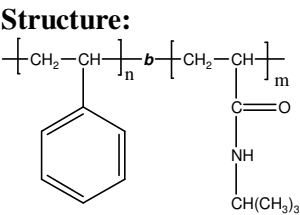


**Sample Name:**  
Poly(styrene-b-N-isopropyl acrylamide)

**Sample #:** P14961-SNIPAM



**Composition:**

Mn x 10 <sup>3</sup> S-b-NIPAM	Mw/Mn (PDI)
14.5-b-8.0	1.1

Polystyrene content: 68 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.

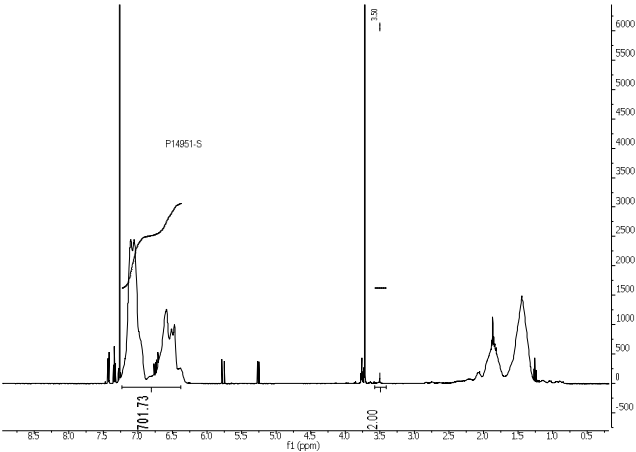
**Thermal analysis**

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>).

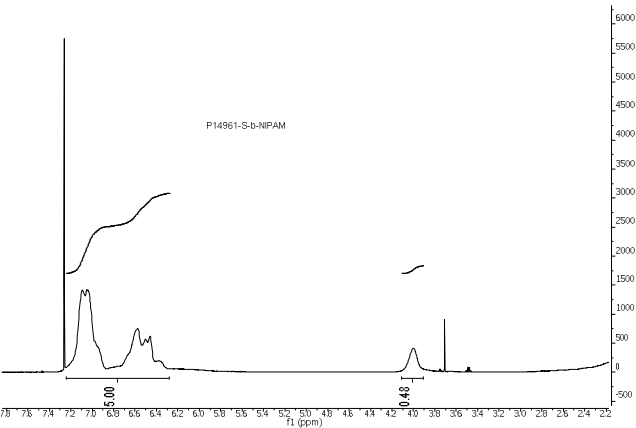
**Solubility:**

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

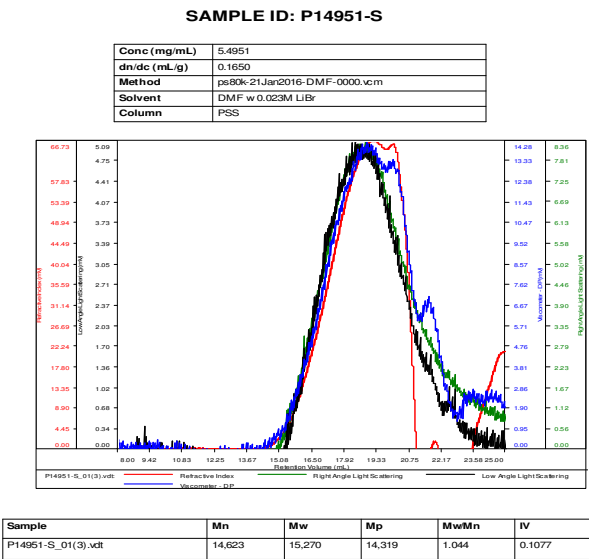
**<sup>1</sup>H NMR spectrum of the first polystyrene block**



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



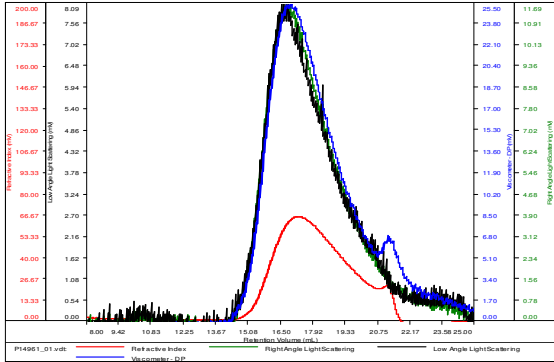
**SEC of first block polystyrene**



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

SAMPLE ID: P14961-SNIPAM

Conc (mg/mL)	6.7552
dn/dc (mL/g)	0.1320
Method	ps80k-21Jan2016-DMF-0000.vcm
Solvent	DMF w 0.023M LiBr
Column	PSS



Sample	Mn	Mw	Mp	Mw/Mn	IV
P14961_01.vcl	22,559	24,510	25,224	1.086	0.1417