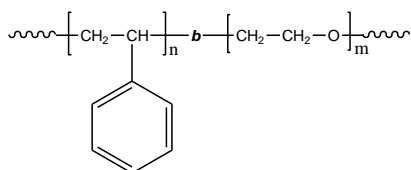


Sample Name: Poly(styrene-b-ethylene oxide)

Sample #: P18848A-SEO

Structure:



Composition:

Mn x 10 ³	PDI
9.5-b-5.0	1.04

Synthesis Procedure:

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

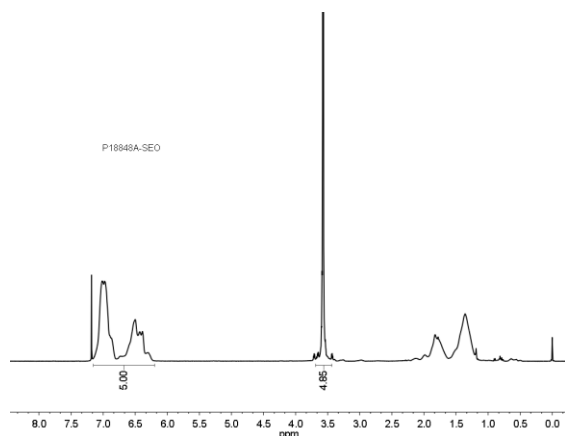
Characterization:

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).

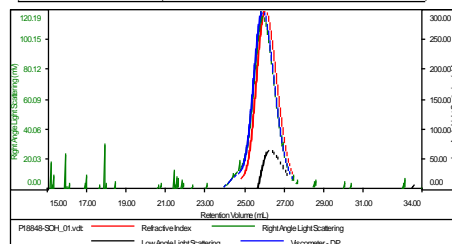
The melting temperature (T_m) was taken as a maximum of the endothermic peak.

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

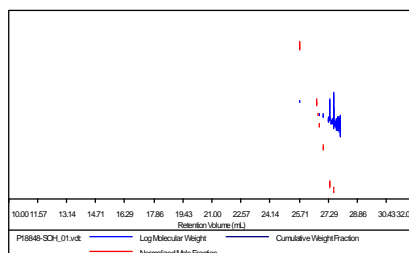
SEC elugram of the block copolymer:

Sample ID: P18848-SCH

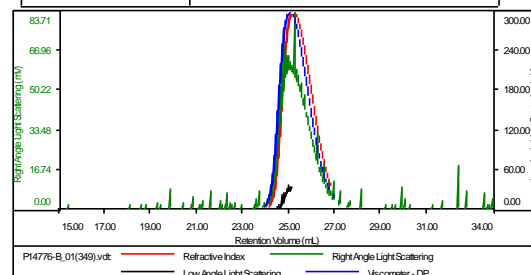
Concentration (mg/mL)	33.3271
Sample dn/dc (mL/g)	0.1850
Method File	F580K-august 12-2014-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	Mn	Mw	Mp	Mw/Mn	IV
P18848-SCH_01.vdt	9,607	9,988	9,737	1.041	0.079



Concentration (mg/mL)	21.7141
Sample dn/dc (mL/g)	0.1370
Method File	F580K-august 12-2014-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	Mn	Mw	Mp	Mw/Mn	IV
P14776-B_01(349).vdt	15,878	16,488	16,046	1.039	0.1337

