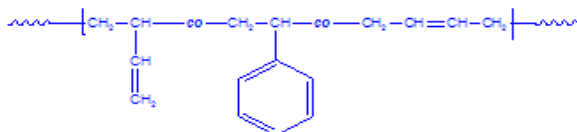


**Sample Name:** Poly(styrene-co-1,2-butadiene-co-1,4-butadiene), random

**Sample #:** P44508A-SBdran

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup> PS-co-PBd	PDI
23.0	1.07
T <sub>g</sub> for random polymer -22°C	
Styrene (mol%): 50.00	

**Synthesis Procedure:**

Random Copolymer Poly(styrene-co-butadiene) is prepared by radical polymerization of styrene and butadiene.

**Characterization:**

The polymer was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The copolymer composition was calculated from <sup>1</sup>H-NMR spectroscopy.

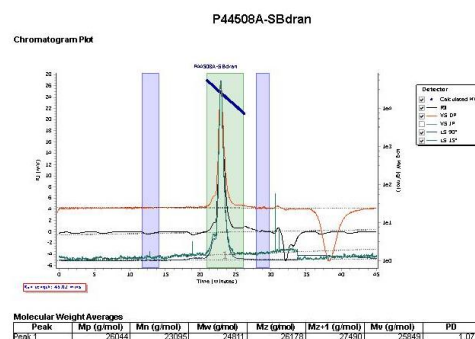
**Thermal analysis:**

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>).

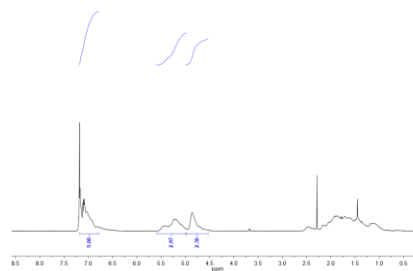
**Solubility:**

Random Copolymer Poly(styrene-co-butadiene) is soluble in CHCl<sub>3</sub>, THF, DMF, toluene and precipitated out from methanol.

**SEC of the random copolymer:**



**H NMR of Copolymer carried out in CdCl<sub>3</sub>:**



**Thermogram of the sample:**

