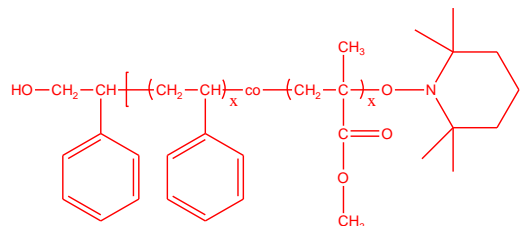


Sample Name: Random Copolymer Poly(styrene-co-methyl methacrylate), α -Hydroxyl- ω -Tempo moiety Terminated

Sample #: P18285C-SMMAranoHT

Structure:

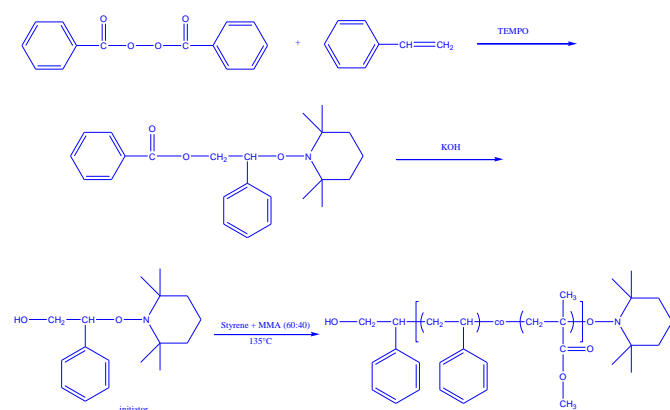


Composition:

Mn x 10 ³ (Styrene content mol%)	Mw/Mn (PDI)
2.0 (36 %)	1.07

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:



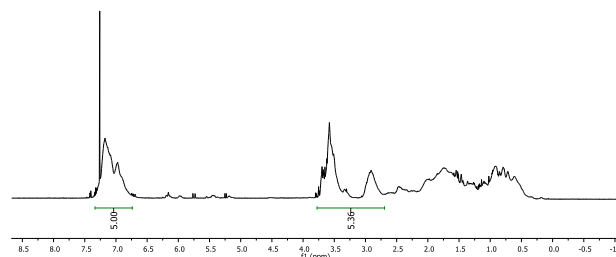
Characterization:

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 ¹H-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:

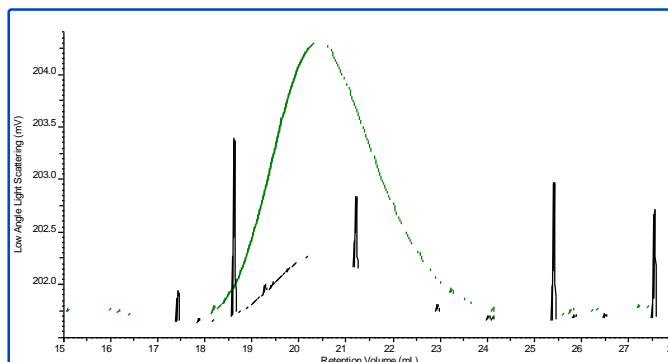
Poly(styrene-co-methyl methacrylate) is soluble in THF, DMF, Toluene and chloroform. Precipitate from methanol and Hexanes.

¹H NMR spectrum of the Sample:



SEC elugram of the random copolymer:
P18285C

dn/dc	0.1000
Flow	0.7000
Solvent	DMF with LiBr
Method	PSS



Sample	Mn	Mw	Mz	IV	Mw/Mn
P18285C_1_2	2,194	2,340	2,505	0.0484	1.066