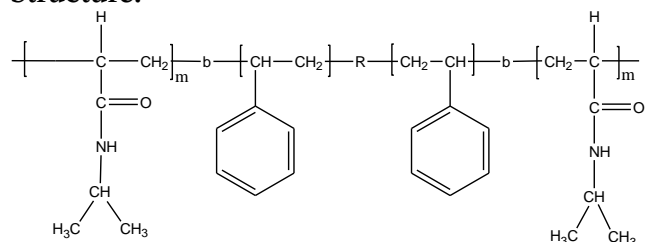


**Sample Name:**

Poly(N-isopropylacrylamide-b-styrene-b-N-isopropylacrylamide)

**Sample #: P9991-NIPAMSNIPAM****Structure:****Composition:**

$M_n \times 10^3$	PDI
0.6-b-26.0-b-0.6	1.16
$T_g$ for PS block ( $^{\circ}\text{C}$ )	107
$T_g$ for NIPAM block ( $^{\circ}\text{C}$ )	89

**Synthesis Procedure:**

Poly(NIPAM-b-styrene-b-NIPAM) is prepared by living anionic polymerization with sequence addition of styrene followed by NH protected NIPAM monomer.

**Characterization:**

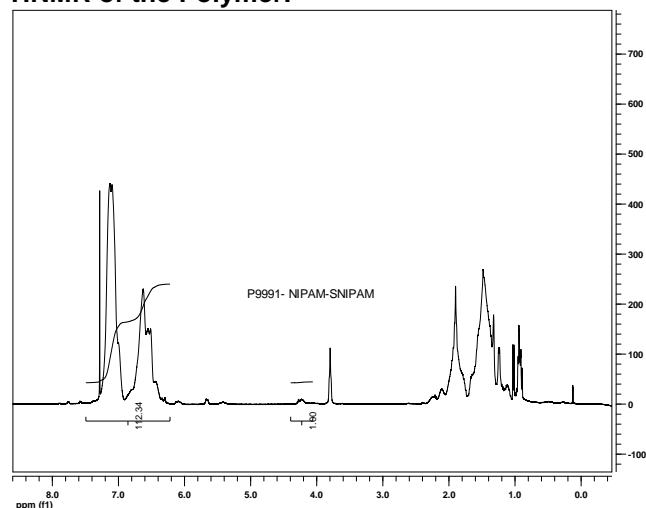
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector.

**Thermal analysis:**

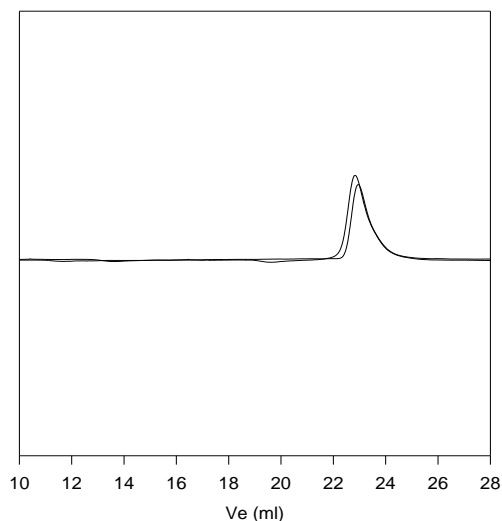
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of  $10^{\circ}\text{C}/\text{min}$ . The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature ( $T_g$ ).

**Solubility:**

Polymer is soluble in THF,  $\text{CHCl}_3$ , dioxane and benzene

**HNMR of the Polymer:****SEC of the polymer:**

**P9991-NIPAMSNIPAM**



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

— Polystyrene,  $M_n=26,000$ ,  $M_w=28,600$ ,  $PI=1.10$   
 — Block Copolymer NIPAM -PSNIPAM:  $M_n$  600-b-26000-b-600  $PI=1.16$   
 (Composition from  $^1\text{H}$  NMR analysis)

**DSC thermogram for MMA block::**