

Supporting information for

# Characterization of thermoresponsive poly-N-Vinylcaprolactam for biological applications

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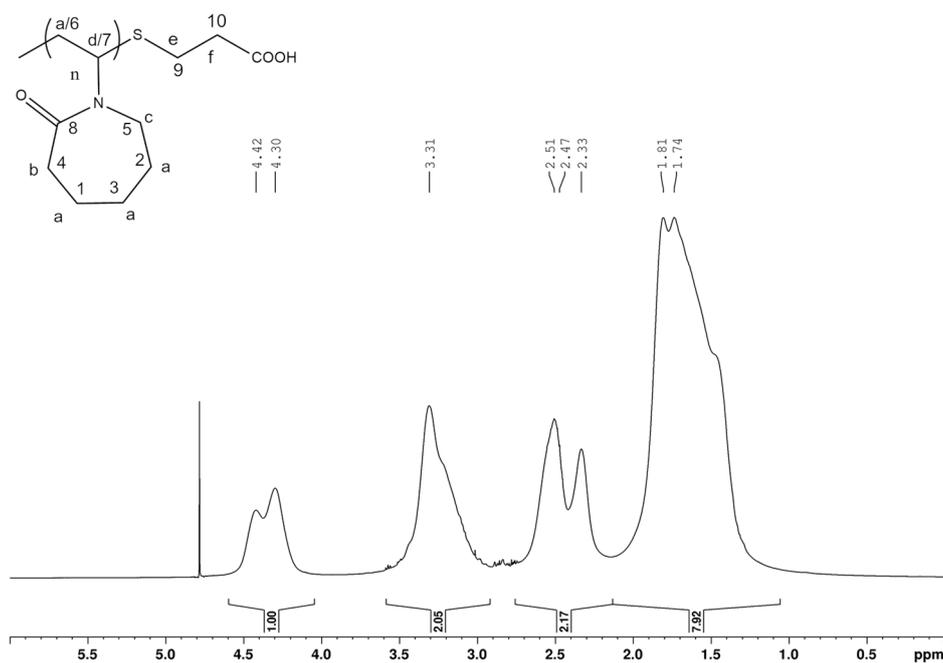


Figure S1 <sup>1</sup>H spectrum of PNVCL\_122.

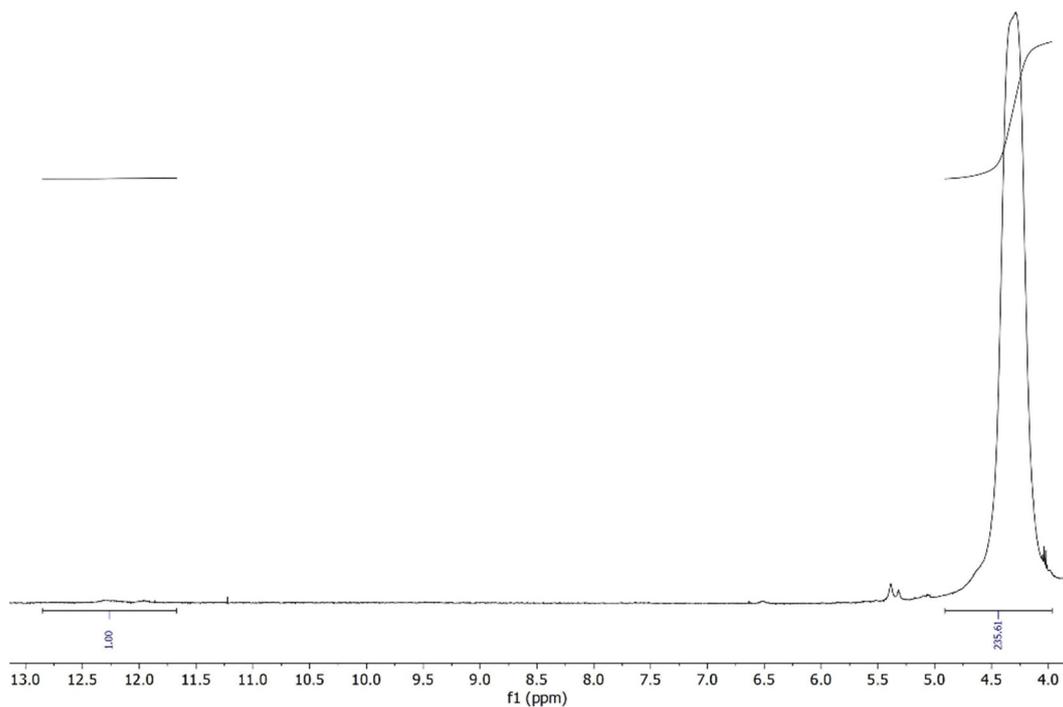


Figure S2 Carboxylic termination group signals in  $^1\text{H}$  NMR spectrum of PNVCCL\_305 dissolved in  $d_6$ -DMSO.

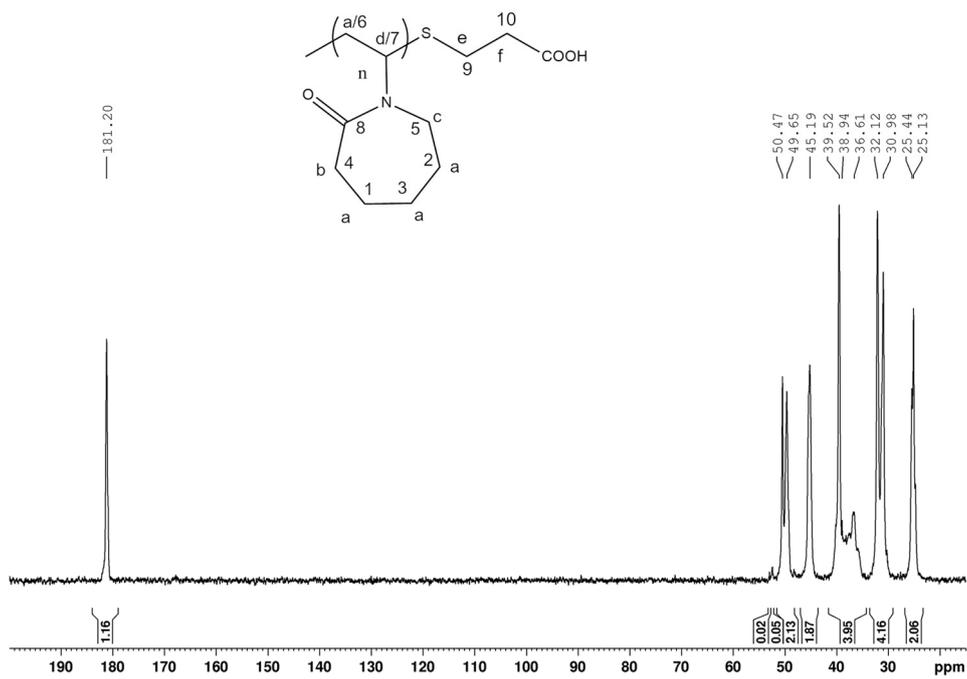


Figure S3  $^{13}\text{C}$  spectrum of PNVCCL\_122.

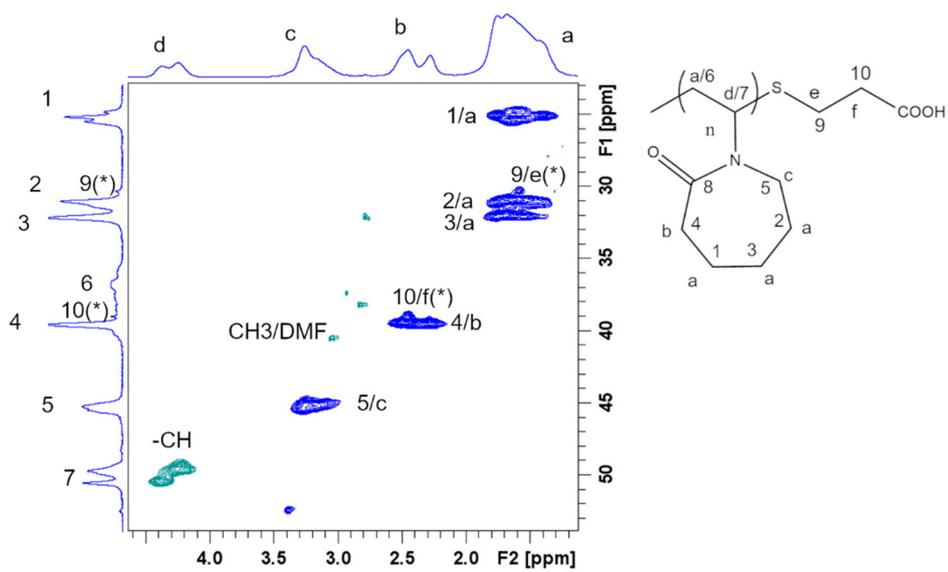


Figure S4 HSQC-DEPT spectrum of PNVCCL\_122.

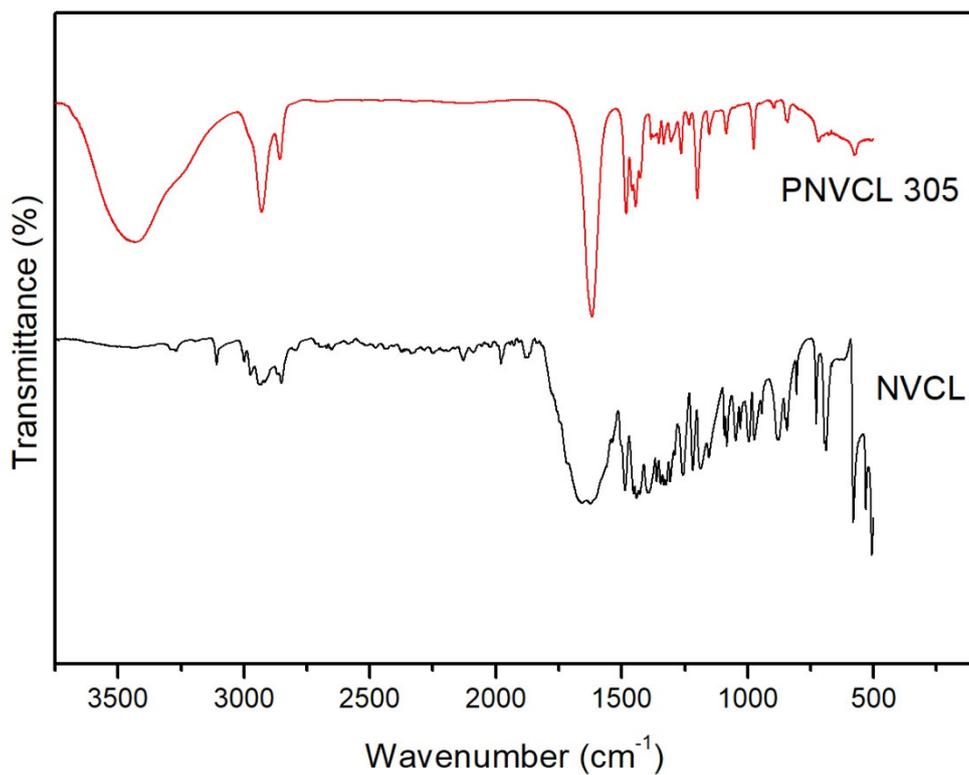


Figure S5 Comparison between NVCL and PNVCCL-COOH spectrum (PNVCCL\_305).

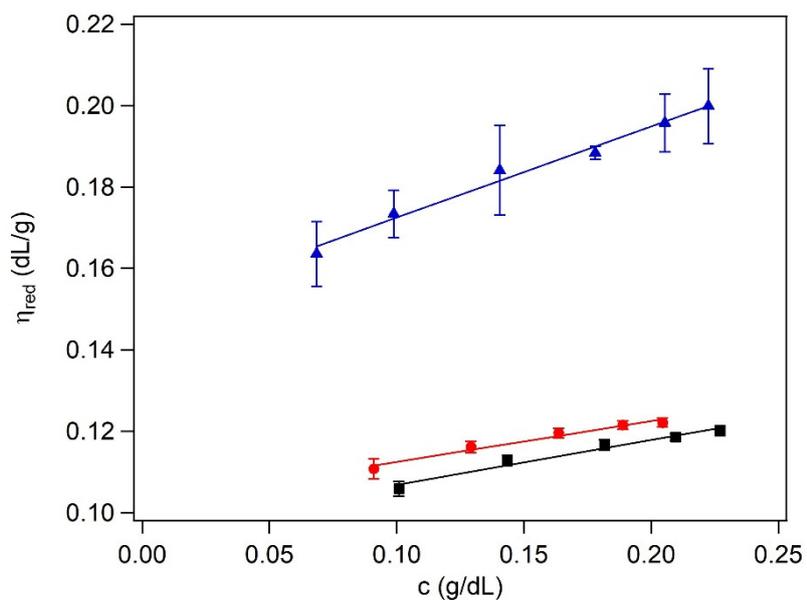


Figure S6 Reduced viscosity reported as a function of PNVCL\_244 (black squares), PNVCL\_305 (red circles) and PNVCL\_1220 (blue triangles) concentration. The value of  $\eta_{red}$  were calculated according to the Huggins method by using the calibration lines reported in the figure.

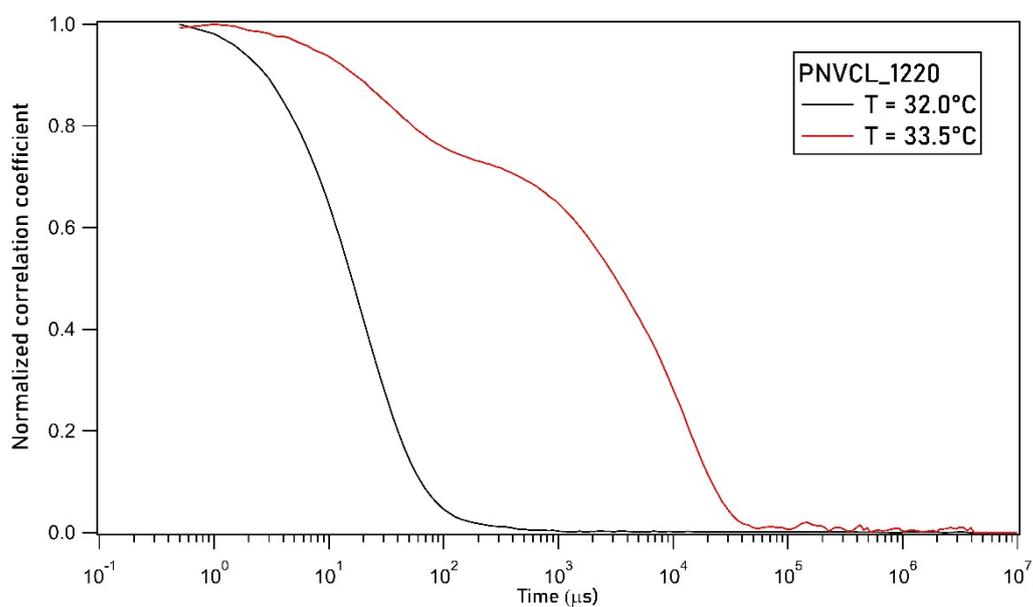


Figure S7 Displacement of the correlation curve of PNVCL\_1220 solution (0.5 w%) associated to LCST transition.

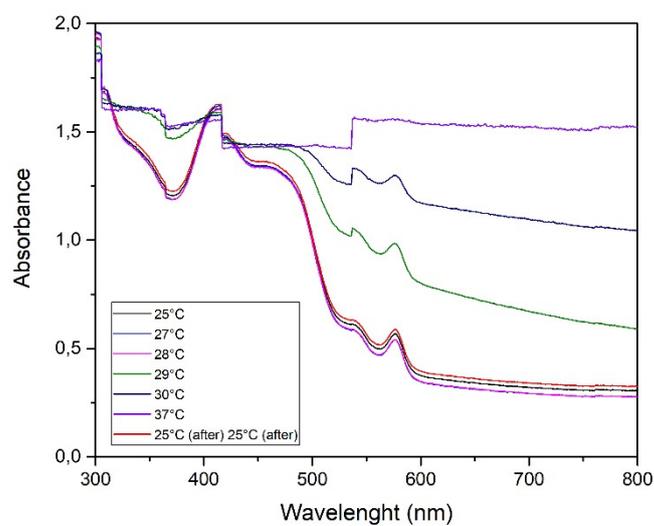


Figure S8 Variation of UV-VIS spectrum of a solution of PNVCL\_244 in human plasma (5mg/ml) with temperature.

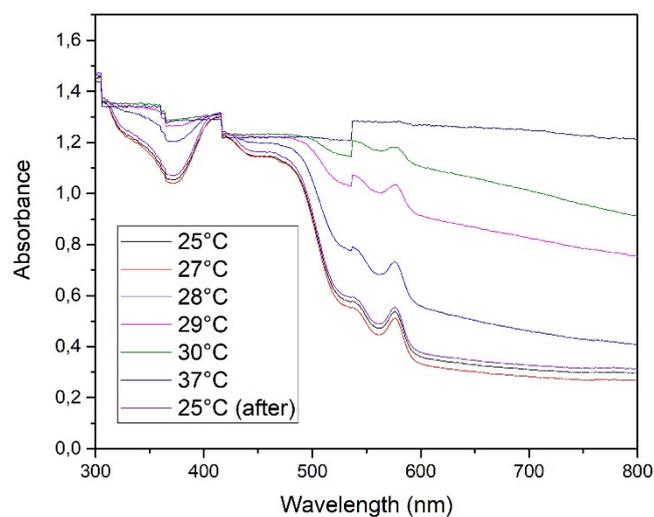


Figure S9 Variation of UV-VIS spectrum of a solution of PNVCL\_244 in human plasma (5mg/ml) with temperature.

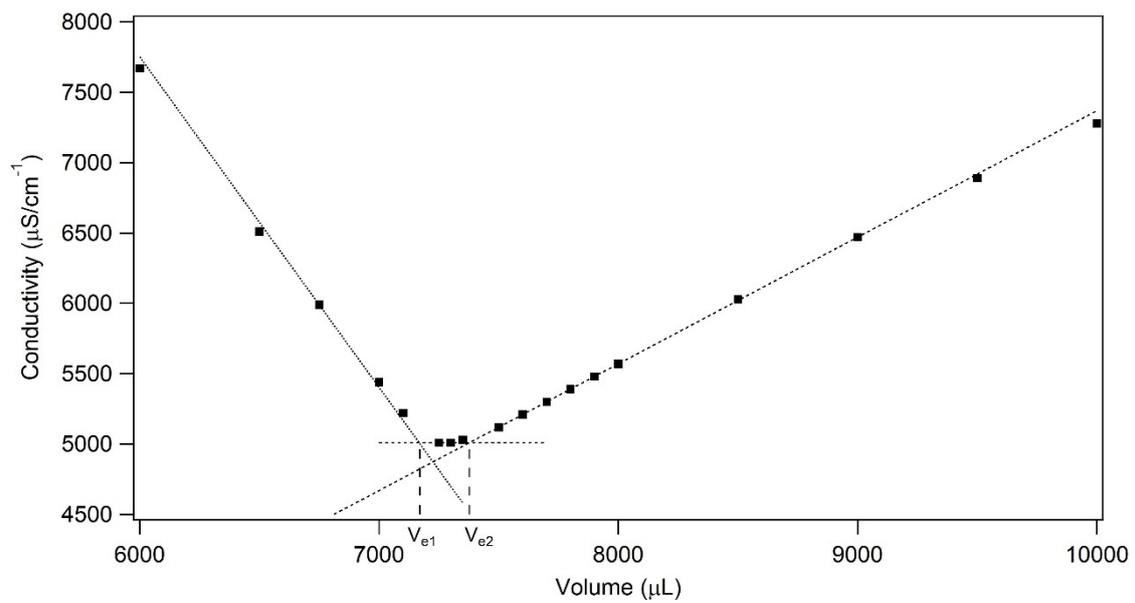


Figure S10 Conductimetric titration of PNVCL\_305.