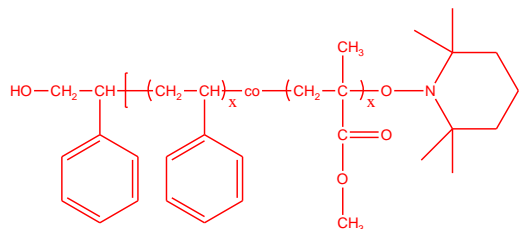


Sample Name:

**Random Copolymer Poly(styrene-co-methyl methacrylate),  
 $\alpha$ -Hydroxyl- $\omega$ -Tempo moiety Terminated**

Sample #: P44447-SMMAranOHT

**Structure:**

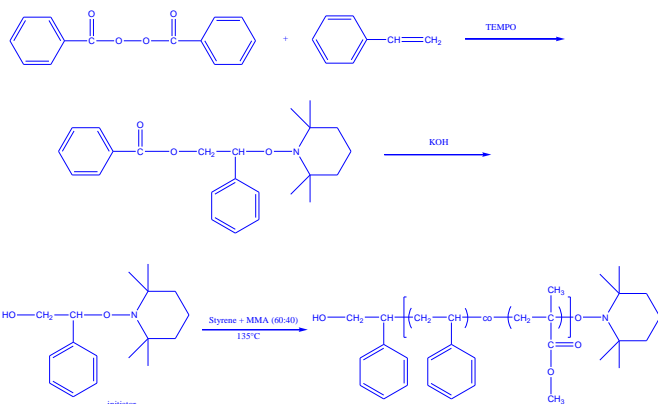


**Composition:**

Mn x 10 <sup>3</sup> (Styrene content mol%)	Mw/Mn (PDI)
8.5 (60%)	1.4

**Synthesis Procedure:**

Hydroxy terminated poly(styrene-co-methyl methacrylate) is prepared by stable free radical polymerization at 135°C. The reaction scheme is shown below:



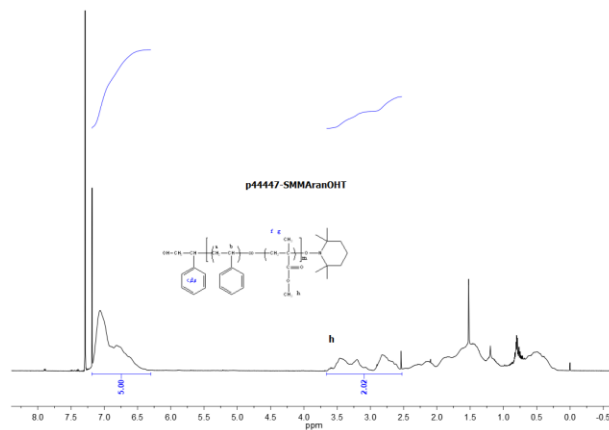
**Characterization:**

An aliquot of the copolymer was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI), the instrument calibrated by Polystyrene standards. The chemical composition was calculated from <sup>1</sup>H-NMR spectroscopy by comparing the peak area of the phenyl protons at 6.8-7.4 ppm with the peak area of methyl methacrylate at 2.6-3.6 ppm.

**Solubility:**

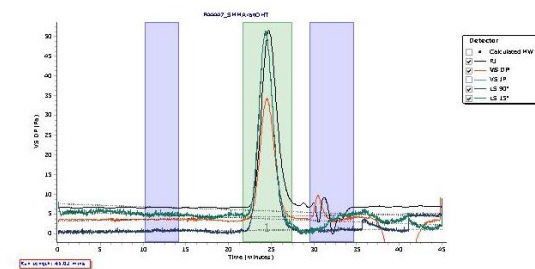
Poly(styrene-co-methyl methacrylate) is soluble in THF, DMF, toluene and chloroform, and precipitates from methanol and hexanes.

**<sup>1</sup>H NMR spectrum**



P44447\_SMMAranOHT

Chromatogram Plot



Molecular Weight Averages

Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz-1 (g/mol)	Mw (g/mol)	PDI
Peak 1	107.26	6281	11644	18321	23716	14626	1.406