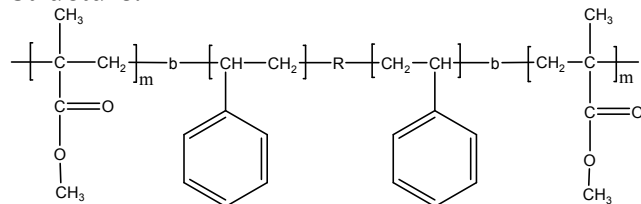


Sample Name:

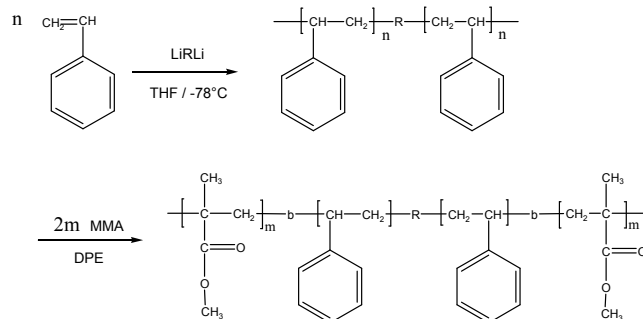
Poly(methyl methacrylate-b-styrene-b-methyl methacrylate)

Sample #: P1822-MMASMA**Structure:****Composition:**

Mn x 10 ³	PDI
218.0-b-120.0-b-218.0	1.50
T _g for PMMA block (°C)	126
T _g for PS block (°C)	107

Synthesis Procedure:

Poly(methyl methacrylate-b-styrene-b-methyl methacrylate) is prepared by living anionic polymerization with sequence addition of styrene followed by methyl methacrylate, using difunctional initiator. 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:

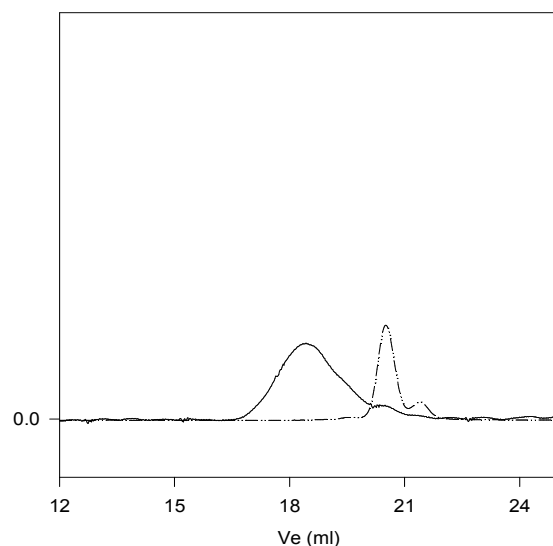
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:

Polymer is soluble in THF, CHCl₃, dioxane and benzene

SEC of Sample:

P1822-MSM



----- Polystyrene, M_n=120000, M_w=127000, PI=1.06

———— Block Copolymer PMMA(218000)-PSt(120000)-PMMA(218000), PI=1.50

DSC thermograms for the polymer: