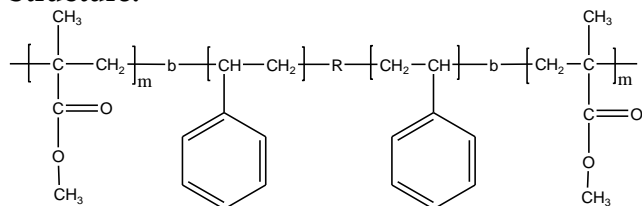


**Sample Name:**

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

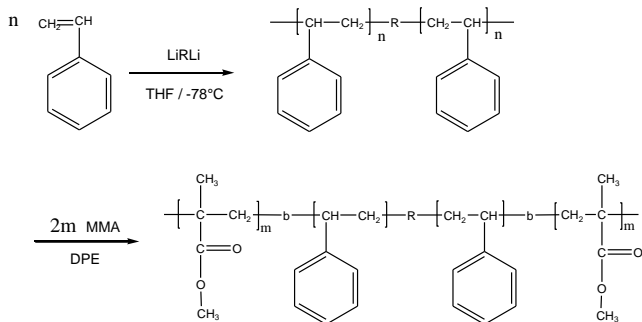
**Sample #: P8360-MMAS MMA**

**Structure:****Composition:**

Mn x 10 <sup>3</sup>	PDI
52.0-b-94.0-b-52	1.15
T <sub>g</sub> for PS block:	109°C
T <sub>g</sub> for MMA block	135°C

**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:**

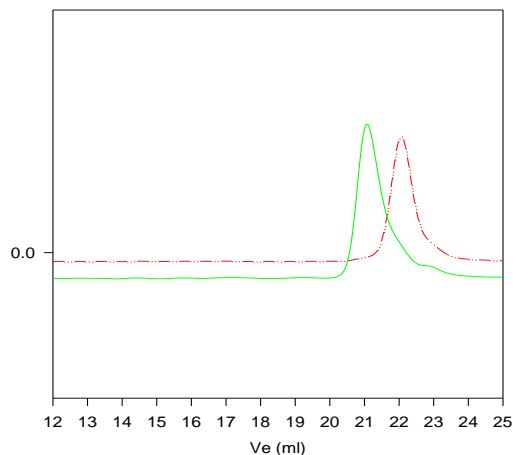
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T<sub>g</sub>).

**Solubility:**

Polymer is soluble in THF, CHCl<sub>3</sub>, dioxane and benzene

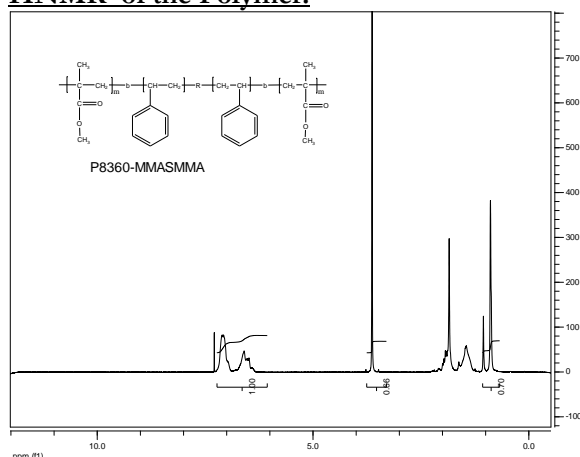
**SEC of Sample:**

**P8360-MMAS MMA**



Polystyrene, M<sub>n</sub>=94000, M<sub>w</sub>=103000, PI=1.10

Block Copolymer PMMA(52000)-PS(94000)-PMMA(52000), PI=1.15

**HNMR of the Polymer:****DSC thermogram for the polymer:**