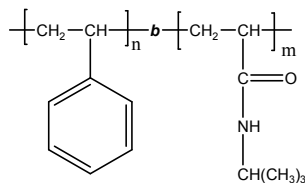


**Sample Name:**  
**Poly(styrene-b-N-isopropyl acrylamide)**

**Sample #: P9988-SNIPAM**

**Structure:**

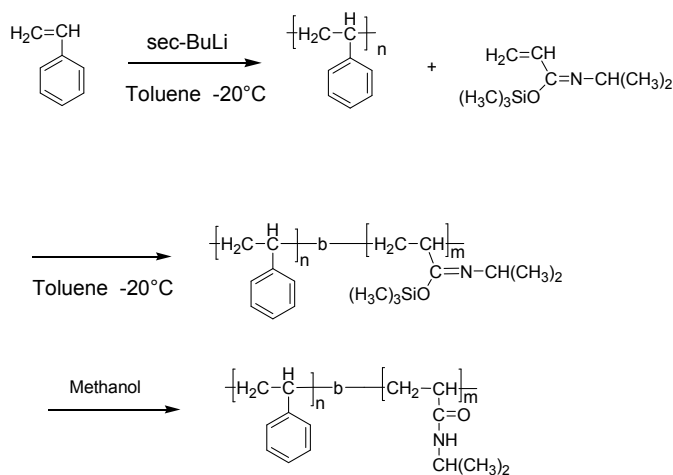


**Composition:**

Mn x 10 <sup>3</sup> S-b-NIPAM	Mw/Mn (PDI)
29.0-b-1.2	1.10

**Synthesis Procedure:**

Poly(styrene-b-N-isopropyl acrylamide) is prepared by living anionic polymerization with sequence addition of styrene followed by trimethylsilane-protected N-isopropyl acrylamide. The polymer was obtained by cleaving the trimethylsilane group by adding acidic methanol and precipitating into hexane.



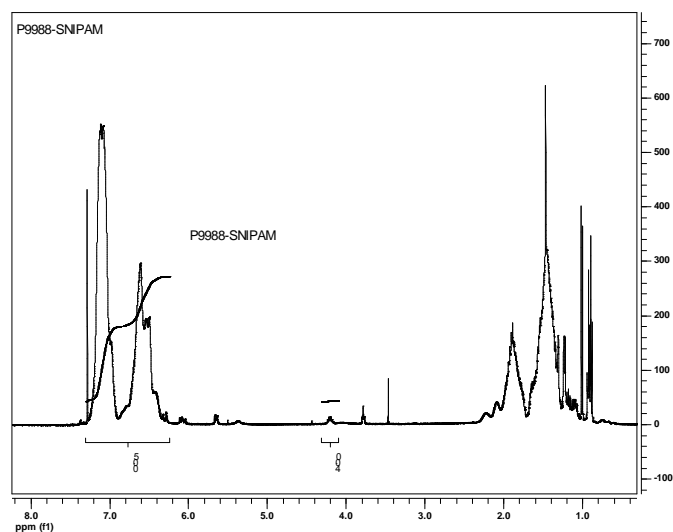
**Characterization:**

The final block copolymer composition was calculated from <sup>1</sup>H-NMR (in DMF at 40 °C) 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.

**Solubility:**

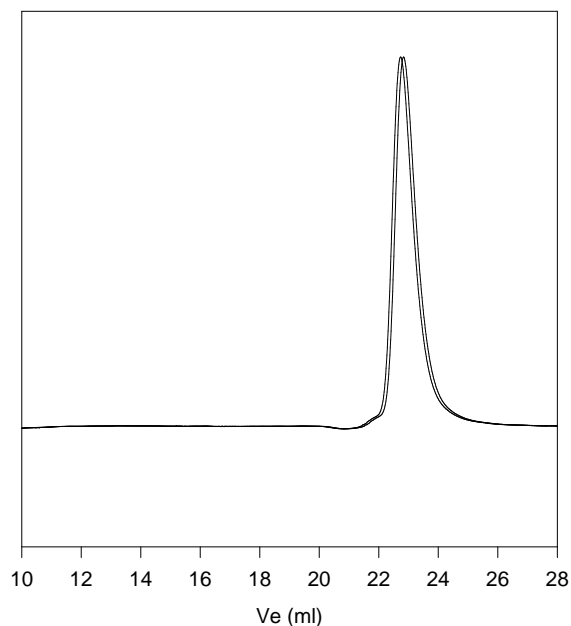
Poly(styrene-b-N-isopropyl acrylamide) block copolymer is soluble in DMF, THF, CHCl<sub>3</sub>.

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



**SEC of block copolymer**

**P9988-SNIPAM**



Size exclusion chromatography of polystyrene-b-N-isopropylacrylamide)

- Polystyrene, M<sub>n</sub>=29,000, M<sub>w</sub>=31500, PI=1.08
- Block Copolymer PS(29,000)-b-NIPAM(1,200), PI=1.10  
(Composition from <sup>1</sup>H NMR analysis)