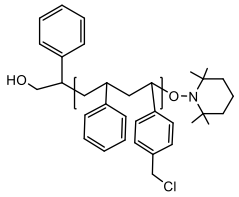
Sample Name:
Poly(styrene–co–4-vinylbenzyl chloride), (α-hydroxy, ω-TEMPO)-terminated

Sample #: **P43990B-SClMeSranOHT**

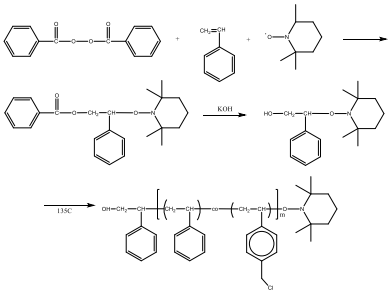
Structure:



Composition:

Mn x 10^3	Mw/Mn (PDI)
7.5	1.30
P4ClMeS = 25 mol%	

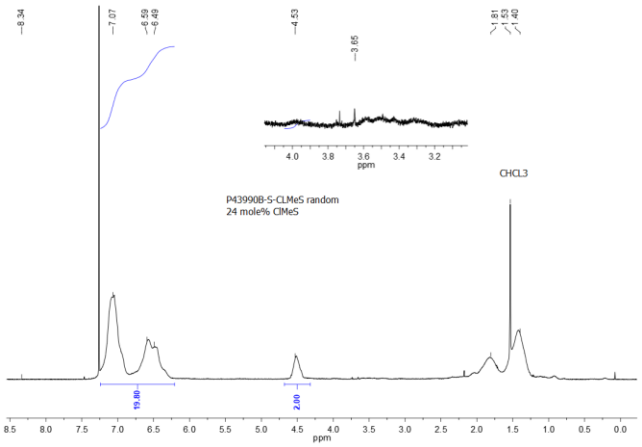
Synthesis Procedure:
Hydroxy terminated poly(styrene-co-4-Chloromethyl Styrene) is prepared by stable free radical polymerization at 135°C. The reaction scheme is shown below:



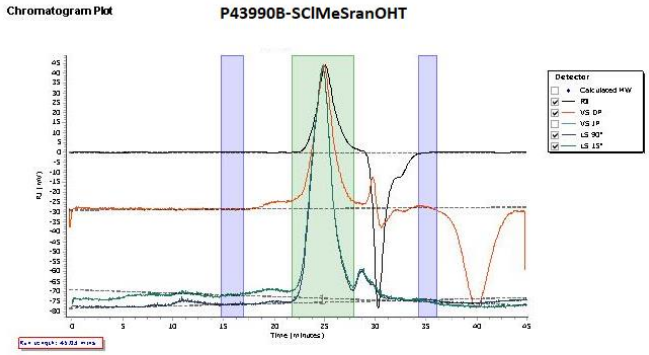
Characterization:
An aliquot of the copolymer was analyzed by size exclusion chromatography (SEC) to obtain the molecular weight and polydispersity index (PDI), the instrument calibrated by Polystyrene standards. The chemical composition was calculated from ^{1}H-NMR spectroscopy by comparing the peak area of the phenyl protons at 6.8-7.4 ppm with the peak area of benzyl at 4.5 ppm.

Solubility:
Polymer is soluble in THF, DMF, Toluene and chloroform. Precipitate from methanol and Hexanes.

^{1}H NMR spectrum of the Sample:



SEC profile of the random copolymer:



Molecular Weight Averages

Peak	Mp (g/mol)	Mn (g/mol)	Mw (g/mol)	Mz (g/mol)	Mz+1 (g/mol)	Mv (g/mol)	PD
Peak 1	9630	7649	9954	12628	15756	12096	1.301