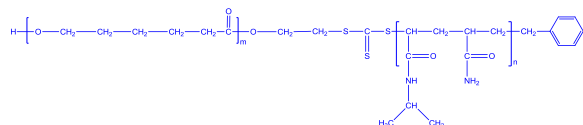Sample Name: **Random block copolymer of Poly(N-isopropyl acrylamide and acrylamide)ran-b-Caprolactone**

Sample #: **P14361C-NIPAMAMDranCL**

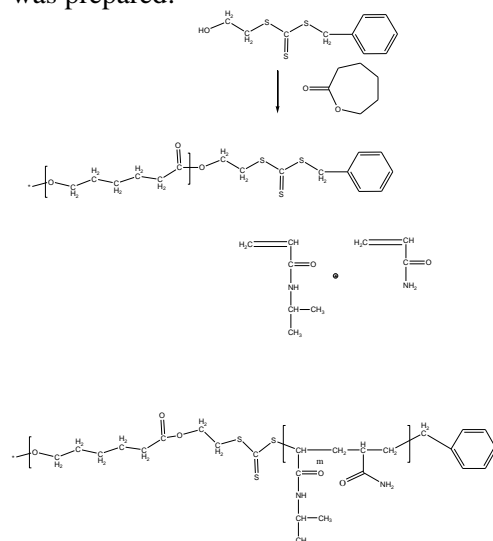**Structure:**

Composition:

Mn x 10³ NIPAMAMDran-b-CL	PDI
7.4-b-2.1	1.66
AMD ration in NIPAMAMD block	2 wt%

Synthesis Procedure:
The following reaction scheme shows how the product was prepared:

Purification of polymer:
Unreacted monomer was removed by dissolving the product in cold water than warming up the solution. The polymer separated out. This procedure was applied 2 times to remove the unreacted monomer. The obtained polymer was dissolved in acetone and reprecipitated in cold ether.
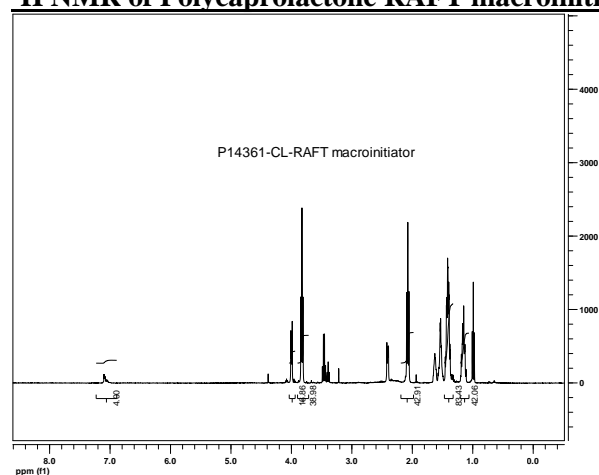
Characterization:
The composition was determined from 1H NMR in DMF-d7. Polydispersity was determined from Size exclusion chromatography (SEC), which was carried out on a Varian liquid chromatograph equipped with a refractive index detector, light scattering detectors.
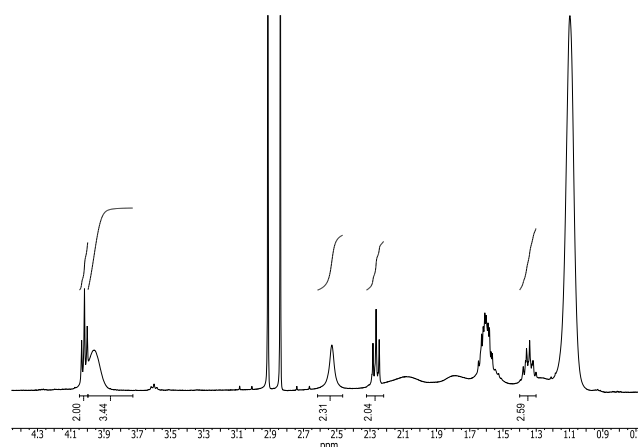
Solubility:
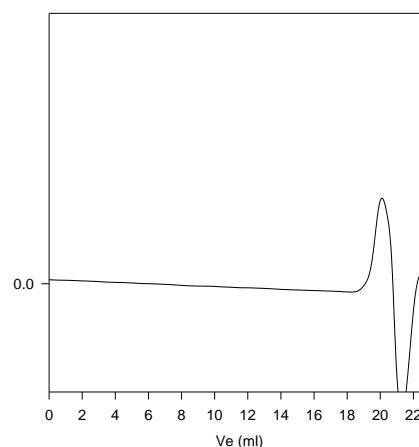The polymer is soluble in water methanol, ethanol, DMF, and dioxane, not soluble in hexane.

¹H NMR of Polycaprolactone RAFT macroinitiator :

¹H NMR of NIPAMAMDran-CL in DMF-d7:

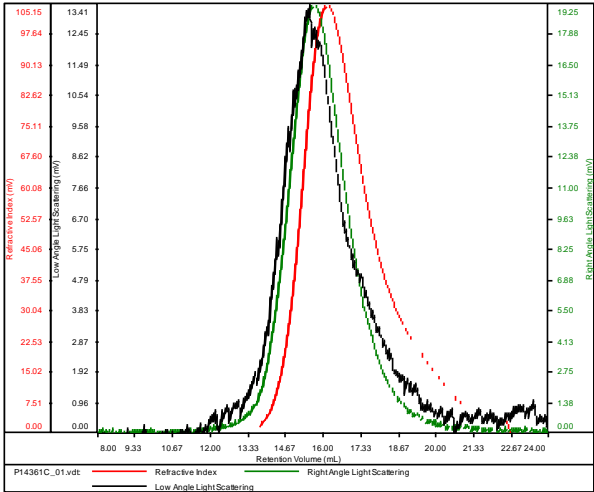**SEC of Polycaprolactone RAFT macroinitiator :**

P14361-PCL Macroinitiator

Size exclusion chromatography of the polymer in DMF at 65 °C: Eluent containing 0.05 M LiBr

—— M_n=2100 , PI=1.15 (values determined by HNMR)

v.R-01

SEC of the copolymer NIPAMAMDran-CL:

P14361C

Conc	5.5429
dn/dc	0.2100
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS80k_2018-02-22-0000.vcm

P14361C_01.vdt: Refractive Index Right Angle Light Scattering Low Angle Light Scattering

Sample	Mn	Mw	Mp	Mw/Mn	IV
P14361C_01.vdt	9,552	15,894	15,848	1.664	0.5129