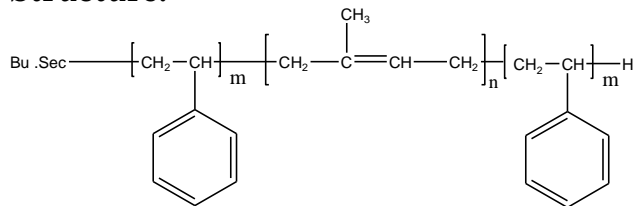


**Sample Name:****Poly(Styrene-b-Isoprene-b-Styrene)****Poly isoprene rich in 1,4 microstructure****Sample #: P5780-SIPS****Structure:****Composition:**

Mn x 10 <sup>3</sup> S-IP-S	PDI
50.0-b-50.0-b-50.0	1.08
T <sub>g</sub> for PS block:	T <sub>g</sub> for Ip block:
105 °C	-63 °C

**Synthesis Procedure:**

Poly(styrene-b-isoprene-b-styrene) is prepared by living anionic polymerization with sequence addition of styrene followed by isoprene and then styrene again.

**Characterization:**

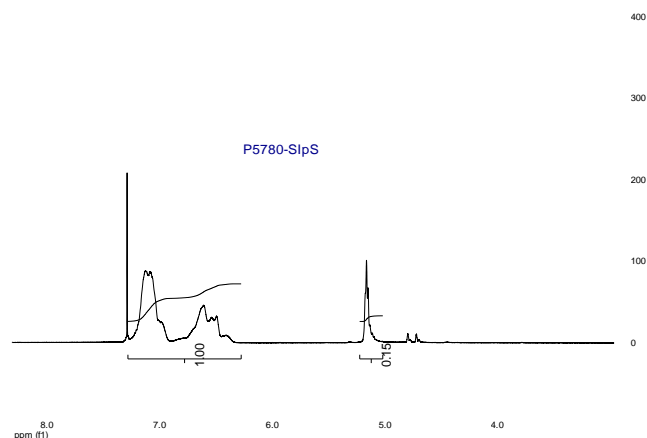
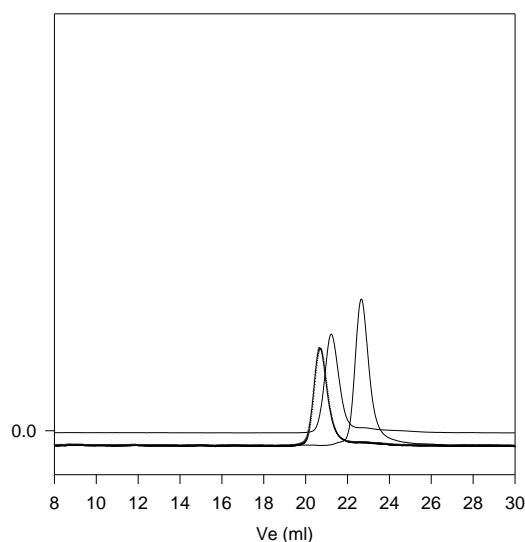
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector.

**Thermal analysis**

Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°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:**

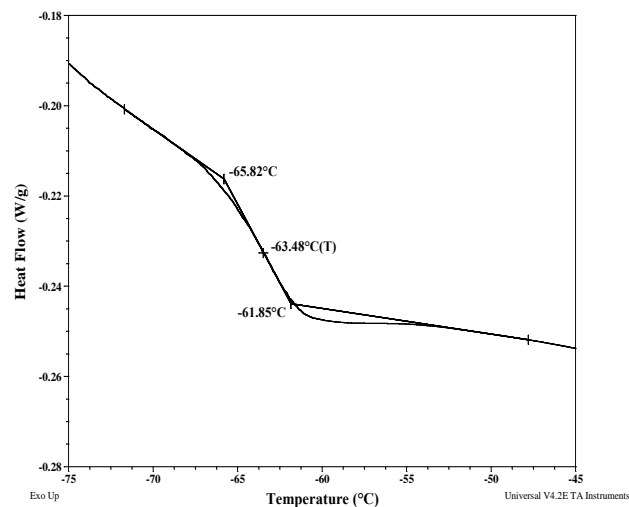
Polymer is soluble in THF, toluene and CHCl<sub>3</sub>. It precipitates from methanol, ethanol, water and hexane (depending on the compositions).

**H NMR of the Polymer:****SEC of Sample:****P5780-SIPs**

Size exclusion chromatography:

— Poly(Styrene first block), M<sub>n</sub>=50,000, M<sub>w</sub>=54,000, PI=1.08

— Diblock Copolymer PS(50000)-b-PiP(50000), PI=1.08

Triblock Copolymer Mn: S(50000)-b-IP(50000)-b-S(50000) PI:1.08  
Composition from H NMR**DSC thermogram for IP block:****DSC thermogram for PS block:**