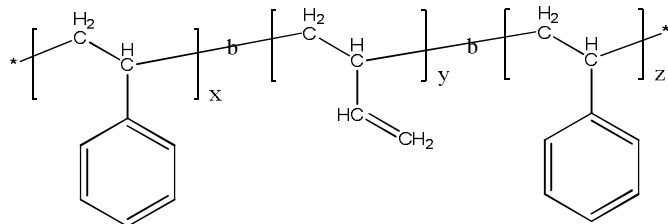


Sample Name:**Poly(Styrene-*b*-Butadiene-*b*-Styrene)**

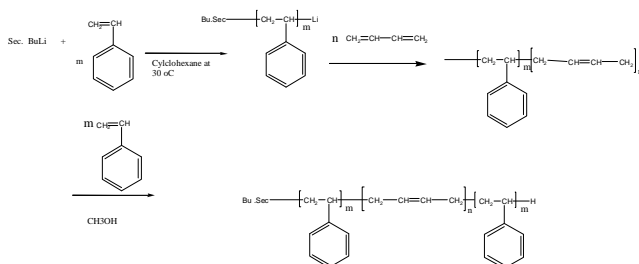
Polybutadiene is rich in 1,2 microstructure

Sample # P2865-SBdS**Structure:****Composition:**

| | |
|---|--------|
| Mn x 10 ³ (S- <i>b</i> -Bd-S) | PDI |
| 14.1.0- <i>b</i> -67.0- <i>b</i> -24.0 | 1.13 |
| T _g of PBd block: | -40 °C |
| T _g of PS block: | 91 °C |

Synthesis Procedure:

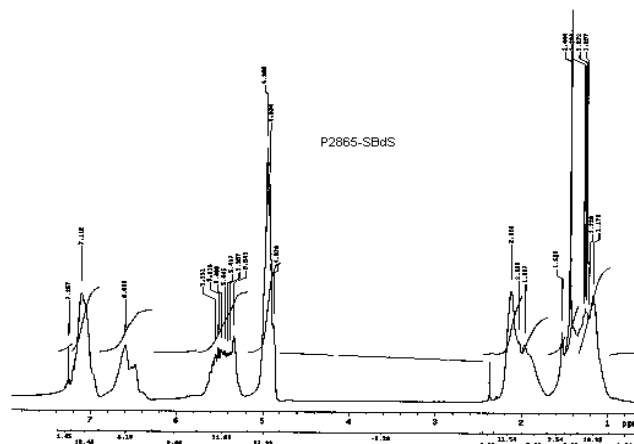
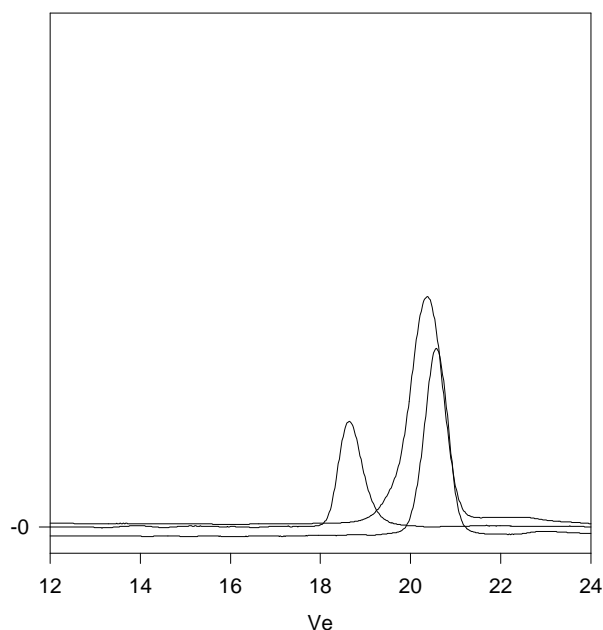
Poly(styrene-*b*-butadiene-*b*-styrene) is prepared by living anionic polymerization with sequence addition of styrene followed by butadiene and then styrene again. The scheme of the reaction is illustrated below:

**Characterization:**

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

Solubility:

The polymer is soluble in THF, toluene, and CHCl₃. It precipitates from methanol, ethanol, water, and hexane (depending on the compositions).

¹H NMR (500 MHz, CDCl₃) spectrum of the polymer:**SEC elugram of the polymer:****P2865-SBdS**

Size Exclusion Chromatography of:

- PSt, first PS block, M_n=14100, PI=1.04
- SBd, the diblock PS(14100)-*b*-PBd(67000), PI=1.08
- SBdS, triblock PS(14100)-*b*-PBd(67000)-*b*-PS(24000), PI=1.13