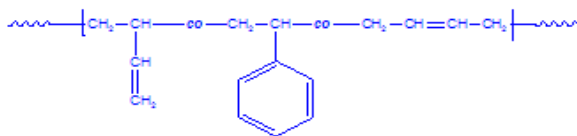


Sample Name:

Random Copolymer Poly(styrene-co-butadiene)

Sample #: P44507-SBd ran**Structure:****Composition:**

Styrene (mol%) : 50.00

Mn x 10 ³ PS-co-PBd	PDI
28.5	1.02
T _g for random polymer	-22°C

Synthesis Procedure:

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

Characterization:

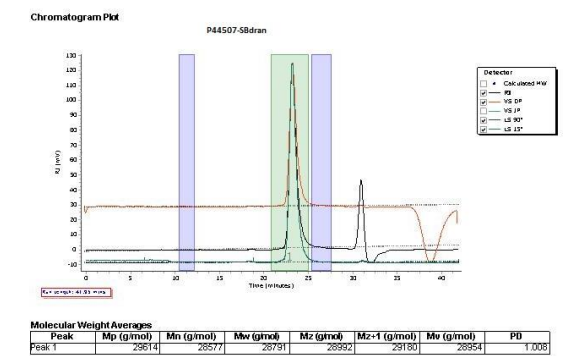
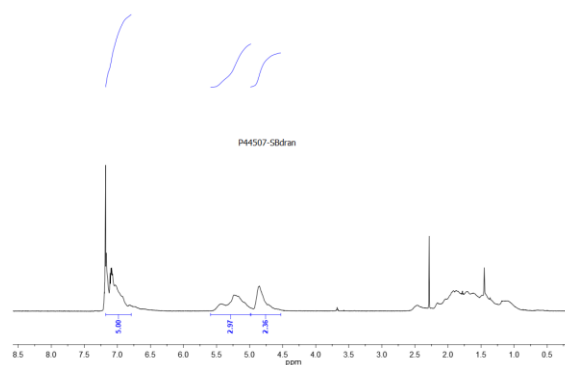
The polymer was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The copolymer composition was calculated from ¹H-NMR spectroscopy.

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_g).

Solubility:

Random Copolymer Poly(styrene-co-butadiene) is soluble in CHCl₃, THF, DMF, toluene and precipitated out from methanol.

SEC of the random copolymer:**¹H NMR of Copolymer carried out in CdCl₃:****Thermogram of the sample:**