribution of unmodified and phenyl isocyanate modified HPHKP.

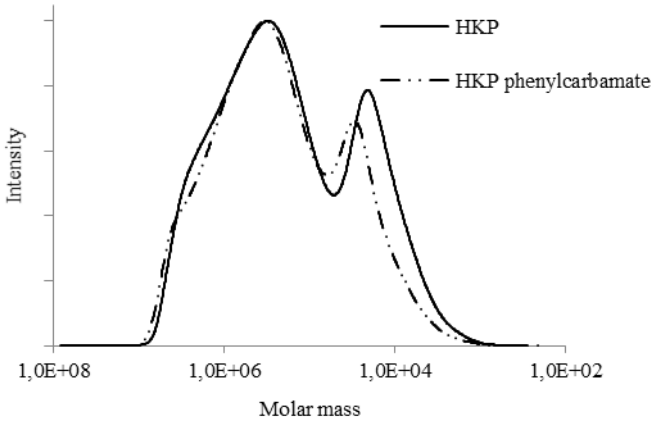

Fig. 24 Molar mass distribution of unmodified and phenyl isocyanate modified HKP.

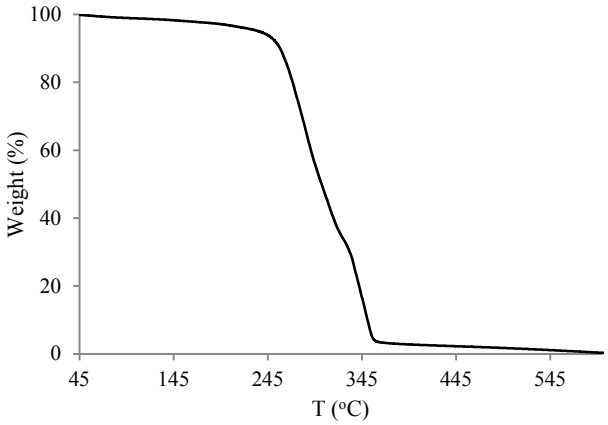

Fig. 25 TGA curve of treated MCC with 3-(trifluoromethyl)phenyl isocyanate

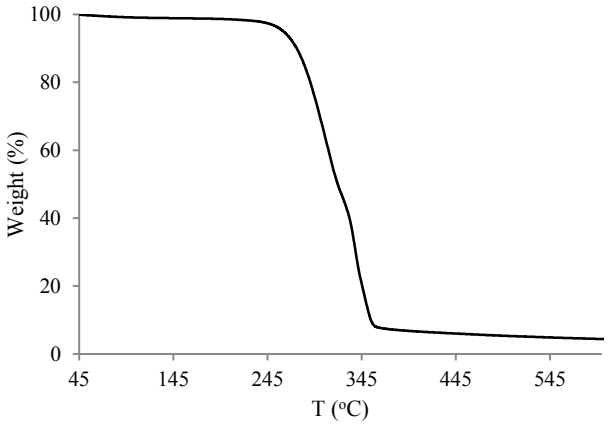

Fig. 26 TGA curve of treated MCC with 4-(trifluoromethyl)phenyl isocyanate

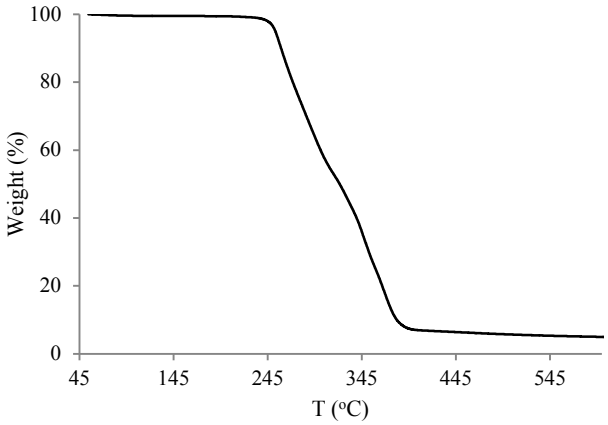

Fig. 27 TGA curve of treated MCC with 2,4-dimethylphenyl isocyanate

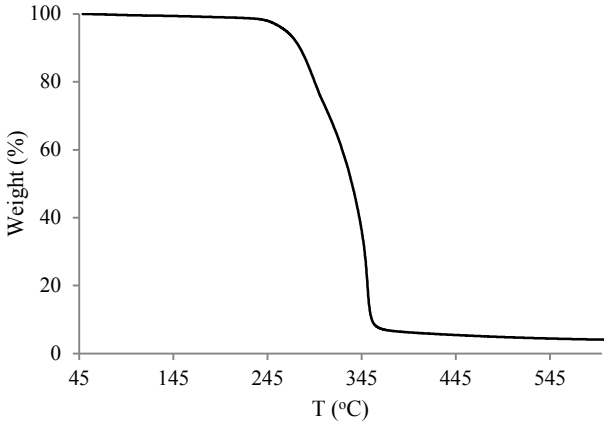

Fig. 28 TGA curve of treated MCC with 3,5-dichlorophenyl isocyanate

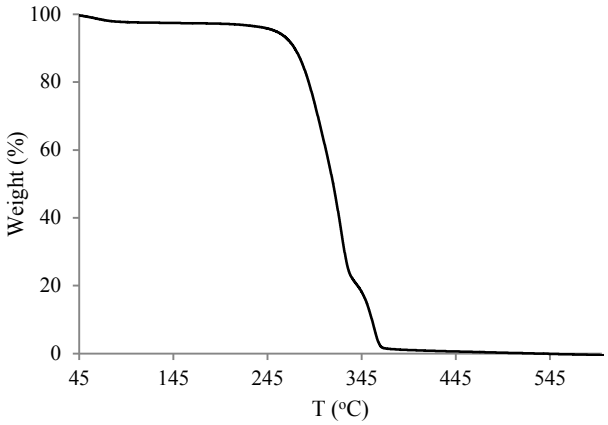

Fig. 29 TGA curve of treated MCC with 4-methoxyphenyl isocyanate

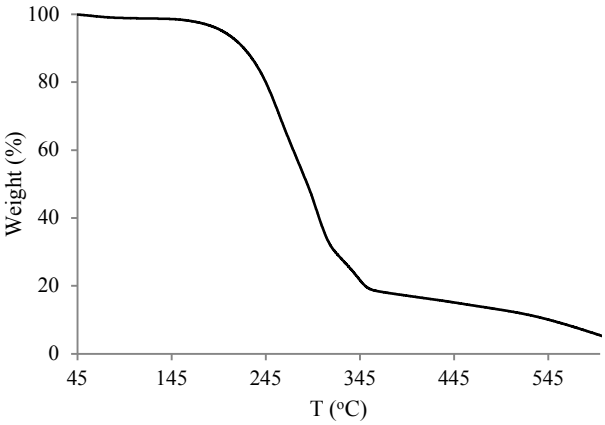

Fig. 30 TGA curve of treated MCC with hexyl isocyanate

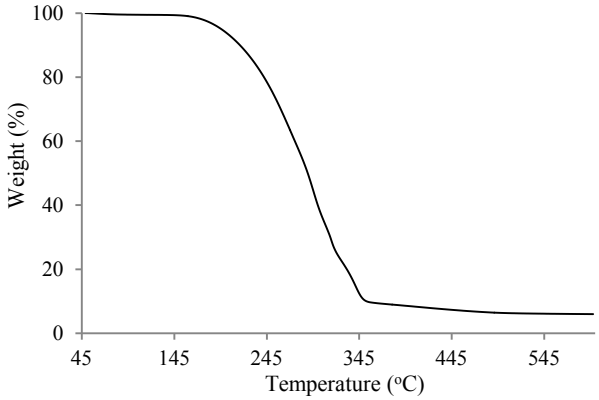

Fig. 31 TGA curve of treated MCC with octyl isocyanate

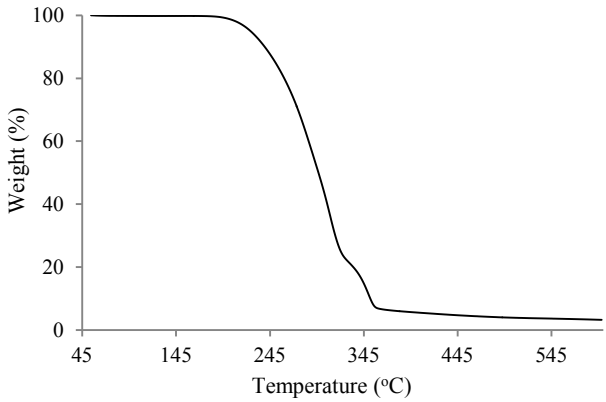

Fig. 32 TGA curve of treated MCC with undecyl isocyanate

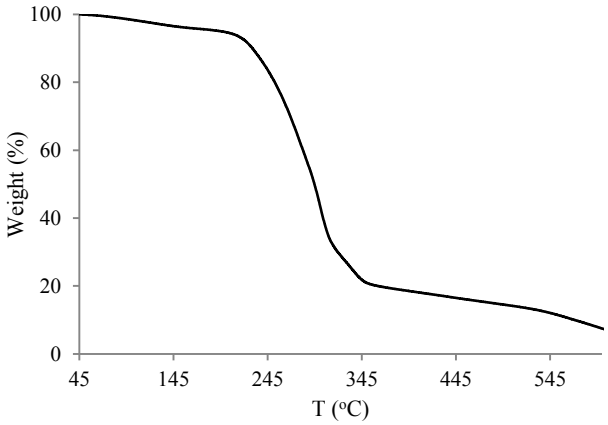

Fig. 33 TGA curve of treated MCC with cyclohexyl isocyanate

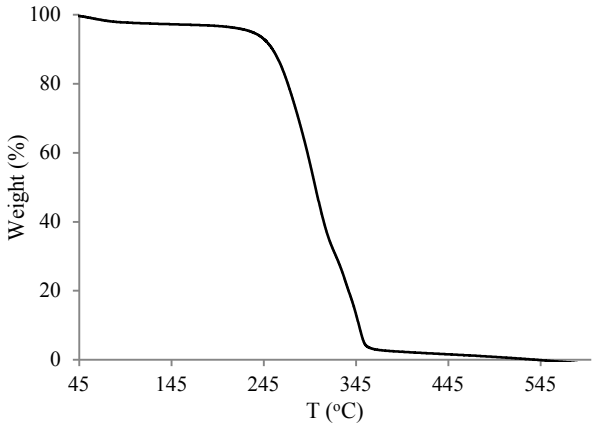

Fig. 34 TGA curve of treated MCC with phenyl isocyanate

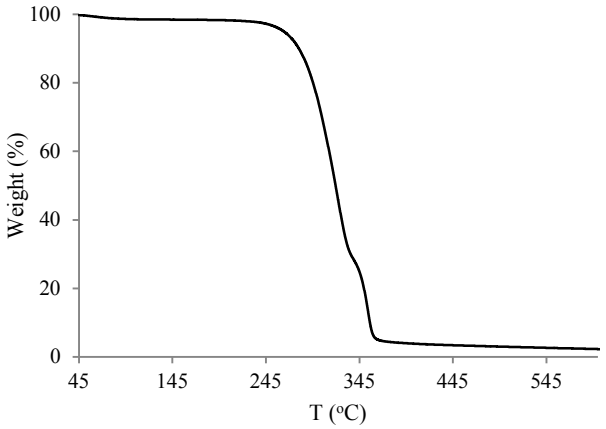

Fig. 35 TGA curve of treated HKP with phenyl isocyanate

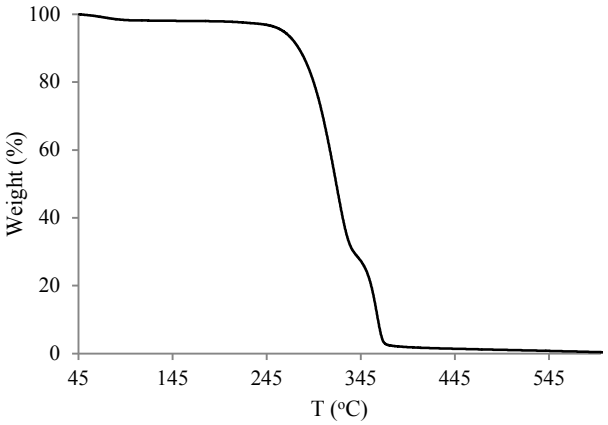

Fig. 36 TGA curve of treated HPHKP with phenyl isocyanate

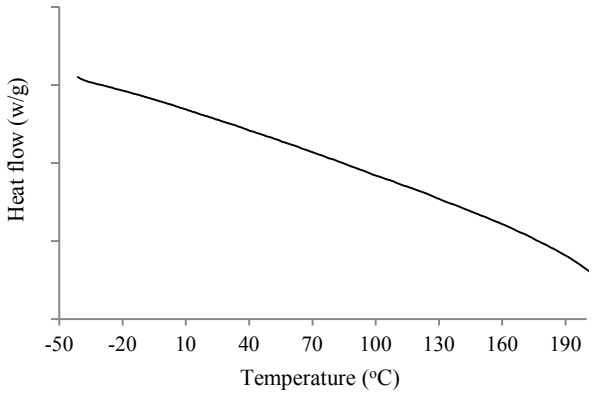

Fig. 37 DSC analysis of modified MCC with phenyl isocyanate.

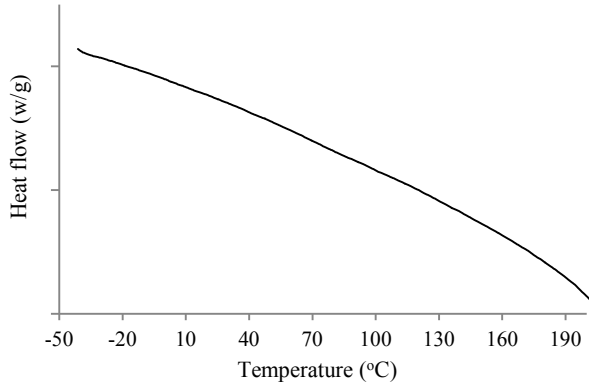

Fig. 38 DSC analysis of modified PHK with phenyl isocyanate

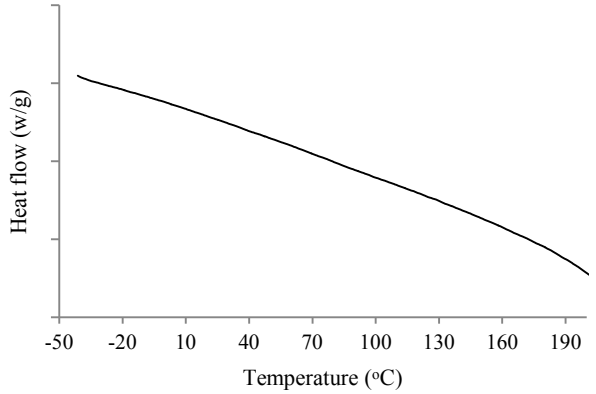

Fig. 39 DSC analysis of modified HPHKP with phenyl isocyanate.

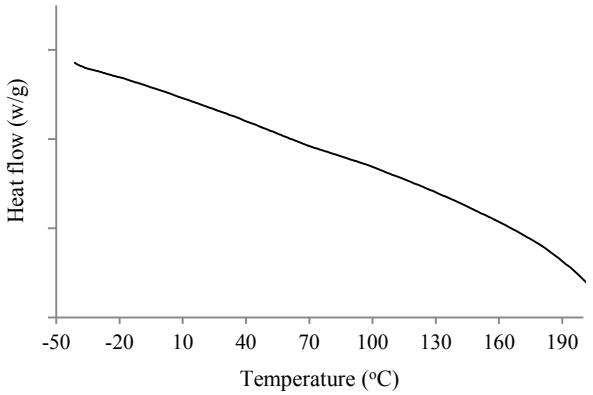

Fig. 40 DSC analysis of modified HKP with phenyl isocyanate.

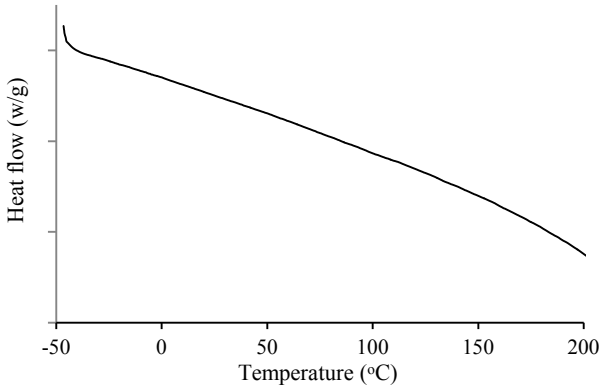

Fig. 41 DSC analysis of modified MCC with 4-methoxyphenyl isocyanate.

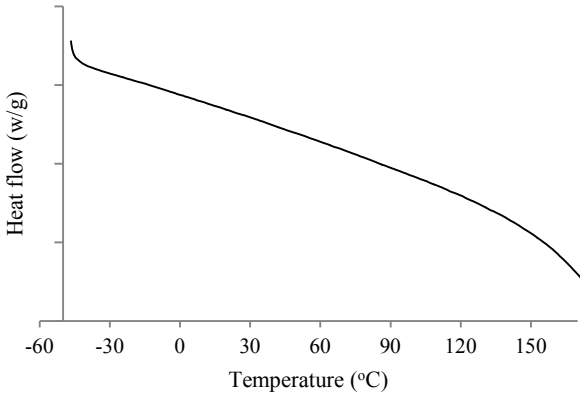

Fig. 42 DSC analysis of modified MCC with cyclohexyl isocyanate.

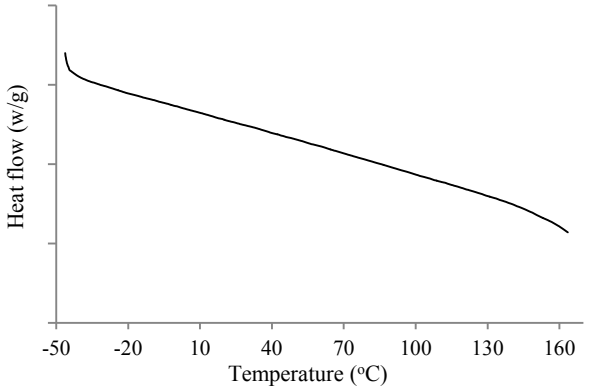

Fig. 43 DSC analysis of modified MCC with hexyl isocyanate.

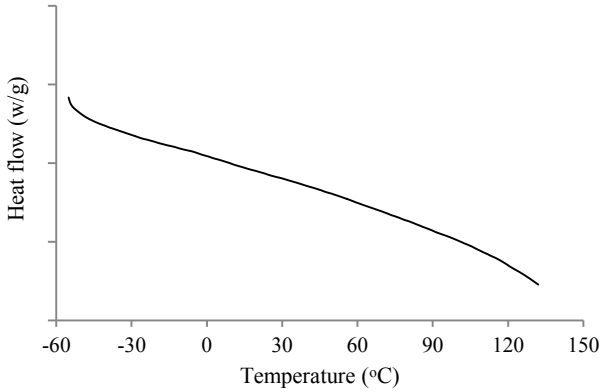

Fig. 44 DSC analysis of modified MCC with octyl isocyanate.

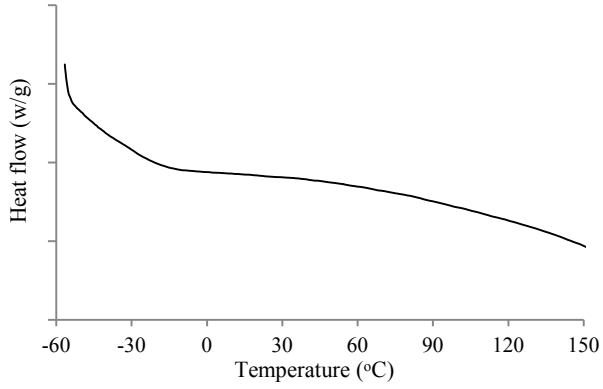

Fig. 45 DSC analysis of modified MCC with undecyl isocyanate.