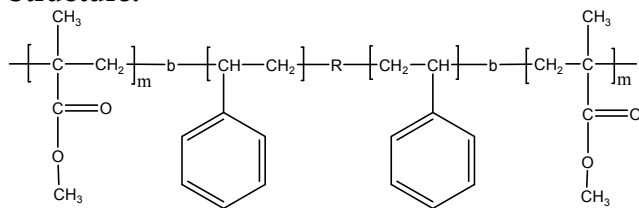


Sample Name:

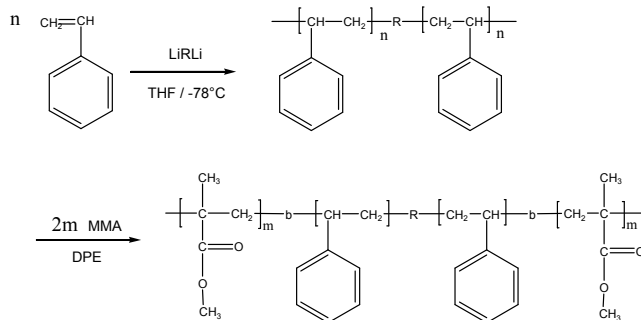
Poly(methyl methacrylate-b-styrene-b-methyl methacrylate)

Sample #: P1825-MMAS MMA**Structure:****Composition:**

Mn x 10 ³	PDI
270.0-b-217.0-b-270.0	1.25
T _g for MMA block (°C)	133
T _g for S 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:

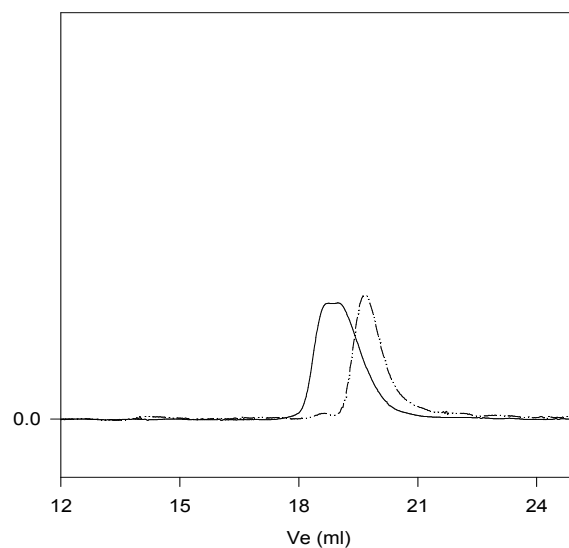
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:

Polymer is soluble in THF, CHCl₃, dioxane and benzene

SEC of Sample:

P1825-MMAS MMA



----- Polystyrene, M_n=217000, M_w=250000, PI=1.15
 ——— Block Copolymer PMMA(270000)-PSt(217000)-PMMA(270000), PI=1.25

DSC thermogram for the polymer: