

Figure 1. Illustration of spin-coating processes to prepare polymer films

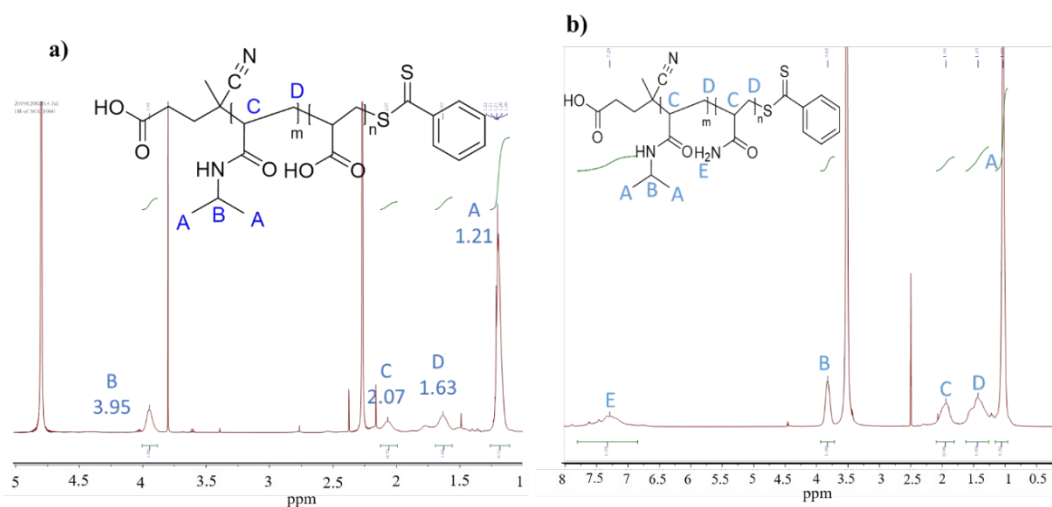


Figure 2. ¹H NMR spectrum of PNIPAm-based copolymers. a) PNIPAm-co-AAc, b) PNIPAm-co-AAm.

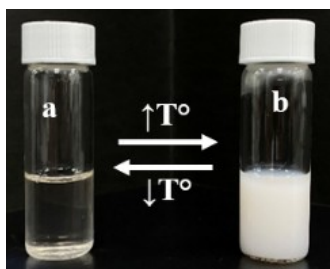


Figure 3. LCST behavior of thermo-responsive polymers in aqueous solution. a) below the cloud point, the solution became transparent; (b) above the cloud point, the solution exhibited cloudy appearance.

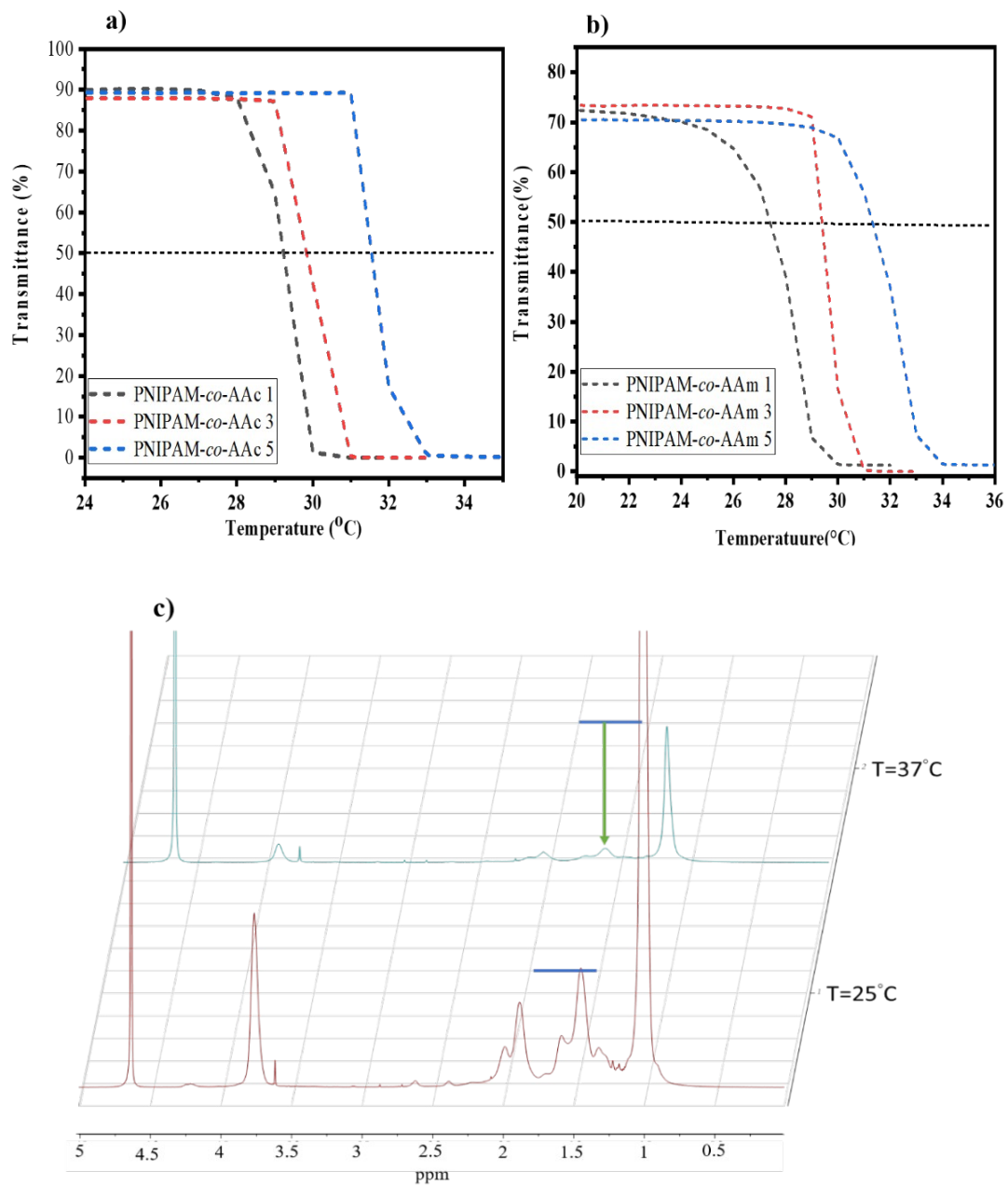


Figure 4. Turbidity measurement of the copolymer's solutions. a) PNIPAm-*co*-AAc, b) PNIPAm-*co*-AAm and c) Temperature-dependent ^1H NMR spectra of PNIPAm-*co*-AAc₅ in D_2O

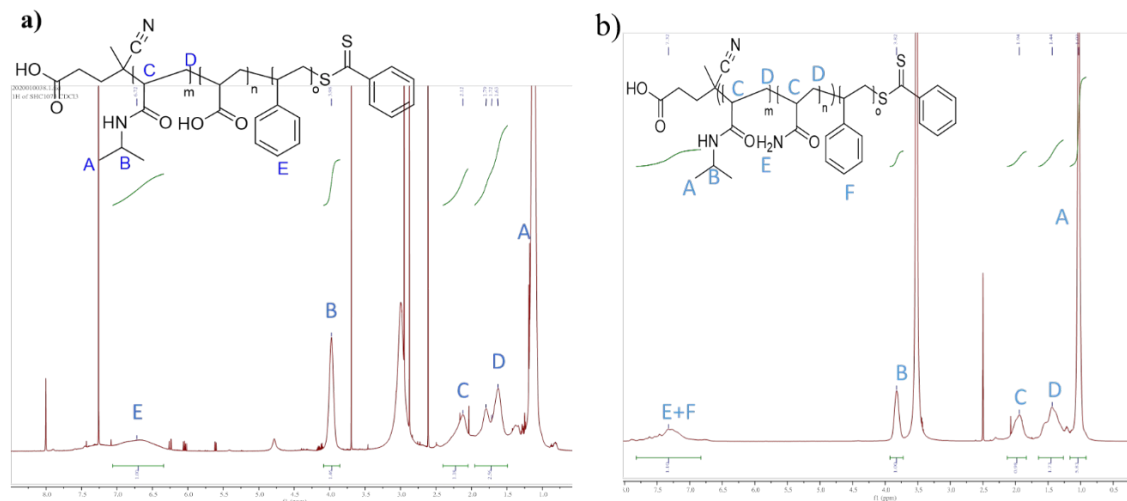


Figure 5. ^1H NMR spectrum of PNIPAm-based copolymers in DMSO-d_6 . a) poly (NIPAm-co-AAc)-b-PS, b) poly (NIPAm-co-AAm)-b-PS

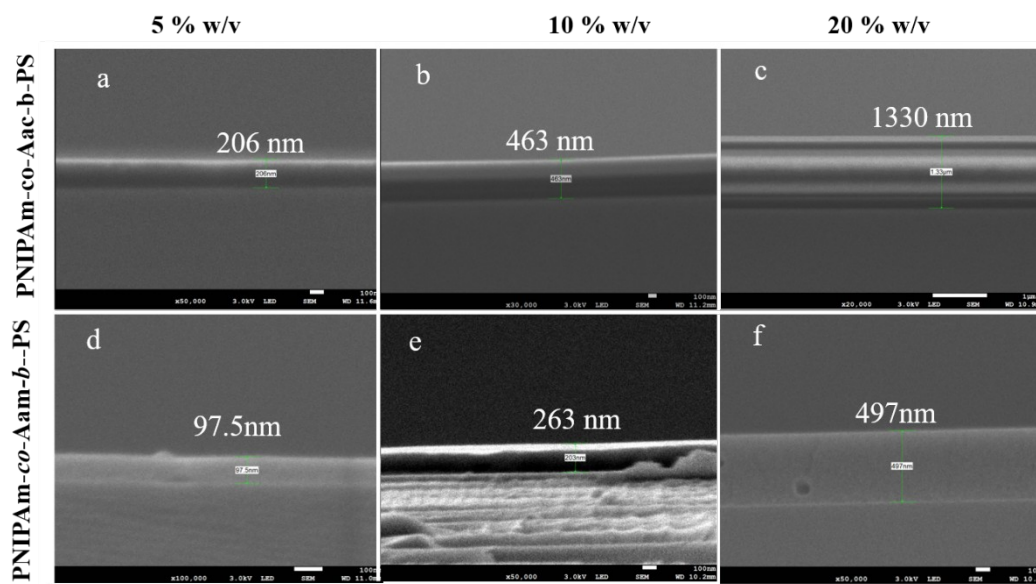


Figure 6. SEM images of polymer films. a) PNIPAm-co-AAc-b-PS (5% w/v), b) PNIPAm-co-AAc-b-PS (10% w/v), c) PNIPAm-co-AAc-b-PS (20% w/v), d) PNIPAm-co-AAm-b-PS (5% w/v), e) PNIPAm-co-AAm-b-PS (10% w/v), f) PNIPAm-co-AAm-b-PS (20% w/v)

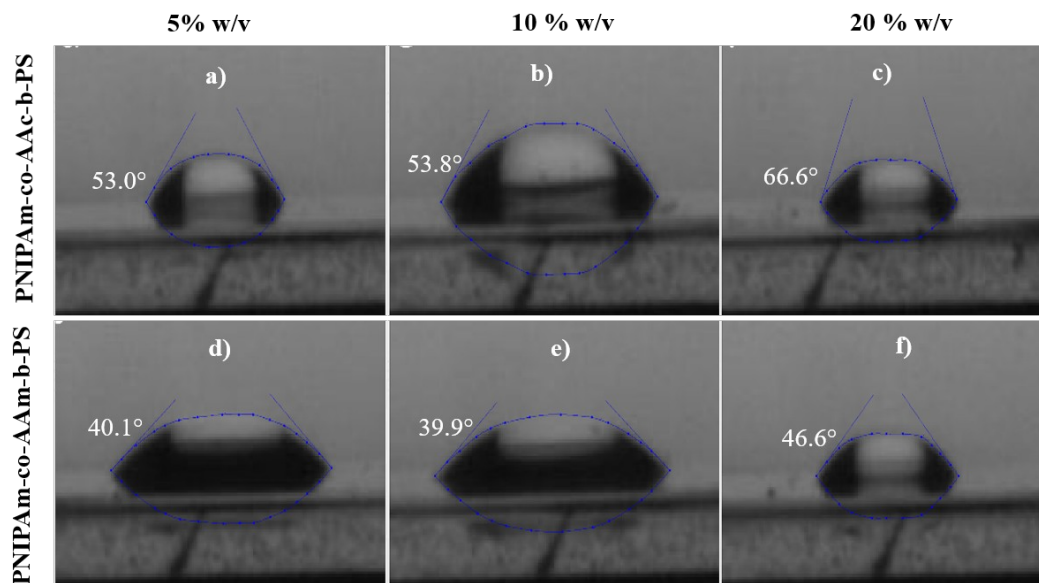


Figure 7. Water contact angle images of copolymer films. a) PNIPAm-*co*-AAc-*b*-PS (5% w/v), b) PNIPAm-*co*-AAc-*b*-PS (10% w/v), c) PNIPAm-*co*-AAc-*b*-PS (20% w/v), d) PNIPAm-*co*-AAm-*b*-PS (5% w/v), e) PNIPAm-*co*-AAm-*b*-PS (10% w/v), f) PNIPAm-*co*-AAm-*b*-PS (20% w/v).

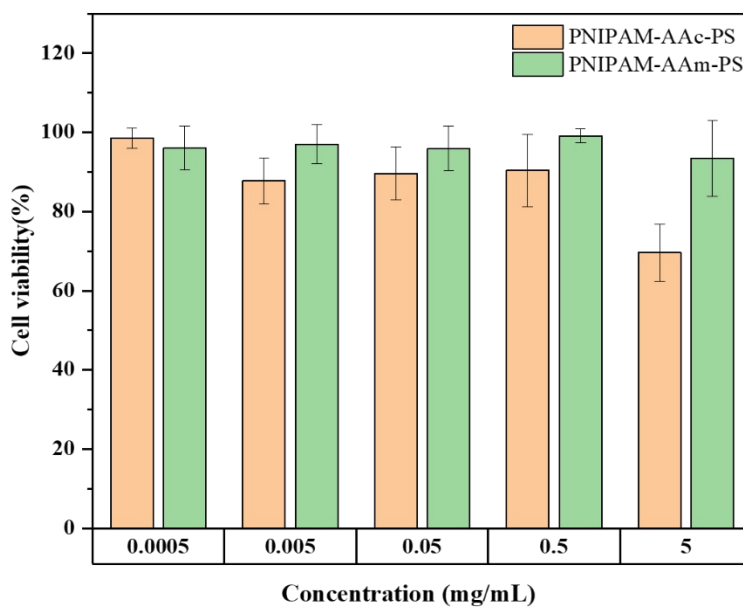


Figure 8: MTT assay indicating cell viability after 24 h of treatment with copolymers.

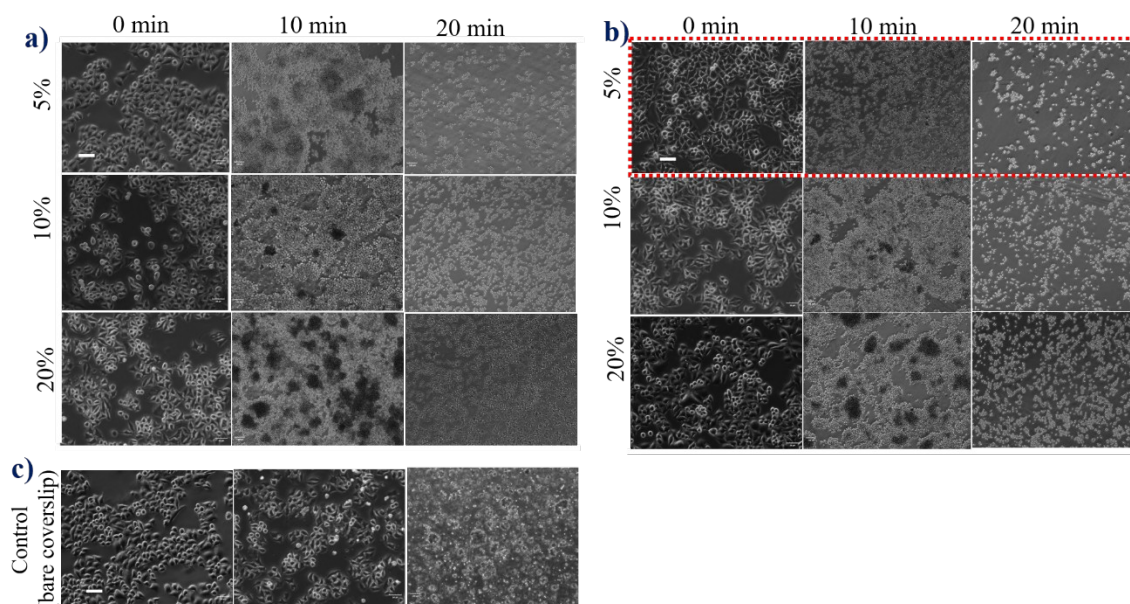


Figure 9. Microscopy image of RAW 264.7 cell detaching from polymer coated and bare coverslips. a) PNIPAm-*co*-AAc-*b*-PS coated coverslip, b) PNIPAm-*co*-AAm-*b*-PS coated coverslip, and c) bare coverslip as a control (scale bar:100 μ m).

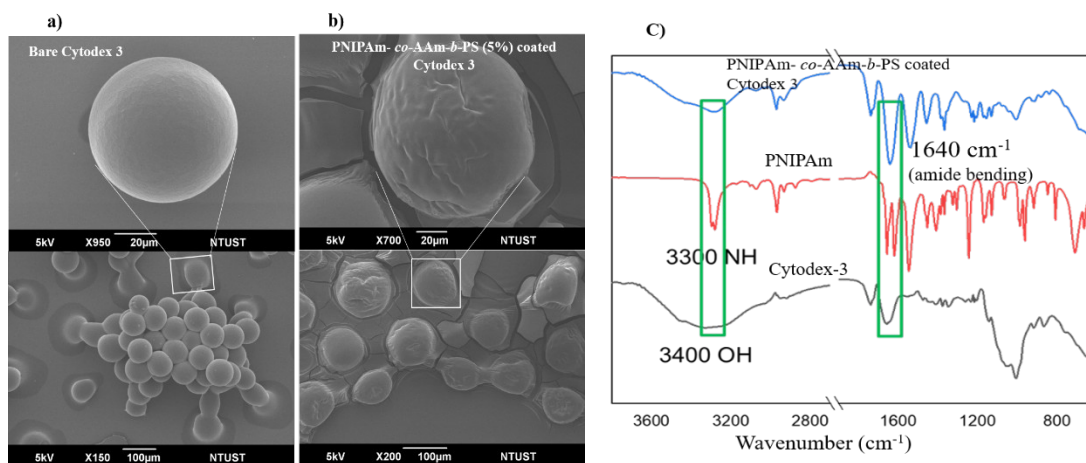


Figure 10. Polymer coated microcarriers examination. a) SEM image of bare cytodex 3 microcarrier, b) SEM image of PNIPAm-*co*-AAm-*b*-PS coated cytodex 3 microcarriers, c) FT-IR spectra of cytodex 3, PNIPAm, and PNIPAm-*co*-AAm-*b*-PS coated cytodex 3

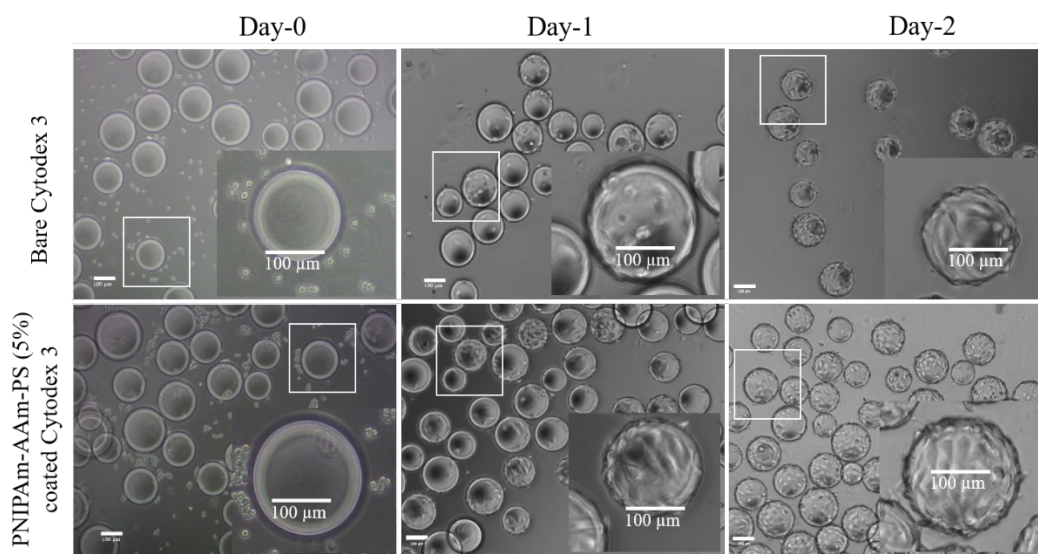


Figure 11. Microscope images of RAW264.7 cells attached on bare cytodex 3 microcarriers and PNIPAm-co-AAm-b-PS (5% w/v) coated cytodex 3 microcarriers at day 0, 1 and 2 (day 0 refers immediately after cells are seeded, scale bar: 100 μm)

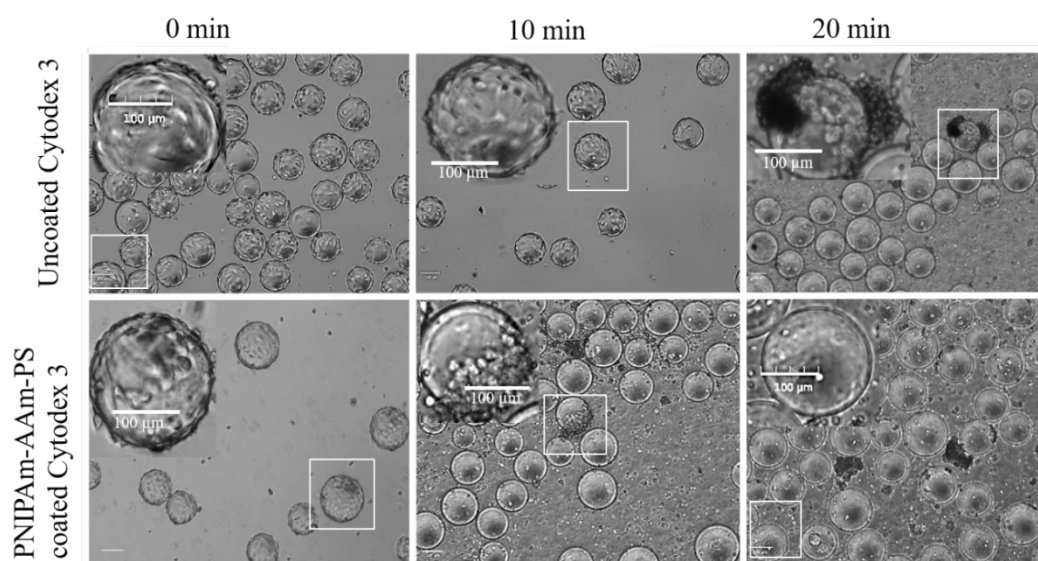


Figure 12: Microscope images of temperature induced detachment of RAW 264.7 cell from bare cytodex 3 and PNIPAm-co-AAm-b-PS (5 % w/v) coated cytodex 3 microcarrier (after 48 h of incubation, scale bar: 100 μm).

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