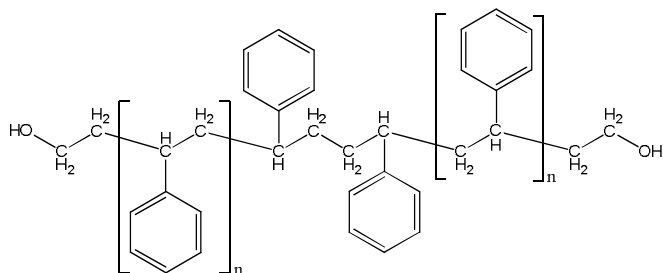


**Sample Name:**

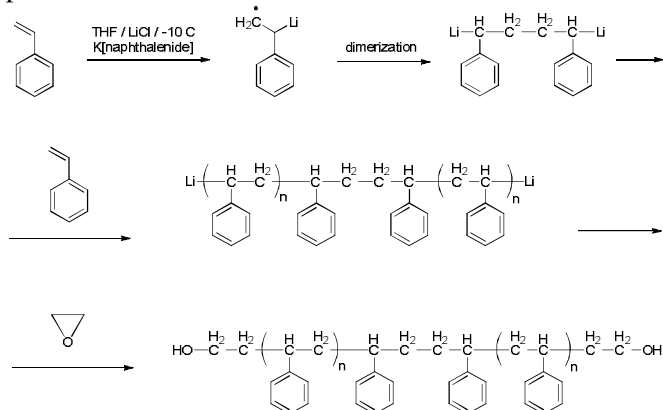
**$\alpha,\omega$ -Di(hydroxy)-terminated polystyrene,**  
(with styrene dimer group in the middle of polymer chain)

**Sample # P18062-S2OH****Structure:****Composition:**

$M_n \times 10^3$ (g/mol)	$M_w/M_n$
362.0	1.7

**Synthesis procedure:**

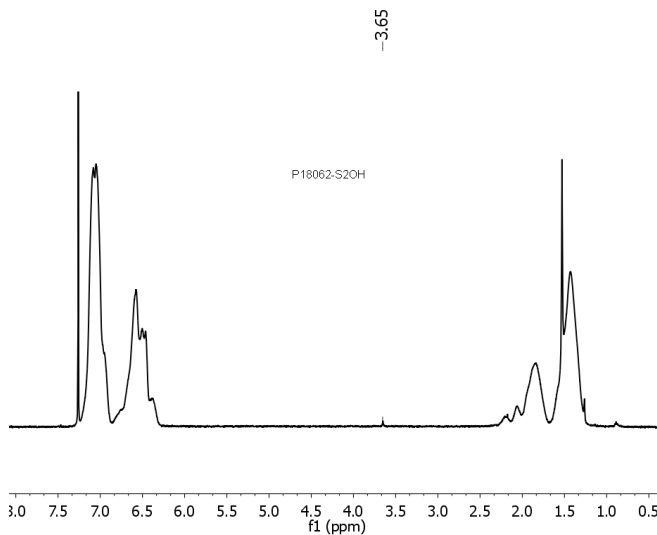
$\alpha,\omega$ -Di(hydroxyl)-terminated polystyrene was prepared by living anionic polymerization of styrene using a bifunctional initiator in THF followed by termination with ethylene oxide. The scheme of reaction is presented below:

**Characterization:**

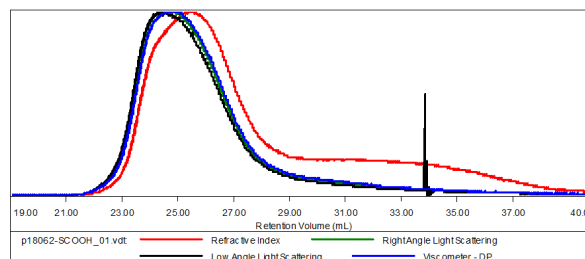
Molecular structure and purity of the polymer were confirmed by  $^1\text{H-NMR}$  spectroscopy. The molecular weight and polydispersity index of the polymer were determined by size exclusion chromatography (SEC) using a Varian liquid chromatograph equipped with a UV and refractive index detectors.

**Solubility:**

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

 **$^1\text{H NMR}$  (500 MHz,  $\text{CDCl}_3$ ):****SEC elugram of the polymer:****Sample ID: P18062-SOH**

Concentration (mg/mL)	2.7583
Sample dn/dc (mL/g)	0.1850
Method File	PS80K-May-2013-0000.vcm
Column Set	3x PL 1113-6300
System	System 1



Sample	Mn	Mw	Mp	Mw/Mn	IV
p18062-SOH_01.vdt	361,841	624,046	759,441	1.725	4.0186