Mixing Ratio Dependent Complex Coacervation Versus Bicontinuous Gelation Of Pectin And *In Situ* Formed Zein Nanoparticles

Supplementary Information

Pectin- Zein Nanoparticle Mixing Ratio Dependent Complex Coacervation Versus Gelation

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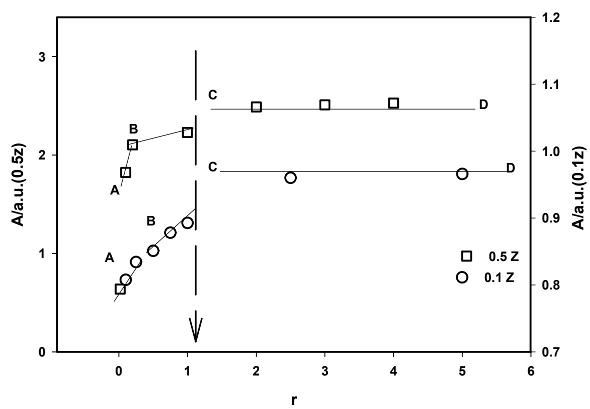

Fig. S1. Variation of absorbance of P-Z complex taken at 205 nm shown as function of mixing ratio. A-D are characteristic transition points depicting formation of complex at A, soluble complex at B, coacervate droplets at C, and gelation in the C-D region. See text for details.

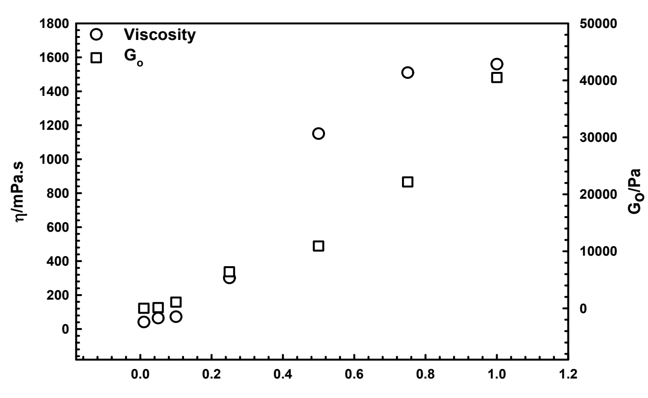

Fig. S2. Variation of viscosity and low frequency storage modulus G_0 of Pectin-Zein complex as a function of mixing ratio (or Zein concentration) measured at 25 °C.

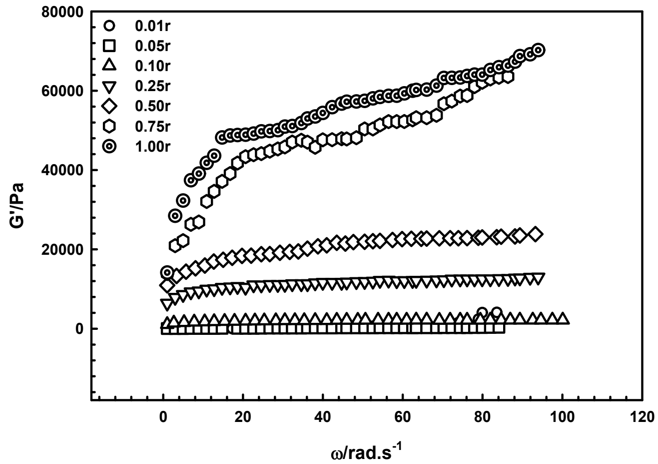

Fig. S3. Variation of elastic (storage) modulus G' of Pectin-Zein complex as a function of frequency at variable mixing ratio (with fixed pectin= 1% (w/v)) measured at 25 °C.

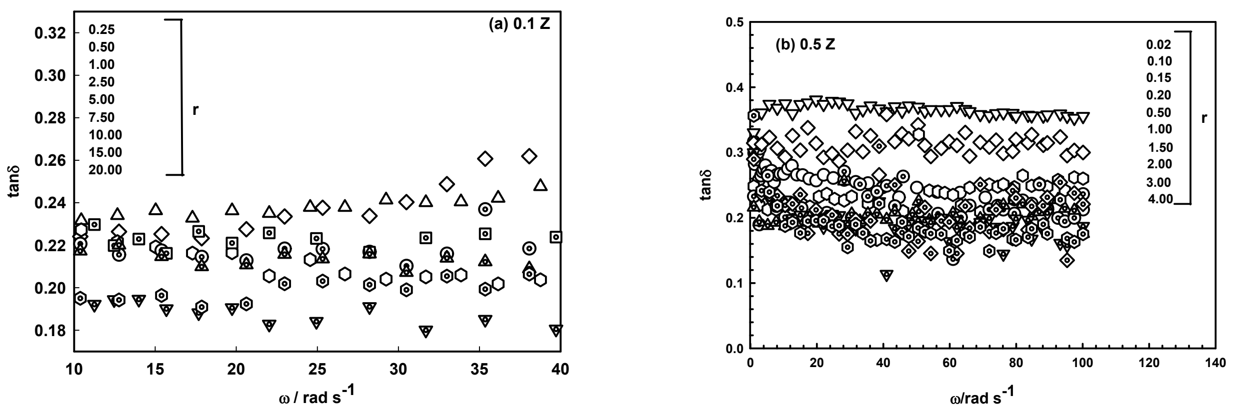

Fig.S4: Variation of tanδ of P-Z samples (coacervate and gel) (a) at 0.1% Z and (b) at 0.5% Z as a function of frequency. The measurements were performed at 25 ^{0}C using constant oscillation stresses of 6.3 Pa. Solid lines are guide to the eye.

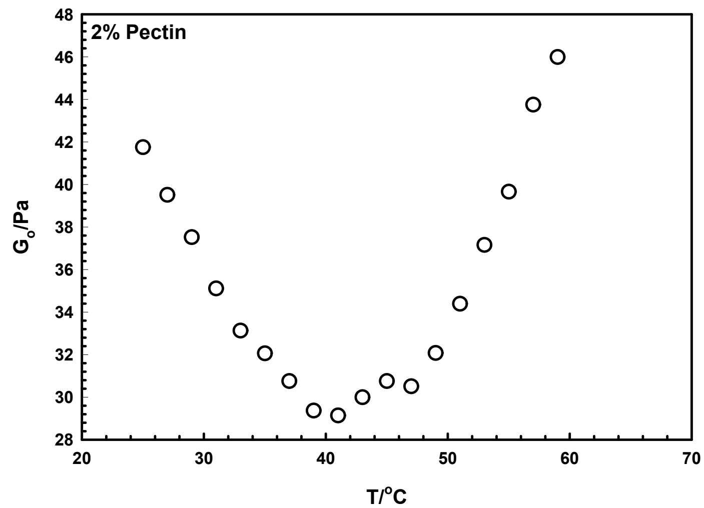

Fig.S5: Variation of low frequency storage modulus G_0 of 2% (w/v) Pectin gel samples shown as function of temperature. Melting profiles were generated by using a temperature ramp of 1 ^{0}C/min. Sharp upturn in the data at 40 ^{0}C indicated drying of samples.

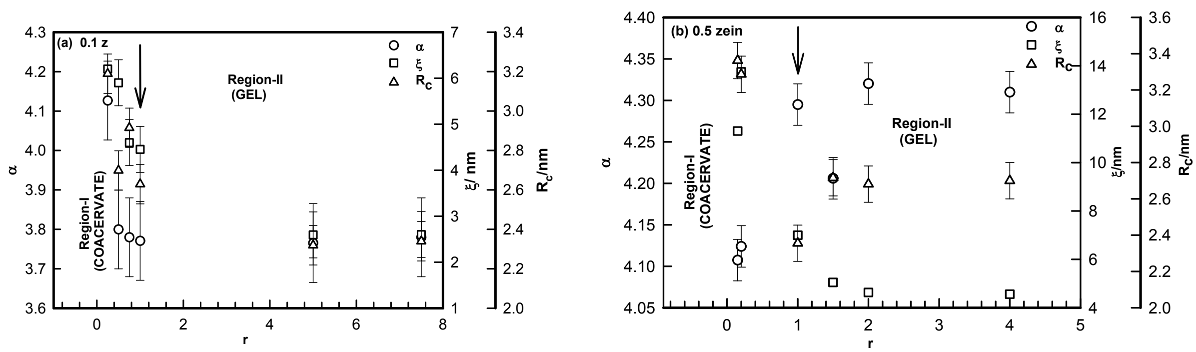

Fig. S6: Small angle neutron scattering intensity profile, fitting parameters (power-law exponent, and mesh size and cross-sectional radius) and cross-over wave vector of a P-Z (coacervate and gel) (a) 0.1 % and (b) 0.5 % (w/v) Zein at various mixing ratio measured at 25 ^{0}C.

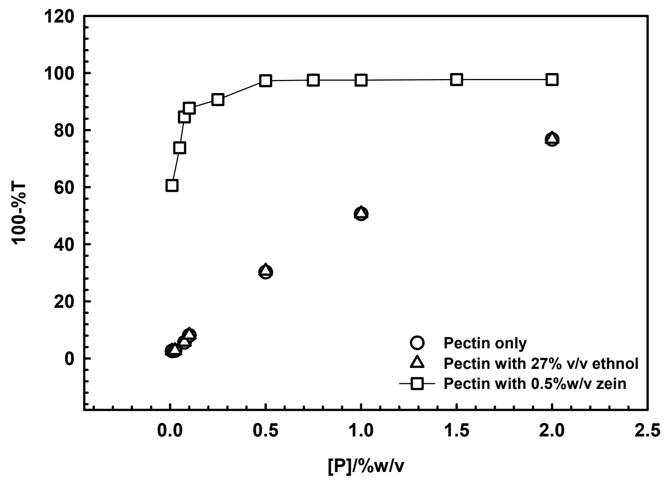

Fig. S7: Turbidity titration profile as a function of pectin concentration with 27%v/v ethanol and 0.5%w/v zein.

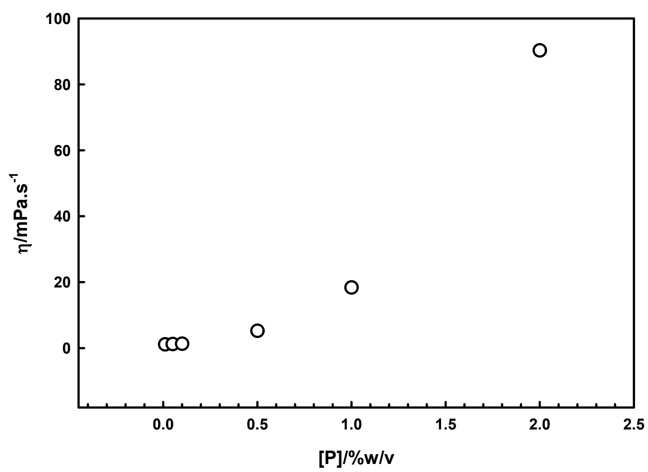

Fig. S8: Variation of viscosity for pectin concentration.