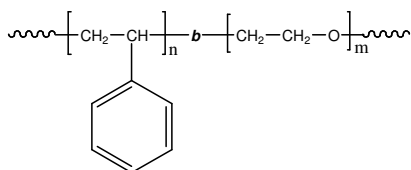


Sample Name: Poly(styrene-b-ethylene oxide)

Sample #: P18902A-SEO

Structure:



Composition:

Mn x 10 ³	PDI
19.5-b-6.0	1.07

Synthesis Procedure:

Poly(styrene-b-ethylene oxide) diblock copolymer is prepared by living anionic polymerization.

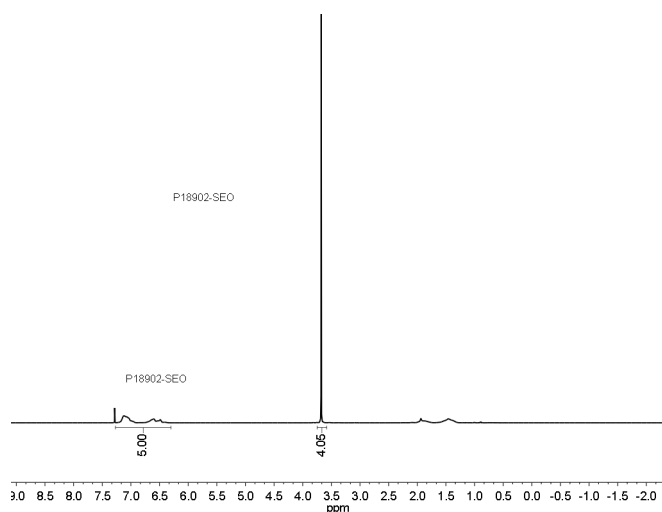
Characterization:

By size exclusion chromatography (SEC) and by ¹H-NMR.

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:



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).

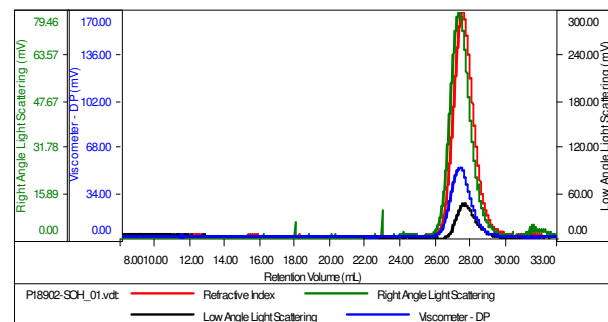
The melting temperature (T_m) was taken as a maximum of the endothermic peak.

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

SEC elugram of the block copolymer:

Sample ID: P18902-SOH

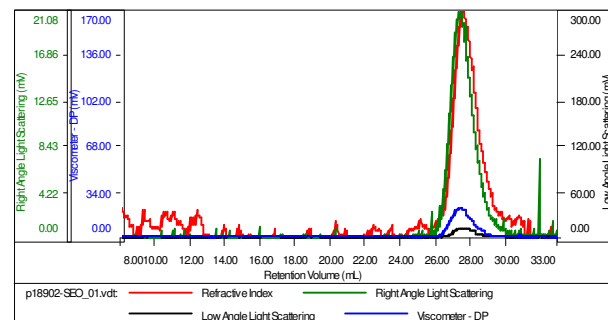
Concentration (mg/mL)	13.8118
Sample dn/dc (mL/g)	0.1850
Method File	PS80K-0923-2014-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P18902-SOH_01.vdt	19,625	20,767	20,074	1.058	0.1180

Sample ID: P18902-SEO

Concentration (mg/mL)	5.7728
Sample dn/dc (mL/g)	0.1356
Method File	PS80K-0923-2014-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
p18902-SEO_01.vdt	25,238	27,166	28,246	1.076	0.1247