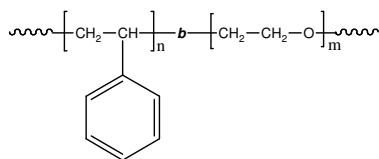


Sample Name: Poly(styrene-b-ethylene oxide)

Sample #: P18848B-SEO

Structure:



Composition:

$M_n \times 10^3$	PDI
9.5-b-5.3	1.04

Synthesis Procedure:

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

Characterization:

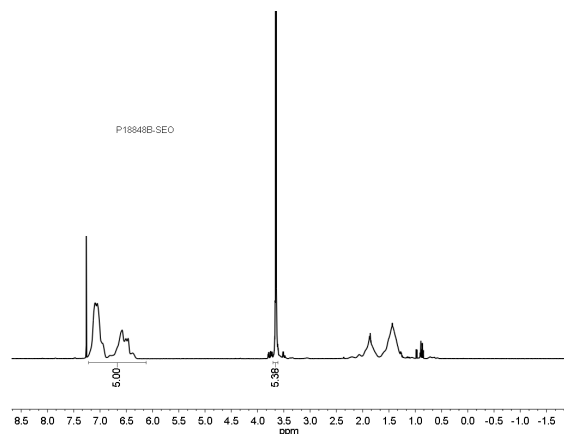
By size exclusion chromatography (SEC) and by ^1H -NMR

Solubility:

The polymer is soluble in THF (at 35 °C), CHCl_3 , benzene, toluene, dioxane. Low molecular weight SEO with high contents of the polyethylene oxide block can also be solubilized in methanol and water.

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).

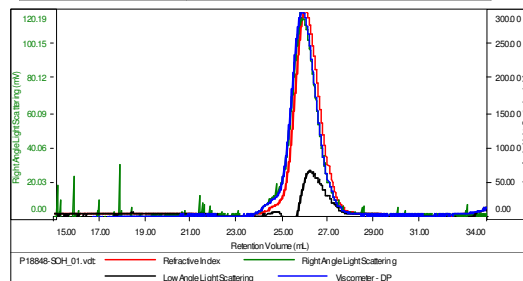
The melting temperature (T_m) was taken as a maximum of the endothermic peak.

For PS block: T_g : 85°C	
For PEO block:	
T_g : -63°C	T_m : 61°C

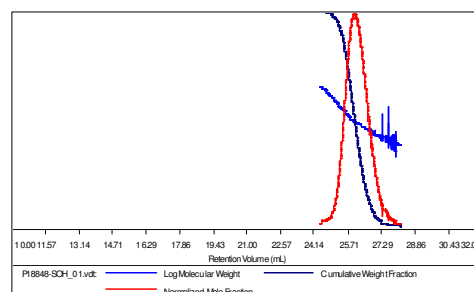
SEC:

Sample ID: P18848-SCH

Concentration (mg/mL)	33.3571
Sample dn/dc (mL/g)	0.1850
Method File	PS80K.august.12.2014.0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF

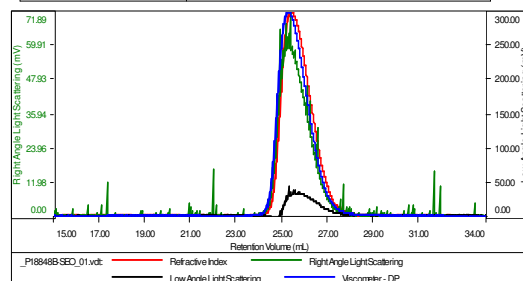


Sample	M_n	M_w	M_p	M_w/M_n	IV
P18848-SCH_01.vdt	9,607	9,998	9,737	1.041	0.079



Sample ID: P18848B-SEO

Concentration (mg/mL)	23.4003
Sample dn/dc (mL/g)	0.1300
Method File	PS80K.august.12.2014.0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF



Sample	M_n	M_w	M_p	M_w/M_n	IV
P18848B-SEO_01.vdt	16,404	16,795	16,812	1.024	0.1257

