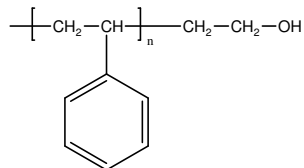


Sample Name:
ω-Hydroxy Terminated Polystyrene

Sample #: **P2586-SOH**

Structure:

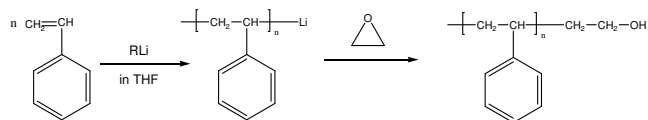


Composition:

Mn x 10 ³	PDI
3.5	1.4
T _g (°C)	48

Synthesis Procedure:

ω-Hydroxy terminated polystyrene was synthesized 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:

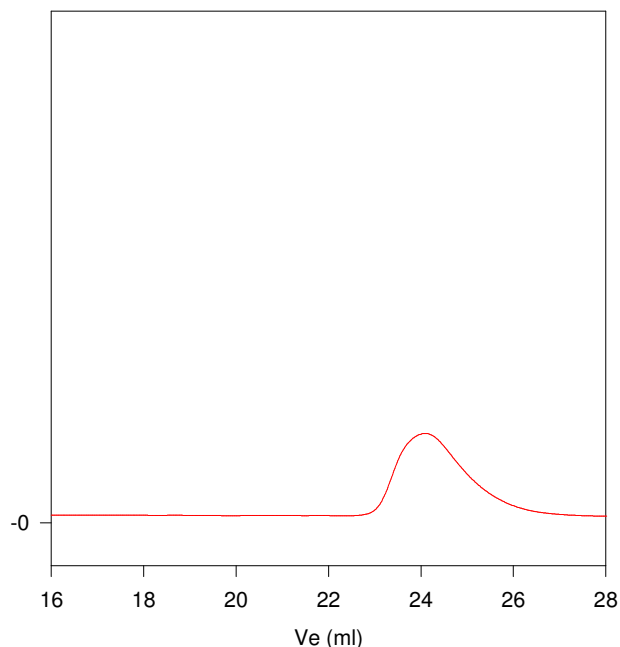
Thermal analysis of the samples was carried out on a TA Q100 differential scanning calorimeter at a heating rate of 10°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

Solubility:

Polystyrene is soluble in DMF, THF, toluene and CHCl₃. It precipitates from methanol, ethanol, water and hexanes.

SEC elugram of the polymer:

P2586-SOH



Size exclusion chromatography of Hydroxy Terminated polystyrene:

M_n=3500, M_w=4900, PI=1.40, functionality>95%

DSC thermogram of the polymer:

