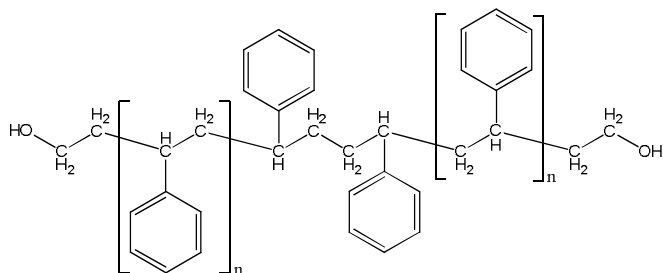


**Sample Name:**

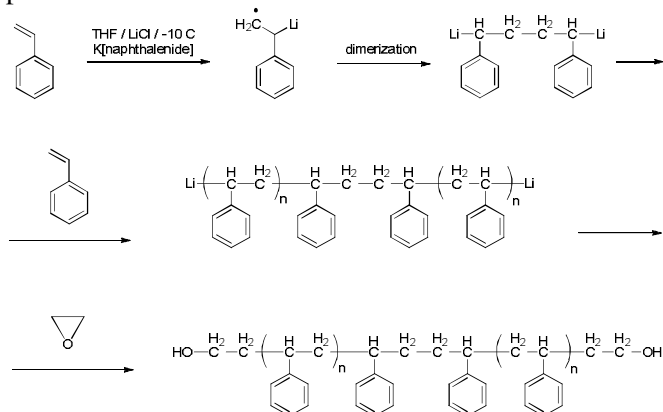
**$\alpha,\omega$ -Di(hydroxy)-terminated polystyrene,**  
(with styrene dimer group in the middle of polymer chain)

**Sample # P499-S2OH****Structure:****Composition:**

$M_n \times 10^3$ (g/mol)	$M_w/M_n$
4.8	1.5

**Synthesis procedure:**

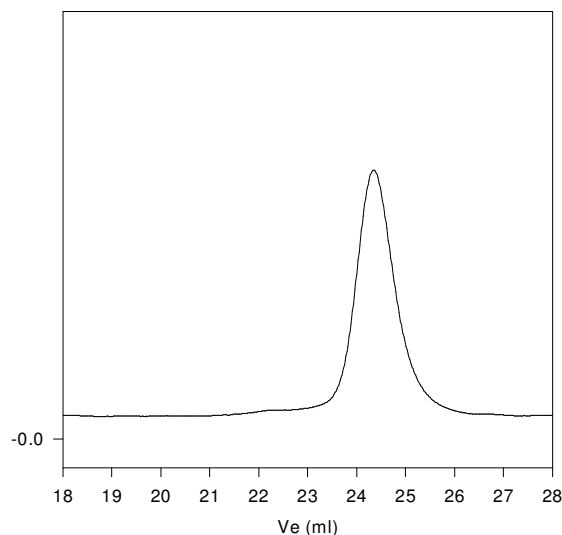
$\alpha,\omega$ -Di(hydroxyl)-terminated polystyrene was prepared by living anionic polymerization of styrene using a bifunctional initiator in THF followed by termination with ethylene oxide. The scheme of reaction is presented below:

**Characterization:**

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.

**SEC elugram of the polymer:****P499-S2OH**

Size exclusion chromatography of  $\alpha,\omega$ -dihydroxy terminated polystyrene.  
 $M_n=4800$ ,  $M_w=7200$ ,  $PI=1.5$ , functionality=1.90.