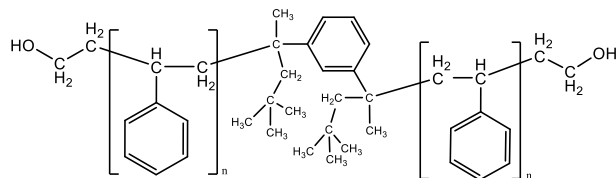


Sample Name:

Poly(styrene), α,ω -bis(hydroxy)-terminated, with dialkyl-benzene group in center of polymer chain

Sample #: P43725A-S2OH

Structure:

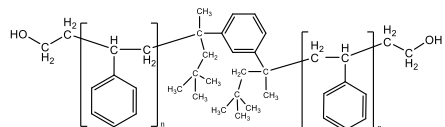
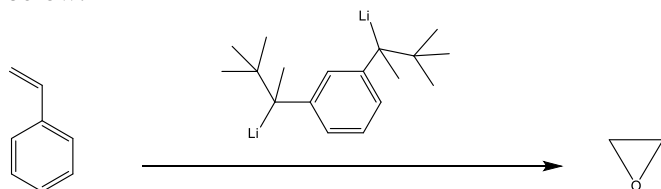


Composition:

$M_n \times 10^3$ (g/mol)	M_w/M_n
0.4	1.10

Synthesis procedure:

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



Characterization:

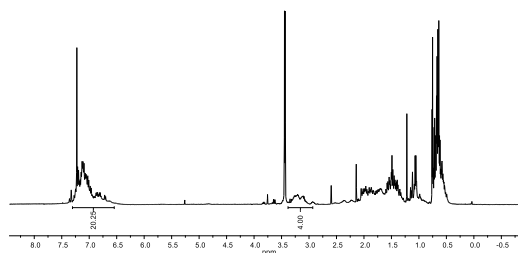
End-group functionality of the polymer was confirmed by $^1\text{H-NMR}$ spectroscopy.

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. It precipitates from cold methanol, and water.

$^1\text{H-NMR}$ of the polymer run in CdCl_3 :



SEC elugram of the polymer: A series of Polymers:

