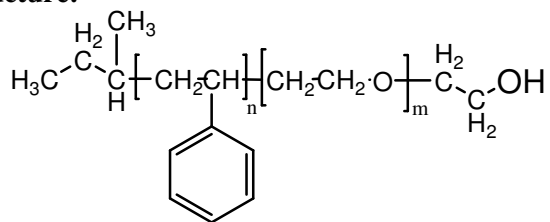


Sample Name: Poly(styrene-b-ethylene oxide)

Sample #: P19745-SEO

Structure:



Composition:

Mn x 10 ³	PDI
5.0-b-10.0	1.09

Synthesis Procedure:

Poly(styrene-b-ethylene oxide) diblock copolymer was synthesised by living anionic polymerization.

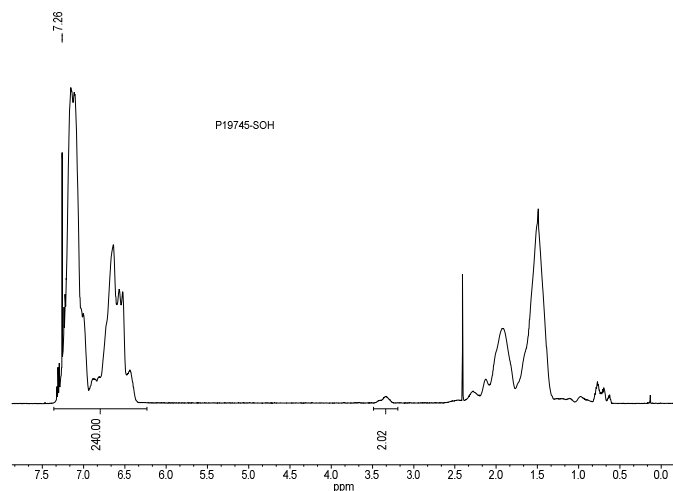
Characterization:

The polymer was characterized by ¹H NMR and size exclusion chromatography (SEC).

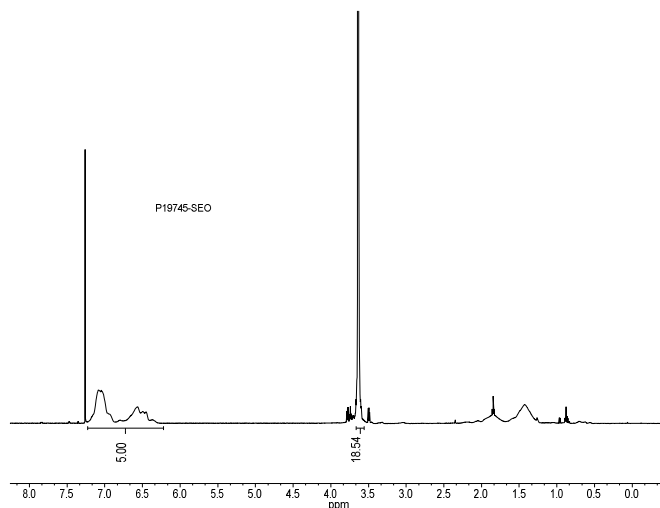
Solubility:

The polymer is soluble in THF (at 35 °C), CHCl₃, benzene, toluene, dioxane. Low molecular weight SEO with high contents of the polyethylene oxide block can also be solubilized in methanol and water.

¹H NMR spectrum of the sample: SOH



¹H NMR spectrum of the sample: SEO



Thermal analysis results:

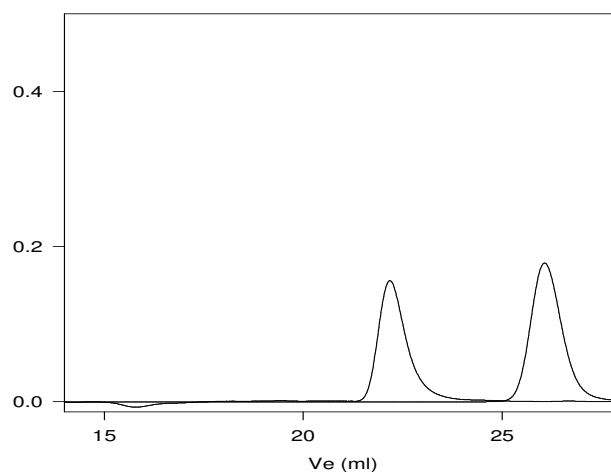
Thermal analysis was done on a TA Q100 differential scanning calorimeter at a heating rate of 20°C/min. The midpoint of the slope change of the heat flow plot of the second heating scan was considered as the glass transition temperature (T_g).

The melting temperature (T_m) was taken as a maximum of the endothermic peak.

For PS block: T _g : 85°C	
For PEO block:	
T _g : -63°C	T _m : 61°C

SEC elugram:

P19745-SEO



Size Exclusion Chromatography:
—— Polystyrene, M_n=5,200, M_w=5,500, PI=1.05
—— Block Copolymer Polystyrene-b-Poly(ethylene oxide)
Mw: PS(5,200)-b-PEO(10,000), PI=1.08