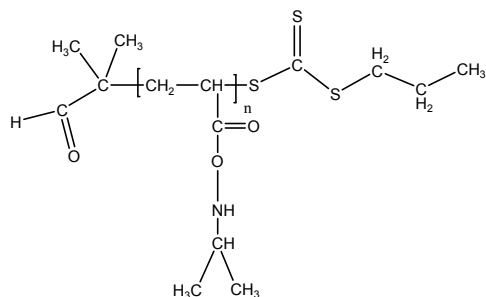


Sample Name: P18079A-NIPAMCOOH

Poly(N-isopropyl acrylamide)

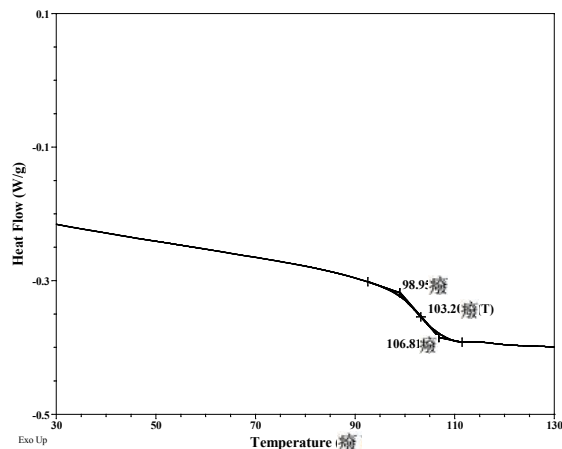


(S:H:Iso : 24:34:41)

Molecular composition:

Mn x 10 ³	Mw x 10 ³	(mmm) triad contents %	Solubility in different Solvents				
			Water	Toluene	CH ₃ OH	CHCl ₃	DMF
28.0	32.5	<2%	NO	No	Yes	Yes	yes

Tg of polymer: 103 oC mid point

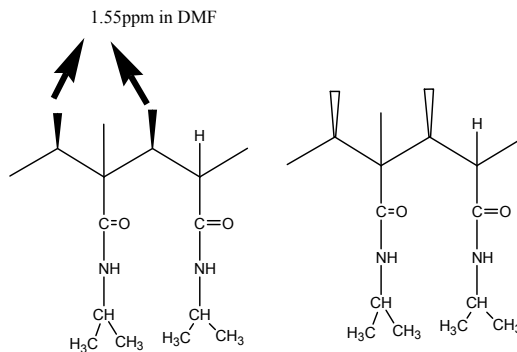


Polymer is synthesized by RAFT polymerization process using TMS protected NIPAM Monomer. Polymerization carried out in different solvents in the presence of ligands such as LiCl, diethyl Zinc, tri isobutyl aluminum and diethyl aluminum.

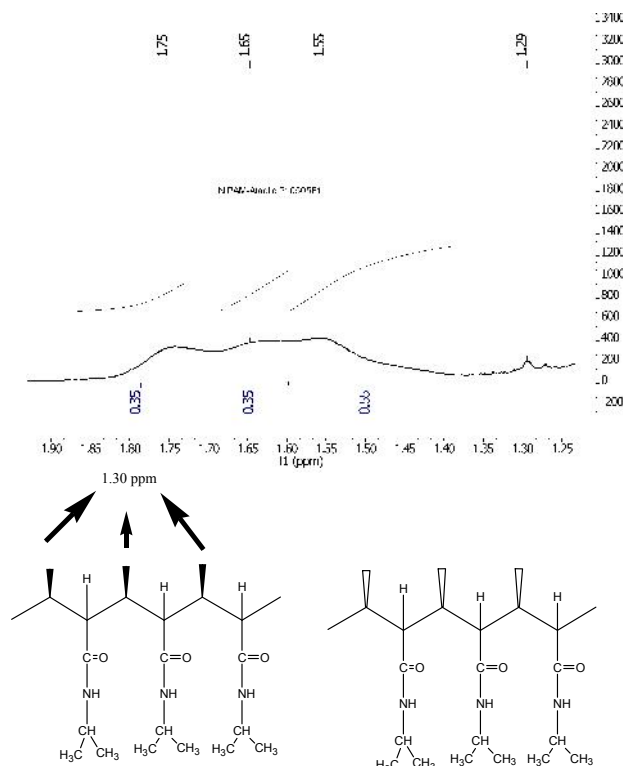
HNMR was carried out in DMF.

Following are the chemical shifts for different microstructures.

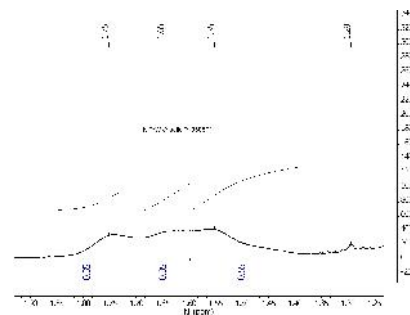
Solubility of Polymer: Solubility of poly NIPAM in water or in methanol dependent on the fraction of triad (mmm) iso contents presence in the polymer.



An example of meso diads



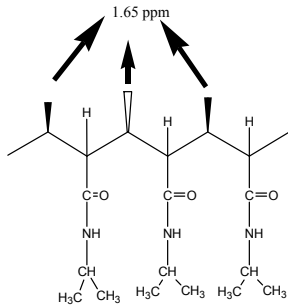
An example of meso triads



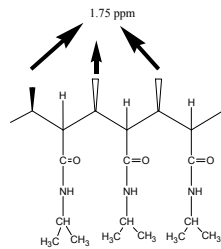
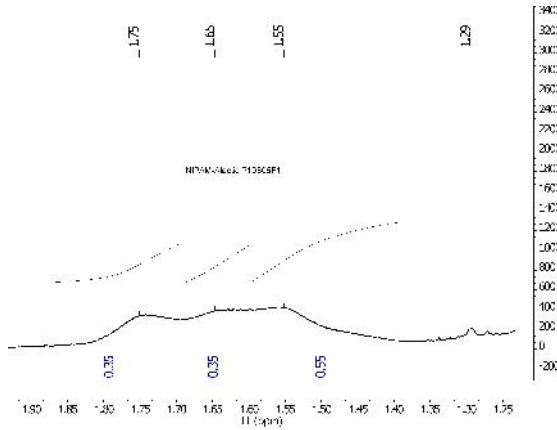
Characterization:

The molecular weight of poly(N-isopropyl acrylamide) are obtained by ^1H NMR carried out at 50 °C.

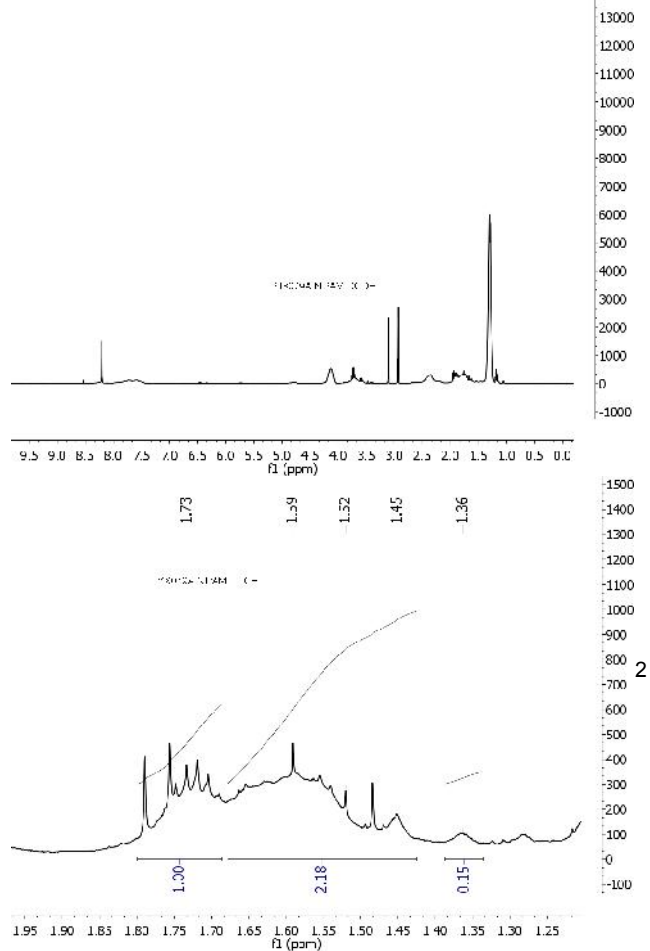
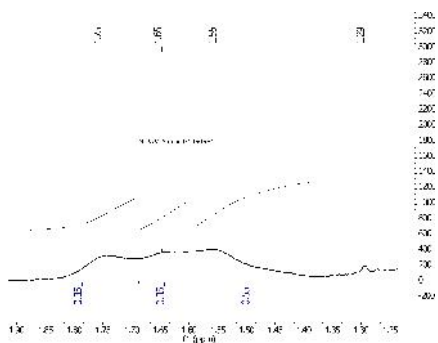
^1H NMR of the Polymer carried out in DMF at 40 °C:



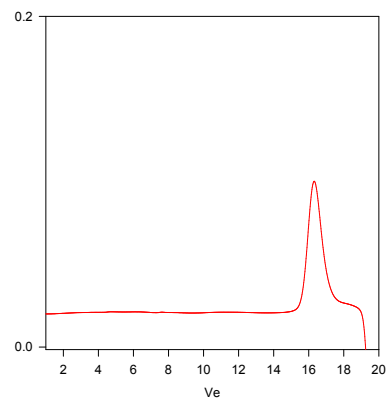
An example of Syndio (rrr) triads



An example of hetero (rmmr) triads



P18079A-NIPAMCOOH



Size Exclusion Chromatography profile of the product run in DMF (0.0.1M LiBr)
Carboxy terminated Poly(N-isopropyl acrylamide)
 $M_n = 28000$ by Titration: M_w/M_n by SEC=1.15