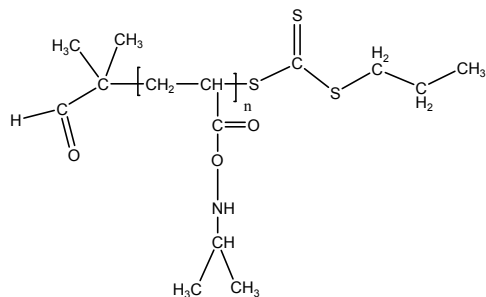


Sample Name: P18069-NIPAMCOOH

**COOH terminated Poly(N-isopropyl acrylamide)**

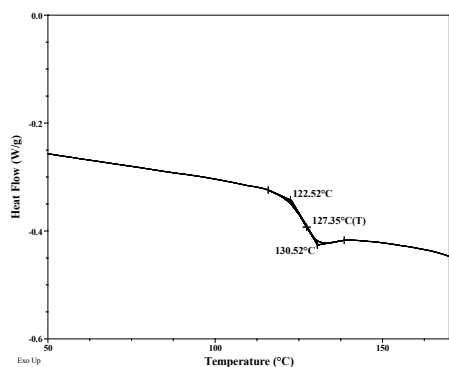


**Polymer Sample # P18069-NIPAM (S:H:Iso : 28:28:43 )**

**Molecular composition:**

Mn x 10 <sup>3</sup>	Mw x 10 <sup>3</sup>	(mmm) triad contents %	Solubility in different Solvents				
			Water	Toluene	CH <sub>3</sub> OH	CHCl <sub>3</sub>	DMF
11.0	36.5	>1%	Yes	No	Yes	Yes	yes

**Tg of polymer: 127 oC mid point**

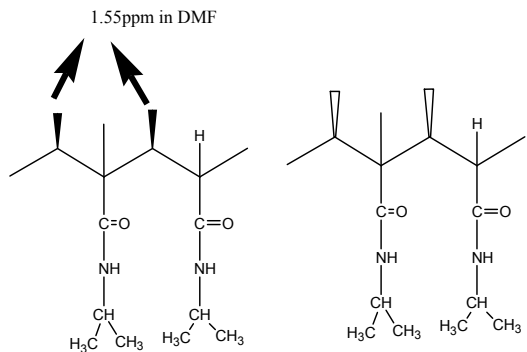


**Polymer is synthesized by RAFT polymerization process**

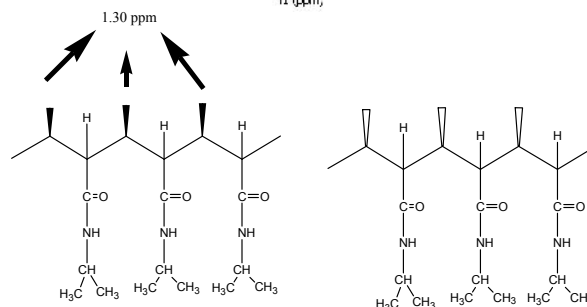
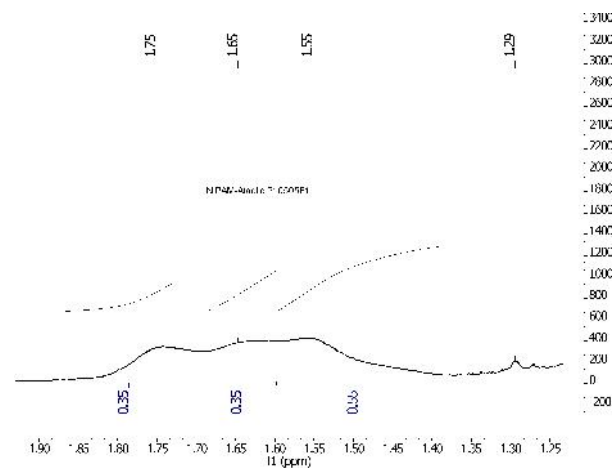
**HNMR was carried out in DMF.**

**Following are the chemical shifts for different microstructures.**

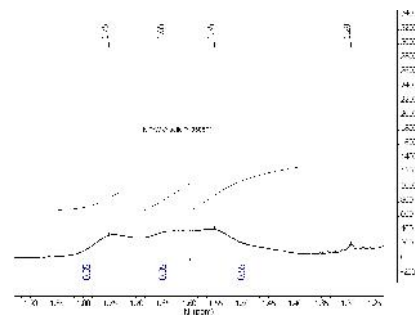
**Solubility of Polymer:** Solubility of poly NIPAM in water or in methanol dependent on the fraction of triad (mmm) iso contents presence in the polymer.



**An example of meso diads**



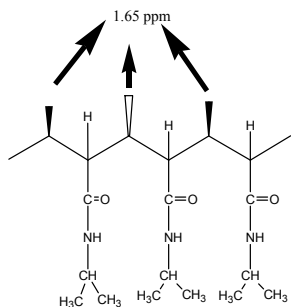
**An example of meso triads**



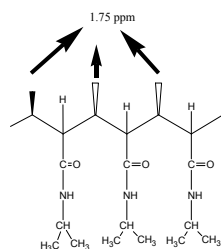
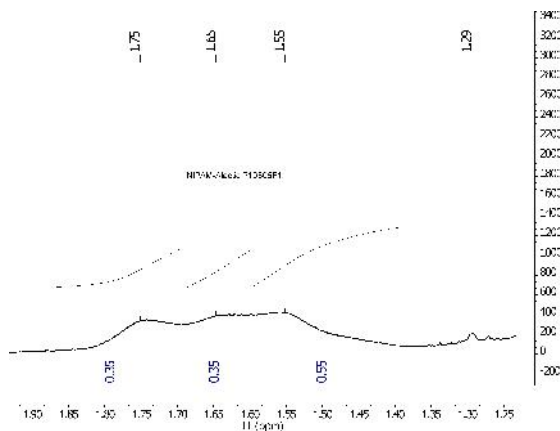
### Characterization:

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

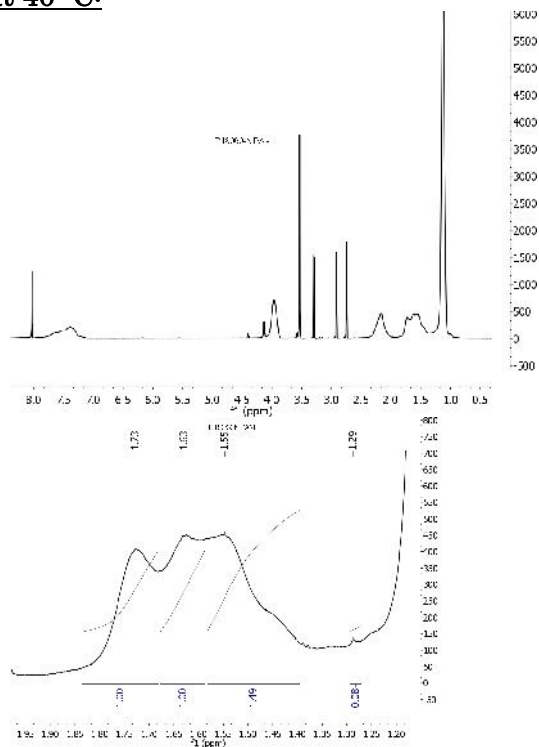
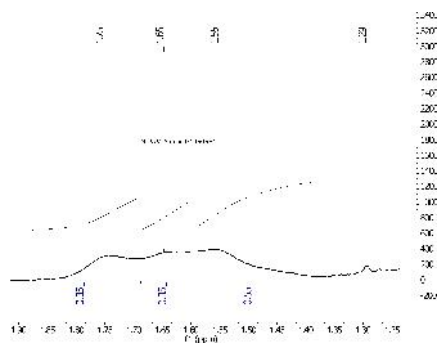
### $^1\text{H}$ NMR of the Polymer carried out in DMF at 40 °C:



An example of Syndio (rrr) triads



An example of hetero (rrmr) triads



2

Empower  
software

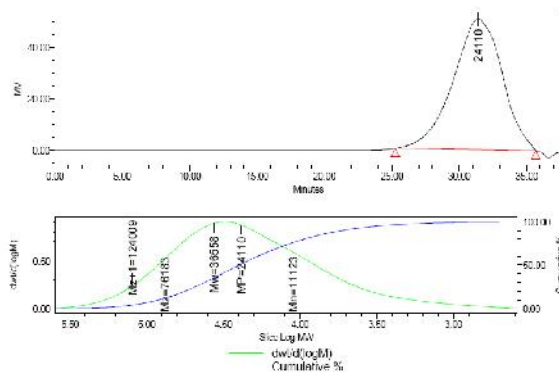
### GPC Default Individual Report

Reported by User: System

Project Name: GPC Default

### SAMPLE INFORMATION

Sample Name:	P18009	Acquired by:	System
Sample Type:	Polymer Unknown	Date Acquired:	7/5/2013 9:00:00 AM
Vial:	1	Acq. Method Set:	method 1
Injection #:	55	Date Processed:	7/5/2013 9:38:16 AM
Injection Volume:	100.00 ul	Processing Method:	1
Run Time:	45.0 Minutes	Channel Name:	410
Sample Set Name:		Proc. Chnl. Descr.:	



### GPC Sample Results

Retention Time	Mn	Mw	MP	Mz	Poly-dispersity
1	31405	11123	36550	24110	75163