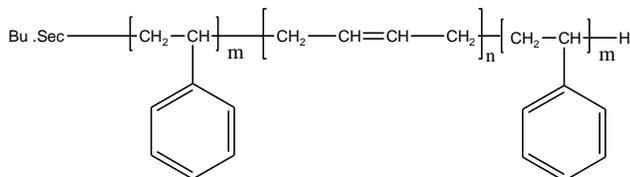


**Sample Name: Poly (Styrene-b-butadiene-b-Styrene)
Poly butadiene rich in 1,4 microstructure**

Sample #: P1220-SBdS

Structure:

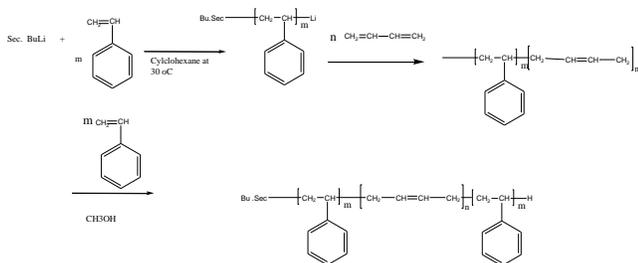


Composition:

Mn x 10 ³ (S-b-Bd-S)	PDI
14.0-b-73.0-b-15.0	1.05
T _g for PBd block	-03°C
T _g for PS block	108°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 this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector.

Thermal analysis

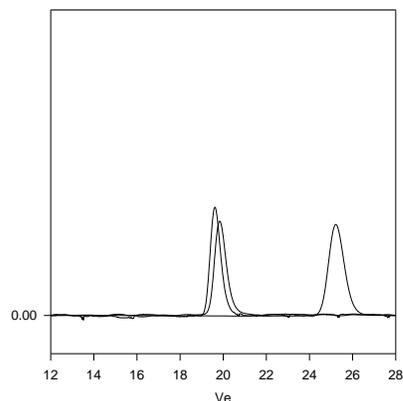
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 20°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:

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

SEC of Sample:

P1220-SBdS

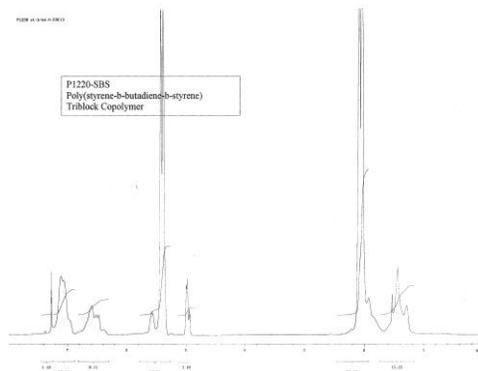


Size Exclusion Chromatography of:

— P1220-St, the first PS block, M_n=14000, PI=1.03

— P1220-SB, the diblock PS(14000)-b-PB(73000), PI=1.03

— P1220-SBS, the triblock PS(14000)-b-PB(73000)-b-PS(15000), PI=1.05



Thermogram for Bd and PS block polymers:

