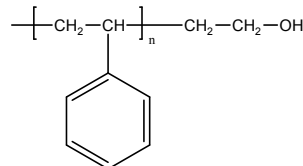


Sample Name:
 ω -Hydroxy Terminated Polystyrene

Sample #: P4728- SOH

Structure:

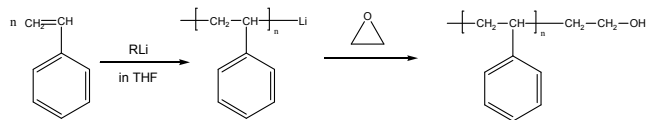


Composition:

$M_n \times 10^3$	PDI
36.0	1.06
T_g ($^{\circ}\text{C}$)	102

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:

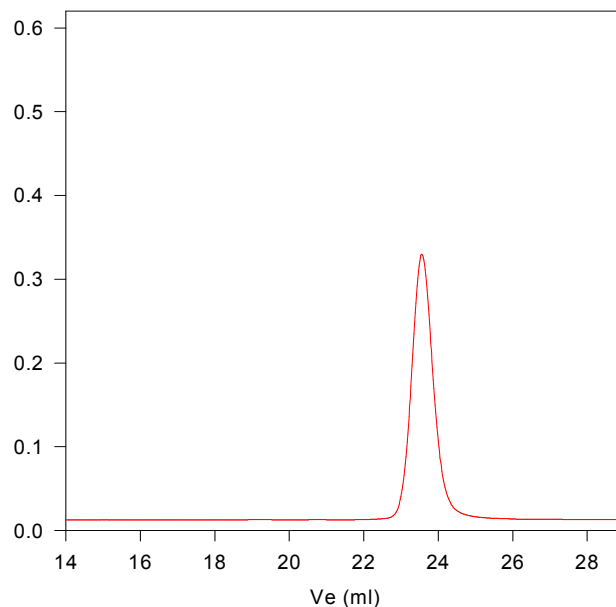
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of $10^{\circ}\text{C}/\text{min}$. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:

Polystyrene is soluble in DMF, THF, toluene and CHCl_3 . It precipitates from methanol, ethanol, water and hexanes.

SEC of Sample:

P4728-SOH



Size exclusion chromatography of ω hydroxy Terminated polystyrene
 $M_n=36000$, $M_w=38000$, $\text{PI}=1.06$, functionality >99%

DSC thermogram for the sample:

