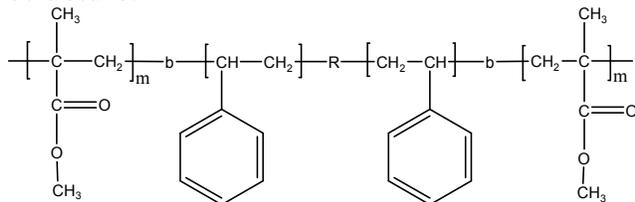


**Sample Name:**

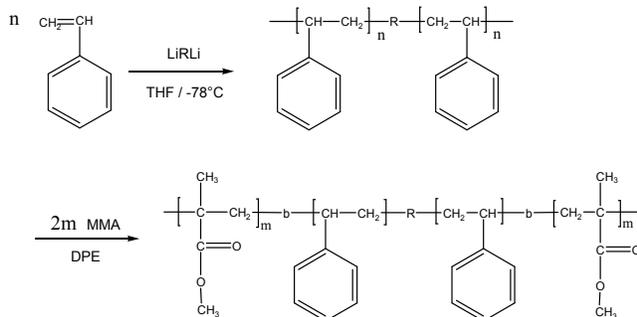
**Poly(methyl methacrylate-b-styrene-b-methyl methacrylate)**

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

Mn x 10 <sup>3</sup>	PDI
218.0-b-120.0-b-218.0	1.50
T <sub>g</sub> for PMMA block (°C)	126
T <sub>g</sub> 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:**

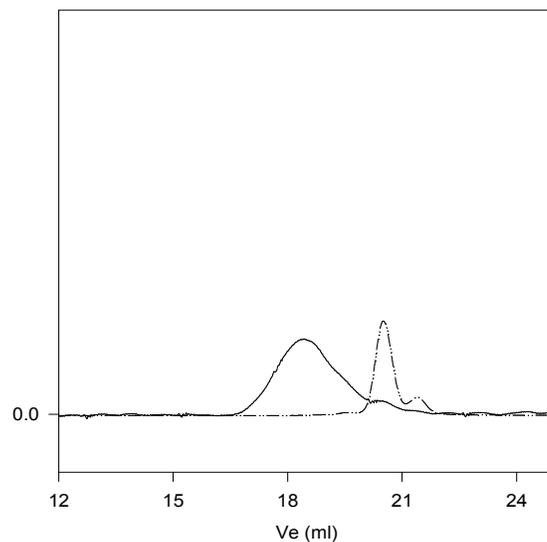
The molecular weight and polydispersity index of this polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detector.

**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<sub>g</sub>).

**Solubility:**

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

**SEC of Sample:****P1822-MSM**

--- Polystyrene, M<sub>n</sub>=120000, M<sub>w</sub>=127000, PI=1.06

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

**DSC thermograms for the polymer:**