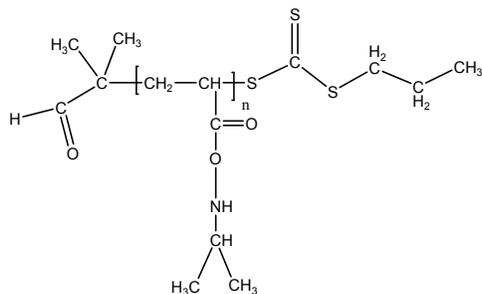


Sample Name: P18070-NIPAMCOOH

Poly(N-isopropyl acrylamide)

Dp of

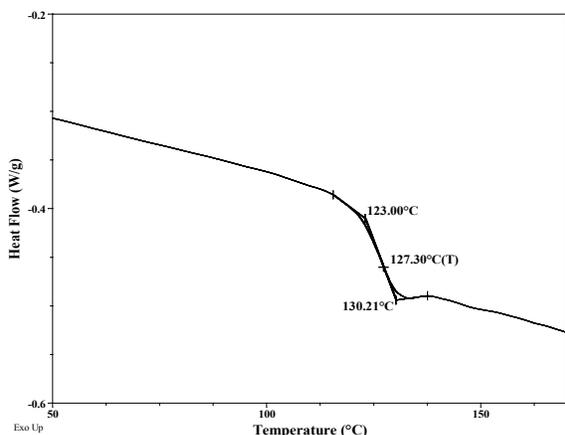


Polymer Sample # P18070-NIPAM
(S:H:Iso : 27:30:43)

Molecular composition:

Mn x 10 ³	Mw x 10 ³	(mmm) triad contents %	Solubility in different Solvents				
			Water	Toluene	CH3OH	CHCl3	DMF
6.0	39.0	>1%	Yes	No	Yes	Yes	yes

Tg of polymer: 127 oC mid point

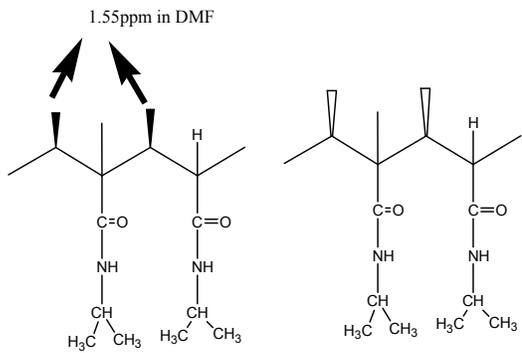


Polymer is synthesized by RAFT polymerization process using TMS protected NIPAM Monomer. Polymerization carried out in different solvents in the presence of ligands such as LiCl, diethyl Zinc, tri isobutyl aluminum and diethyl aluminum.

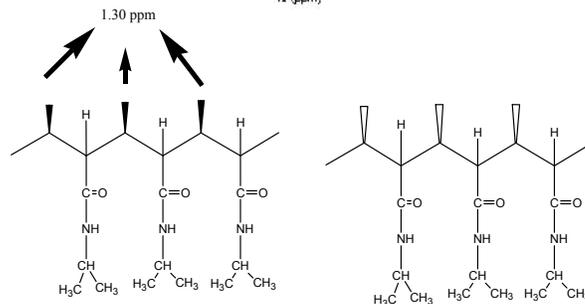
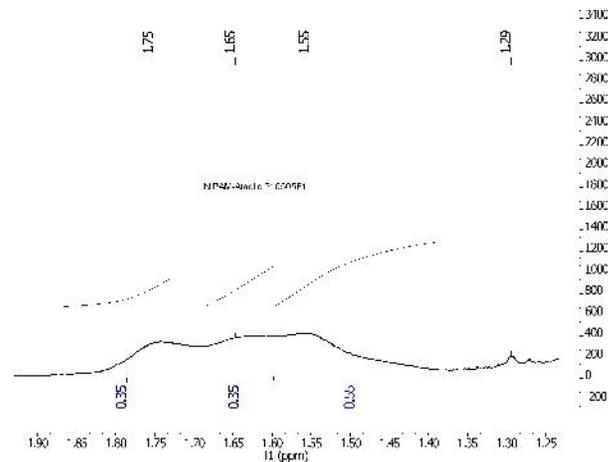
HNMR was carried out in DMF.

Following are the chemical shifts for different microstructures.

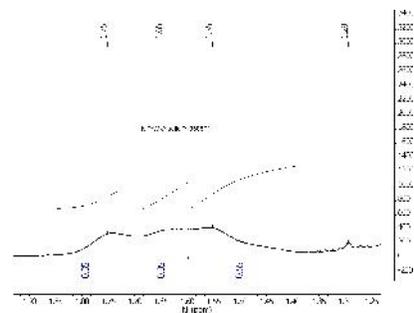
Solubility of Polymer: Solubility of poly NIPAM in water or in methanol dependent on the fraction of triad (mmm) iso contents presence in the polymer.

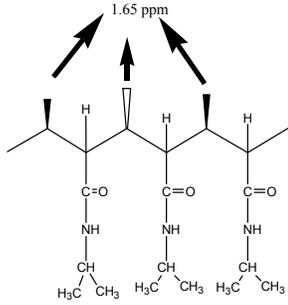


An example of meso diads

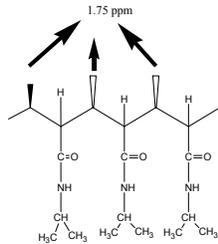
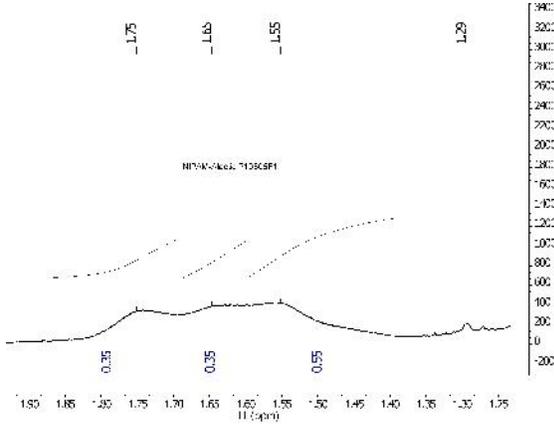


An example of meso triads

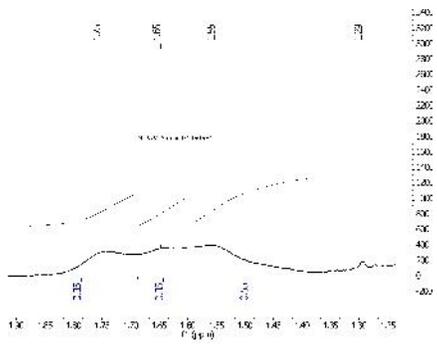




An example of Syndio (rrr) triads



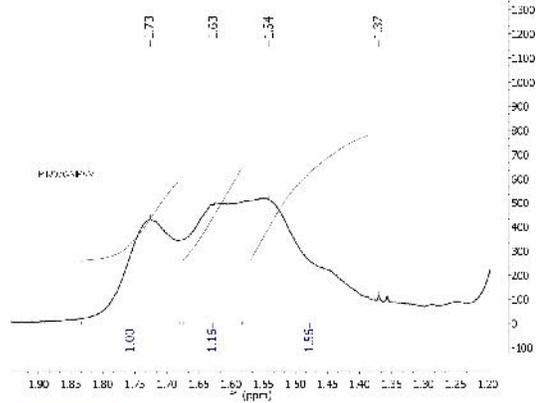
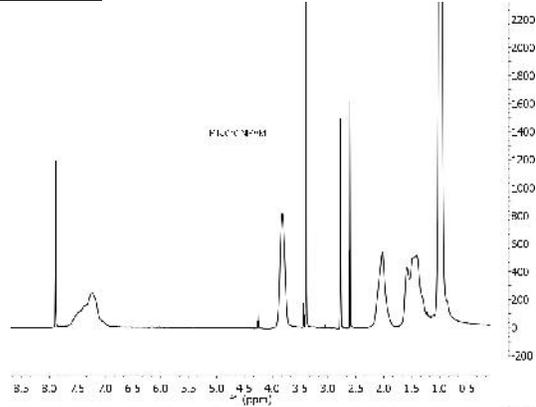
An example of hetero (rmmr) triads



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:

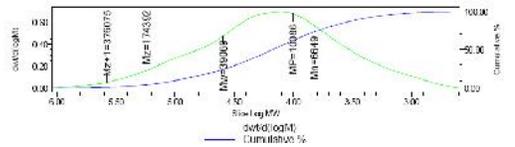
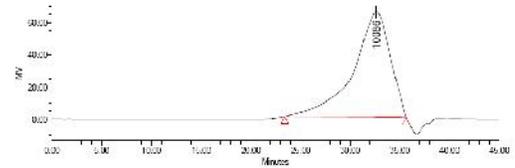


GPC Default Individual Report

Reported by User System Project Name: GPC_Default

SAMPLE INFORMATION

Sample Name:	P11110	Acquired by:	System
Sample Type:	Dried Unknown	Date Acquired:	7/5/2013 9:10:01 AM
Vial:	1	Acq. Method Set:	method 1
Injection #:	55	Data Processing:	7/5/2013 10:46:40 AM
Injection Volume:	100.00 µl	Processing Method:	1
Run Time:	45.0 Minutes	Channel Name:	410
Sample Set Name:		Trac. Chnl. Descr.:	



GPC Sample Results

Retention Time	Mn	Mw	MP	Mz	Poly-dispersity
35.040	6940	39059	6668	174392	5.018