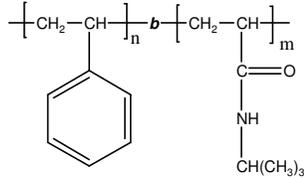


### Sample Name:

Poly(styrene-*b*-N-isopropyl acrylamide)

### Sample #: P14962-SNIPAM

### Structure:



### Composition:

Mn x 10 <sup>3</sup> S- <i>b</i> -NIPAM	Mw/Mn (PDI)
14.5- <i>b</i> -12.0	1.1

Polystyrene content: 56 mol %
-------------------------------

### Synthesis Procedure:

Poly(styrene-*b*-N-isopropyl acrylamide) is prepared by RAFT polymerization with sequence addition of styrene followed by N-isopropyl acrylamide. The polymer was obtained by precipitating into cold diethyl ether/hexane.

### Characterization:

The final block copolymer composition and molecular weight was calculated from <sup>1</sup>H-NMR spectroscopy by comparing the peak area of the aromatic protons on styrene between about 6.5-7.5 ppm with the proton of NCH on NIPAM at 3.9 ppm. The PDI of block copolymer is determined by SEC.

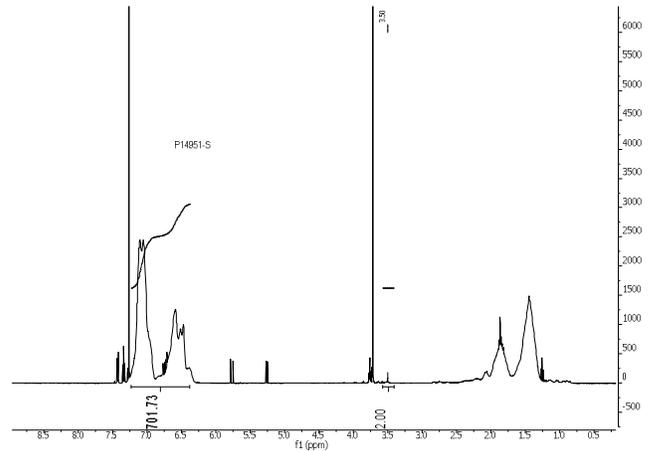
### Thermal analysis

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 15°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T<sub>g</sub>).

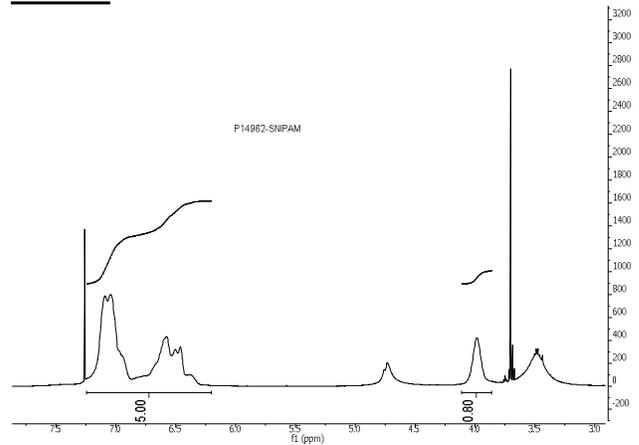
### Solubility:

Poly(styrene-*b*-N-isopropyl acrylamide) block copolymer is soluble in DMF.

### <sup>1</sup>H NMR spectrum of the first polystyrene block



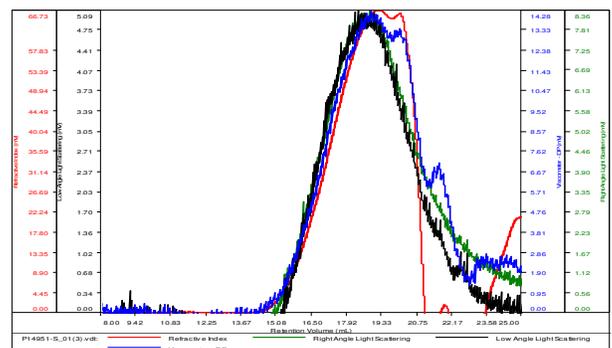
### <sup>1</sup>H NMR spectrum of the block copolymer S-*b*-NIPAM



### SEC of the first polystyrene block

SAMPLE ID: P14951-S

Conc (mg/mL)	5.4951
dn/dc (mL/g)	0.1650
Method	ps80k-21Jan2016-DMF-0000.vcm
Solvent	DMF w 0.023M LiBr
Column	PSS

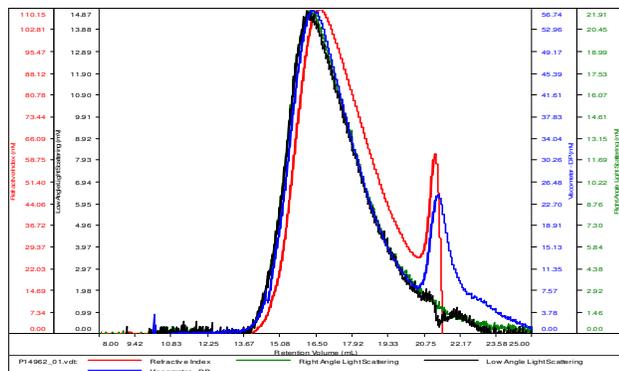


Sample	Mn	Mw	Mp	Mw/Mn	IV
P14951-S_01(3).vcl	14,623	15,270	14,319	1.044	0.1077

# SEC of diblock poly(styrene-b- N-isopropyl acrylamide)

SAMPLE ID: P14962-SNIPAM

Conc (mg/mL)	10.8162
dn/dc (mL/g)	0.1290
Method	ps80k-21Jan2016-DMF-0000.vcm
Solvent	DMF w 0.023M LiBr
Column	PSS



Sample	Mn	Mw	Mp	Mw/Mn	IV
P14962_01.vdt	26,649	26,787	26,698	1.080	0.1795