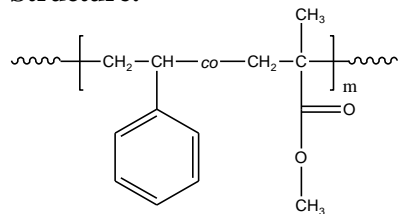


Sample Name:

**Random Copolymer Poly(styrene-co-methyl methacrylate)**

Sample #: **P9142A-SMMArAn**

**Structure:**

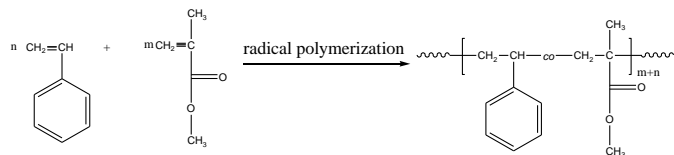


**Composition:**

Mn x 10 <sup>3</sup> PS-co-PMMA	PDI
170.0	1.5

**Synthesis Procedure:**

Random Copolymer Poly(styrene-co-methyl methacrylate) is prepared by radical polymerization of styrene and methyl methacrylate. The scheme of the reaction is illustrated below:



**Characterization:**

The polymer was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI). The copolymer composition was calculated from <sup>1</sup>H-NMR spectroscopy by comparing the peak area the aromatic protons of 6.66-7.05 ppm with the protons of methyl methacrylate at about 0.8-3.8 ppm that deducts the contribution of the styrene back bone protons.

**Solubility:**

Random Copolymer Poly(styrene-co-methyl methacrylate) is soluble in CHCl<sub>3</sub>, THF, DMF, toluene and precipitated out from methanol.

**<sup>1</sup>H-NMR Spectrum of the random copolymer:**

