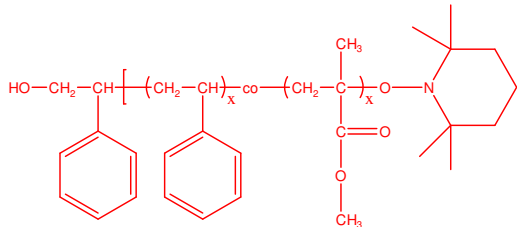


Sample Name:

α -Hydroxy, ω -TEMPO-Terminated Poly(Styrene-co-Methyl Methacrylate) Random Copolymer

Sample #: **P18340B-SMMAranOHT**

Structure:

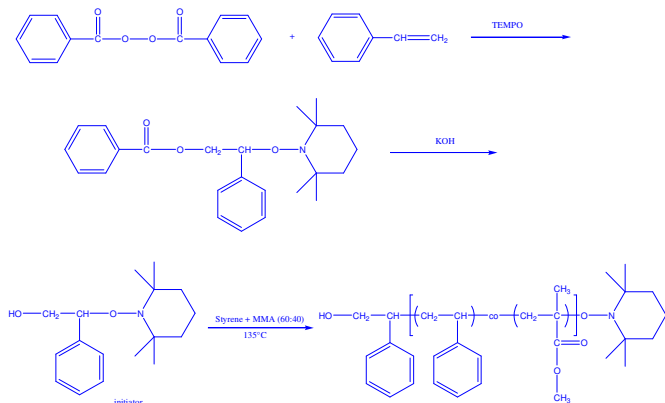


Composition:

Mn x 10 ³	Mw/Mn (PDI)
11.0 (Polystyrene = 51 mol%)	1.5

Synthesis Procedure:

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



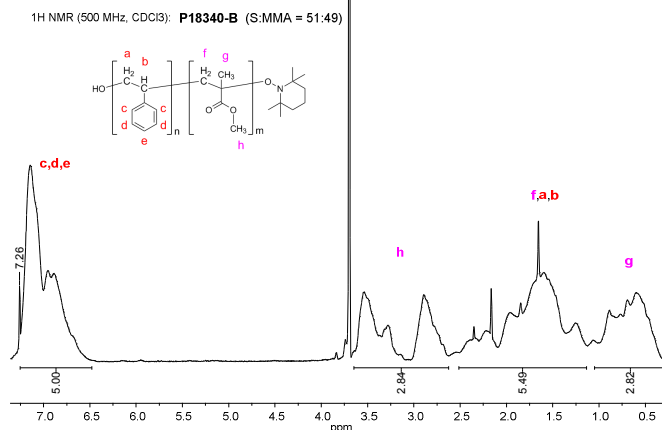
Characterization:

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:

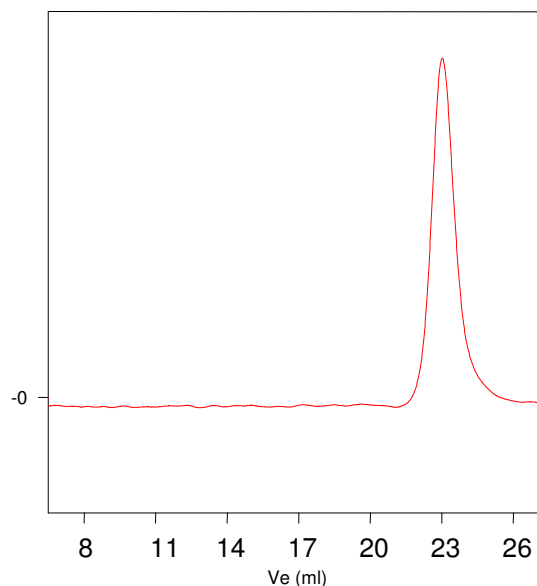
Poly(styrene-co-methyl methacrylate) is soluble in THF, DMF, toluene and chloroform; and it precipitate from methanol and hexanes.

¹H NMR (500MHz, CDCl₃) spectrum:



SEC elugram:

P18340B-SMMAranOHT



M_n=11,000, M_w=16,500, M_w/M_n=1.5