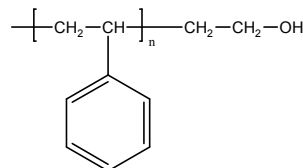


**Sample Name:**  
**ω-Hydroxy Terminated Polystyrene**

**Sample #:** P4730- SOH

**Structure:**

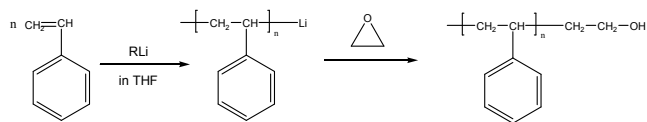


**Composition:**

$M_n \times 10^3$	PDI
50.0	1.06
$T_g$ (°C)	105

**Synthesis Procedure:**

ω-Hydroxy terminated polystyrene was prepared by anionic living polymerization of styrene in THF followed by termination with ethylene oxide. The scheme of the reaction is illustrated below:



**Characterization:**

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

**Thermal analysis:**

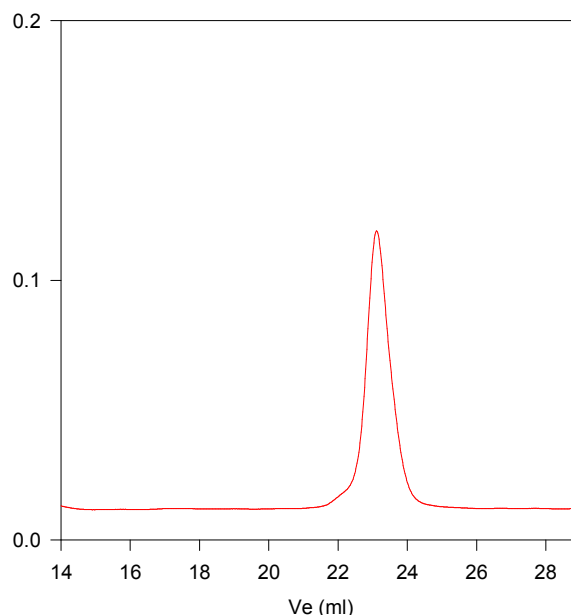
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature ( $T_g$ ).

**Solubility:**

Polystyrene is soluble in DMF, THF, toluene and  $\text{CHCl}_3$ . It precipitates from methanol, ethanol, water and hexanes.

**SEC of Sample:**

**P4730-SOH**



Size exclusion chromatography of ω hydroxy Terminated polystyrene  
 $M_n=50000$ ,  $M_w=52500$ ,  $PI=1.06$ , functionality>99%

**DSC thermogram for the sample:**

