

Supplementary Materials for

UV-Curable Silicone-Modified Polyurethane Acrylates for Food Freshness Monitoring

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Table S1 Feed ratios for preparation PUAs

Name of PUAs	Molar ratio of DMBA to PEG-600	Amount of DMBA/g	Amount of PEG-600/g	Amount of TMP/g	Amount of IPDI/g	Amount of HPA/g
PUA-1	5:95	0.3704	28.5			
PUA-2	10:90	3.180	9.37			
PUA-3	15:85	4.770	8.85 g	↑ 0.4025	↑ 24.937	↑ 14.185
PUA-4	20:80	6.370	8.33 g	↓	↓	↓
PUA-5	25:75	7.960	7.81 g			

The amounts of acetone and DBTDL were the total mass and 0.4 wt% of the reaction raw materials, respectively.

Table S2 Feed ratios for preparation NR-PUAs

Name of NR-PUAs	Molar ratio of DMBA to PEG-600	PUAs	Amount of PUAs/g	Amount of EDC·HCl /g	Amount of NHS/g	Amount of NR/g	Acrylate content calculated by ¹ H-NMR (mmol/g)
NR-PUA-1	5:95	PUA-1		0.0690	0.0420	0.1050	4.69
NR-PUA-2	10:90	PUA-2		0.1132	0.0680	0.1706	4.37
NR-PUA-3	15:85	PUA-3	↑ 10.0	0.1420	0.08550	0.2150	4.16
NR-PUA-4	20:80	PUA-4	↓	0.2170	0.1300	0.3260	3.95
NR-PUA-5	25:75	PUA-5		0.4580	0.2750	0.6900	3.74

The amounts of mixture solvent of THF and ethanol (m:m=1:4) was two fold of the mass of reaction raw materials.