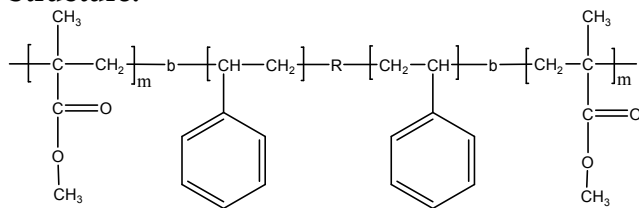


Sample Name:

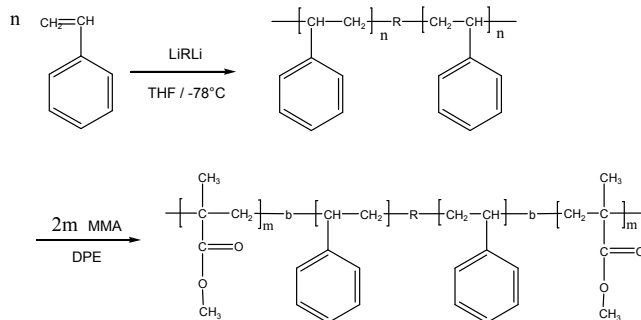
Poly(methyl methacrylate-*b*-styrene-*b*-methyl methacrylate)

Sample #: P1815-MMASMA**Structure:****Composition:**

Mn x 10 ³	PDI
223.0- <i>b</i> -26.7- <i>b</i> -223.0	1.27
T _g for MMA block (°C)	130
T _g for S block (°C)	Not distinct

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:

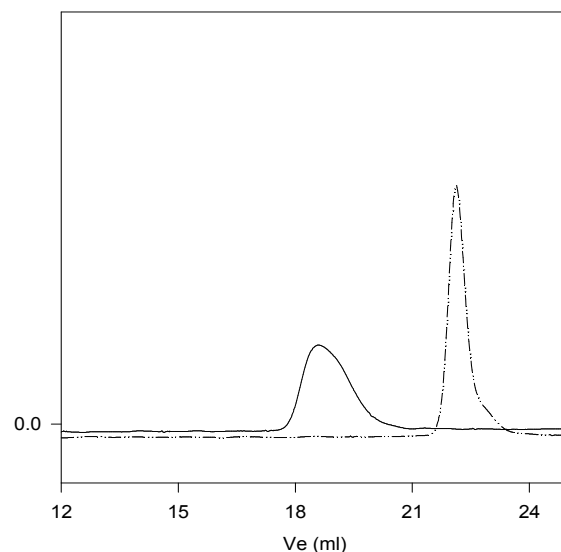
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:

Polymer is soluble in THF, CHCl₃, dioxane and benzene

SEC of Sample:

P1815-MSM



Polystyrene, M_n=26700, M_w=28600, PI=1.07

Block Copolymer PMMA(223000)-PSt(26700)-PMMA(223000), PI=1.27

Thermograms of the Polymer: