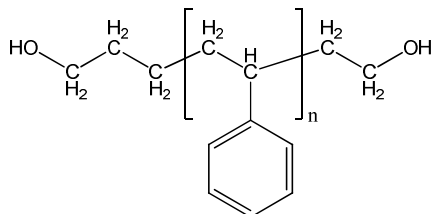


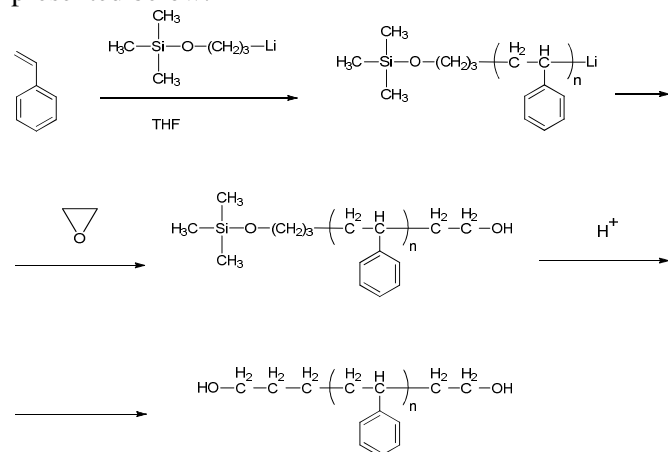
Sample Name: **α,ω -Di(hydroxy)-terminated polystyrene****Sample # P19875-S2OH****Structure:****Composition:**

$M_n \times 10^3$ (g/mol)	M_w/M_n
7.5	1.16

-OH functionality:	> 98%
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Synthesis procedure:

α,ω -Di(hydroxyl)-terminated polystyrene was prepared by living anionic polymerization of styrene using a hydroxyl-protected initiator, followed by termination with ethylene oxide. The scheme of reaction is presented below:

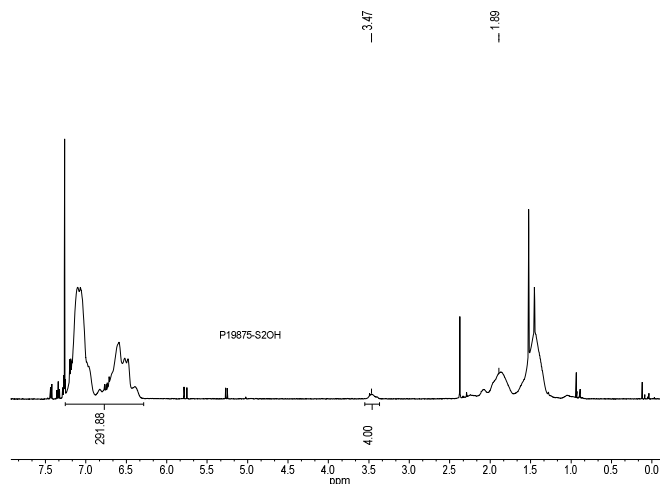
**Characterization:**

End-group functionality of the polymer was confirmed by ^1H -NMR spectroscopy.

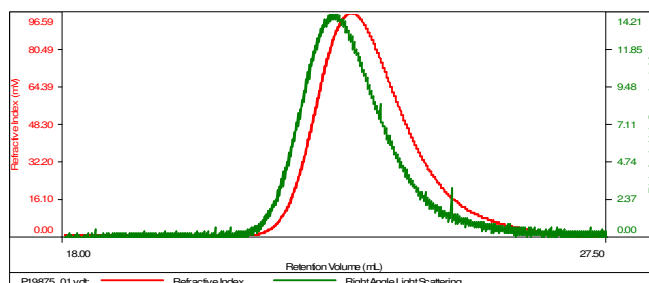
The molecular weight and polydispersity index of the polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detectors.

Solubility:

Polystyrene is soluble in toluene, THF, chloroform; and it precipitates from cold methanol, water.

 ^1H NMR spectrum of the polymer (500 MHz, CDCl_3):**SEC elugram of the polymer:****Sample ID: P19875-S2OH**

Concentration (mg/mL)	2.9674
Sample dilute (mL/g)	0.1850
Method File	PS80K-30JUNE2016-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	Mn (Da)	Mw (Da)	Mw/Mn	N (dL/g)	Mp (Da)
P19875_01.vdt	7,647	8,894	1.163	0.1123	8,631