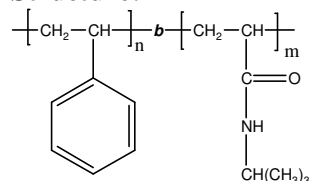


**Sample Name:**  
Poly(styrene-*b*-N-isopropyl acrylamide)

**Sample #: P14965-SNIPAM**

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup> S- <i>b</i> -NIPAM	Mw/Mn (PDI)
11.5- <i>b</i> -16.0	1.1

Polystyrene content: 44 mol %
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**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.

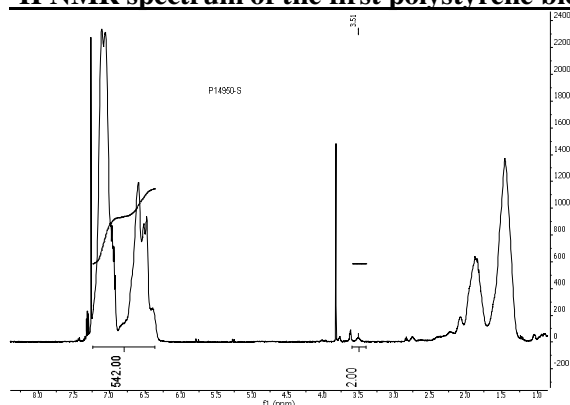
**Thermal analysis**

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>).

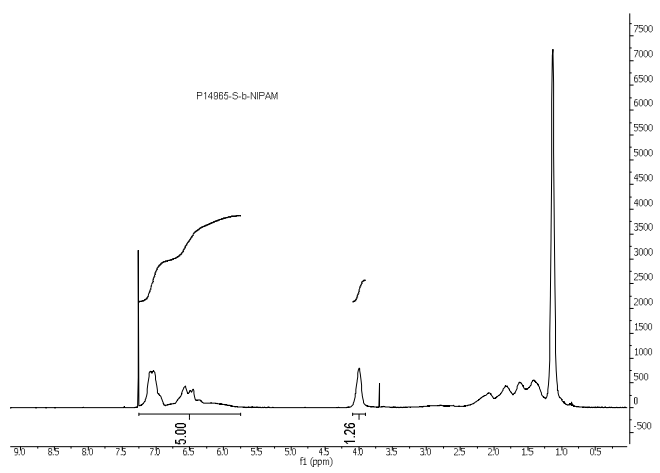
**Solubility:**

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

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



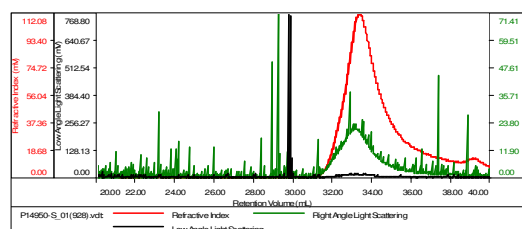
**<sup>1</sup>H NMR spectrum of the block copolymer S-*b*-NIPAM**



**SEC of the first polystyrene block**

Sample ID-P14965-S

Concentration (mg/mL)	1.5229
Sample dn/dc (mL/g)	0.1850
Method File	PS80K-Jan-2016-0000.vcm
Column Set	3x PL 1113-6000
Solvent	THF

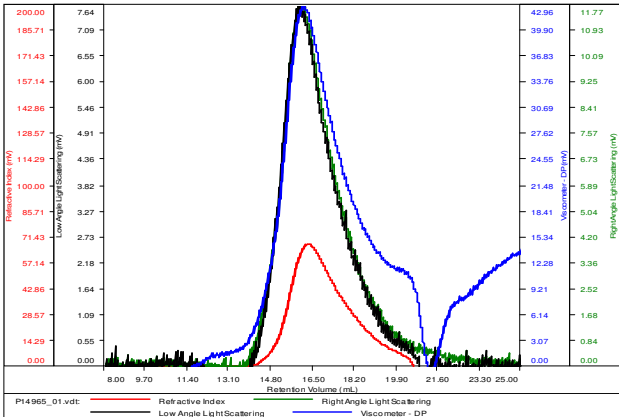


Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P14965-S_01(1928).vcl	11,340	12,530	12,981	1.104	0.2521

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

SAMPLE ID: P14965-SNIPAM

Conc (mg/mL)	5.6613
dn/dc (mL/g)	0.1150
Method	ps80k-21Jan2016-DMF-0000.vcm
Solvent	DMF w 0.023M LiBr
Column	PSS



Sample	Mn	Mw	Mp	Mw/Mn	IV
P14965_01.vdt	27,648	29,885	27,971	1.081	0.2456