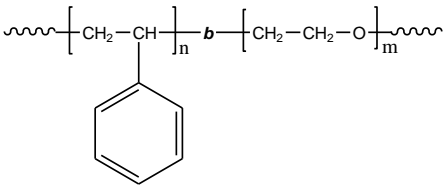


Sample Name: Poly (styrene-b-ethylene oxide)

Sample #: P19287-SEO

Structure:



Composition:

Mn x 10 ³ S-b-EO	PDI
158.0-b-15.0	1.07

Synthesis Procedure:

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

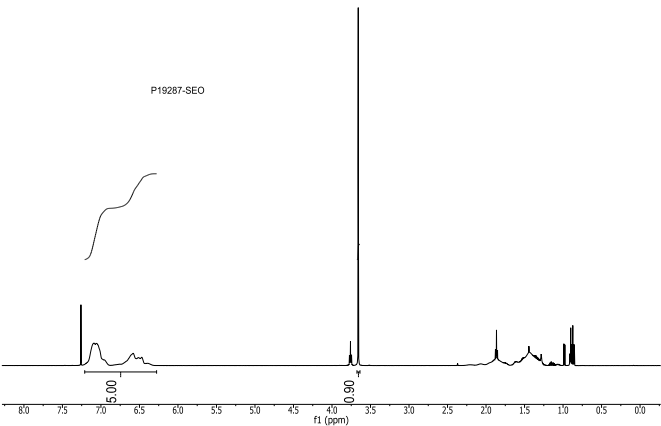
Characterization:

The molecular weight and polydispersity index (PDI) of the block copolymer are characterized by size exclusion chromatography (SEC) in THF or DMF. The composition of the block copolymer was calculated from ¹H-NMR by comparing the peak area of the phenyl polystyrene protons between 6.4 to 7.2 ppm and the ethylene oxide protons at 3.65 ppm.

Solubility:

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

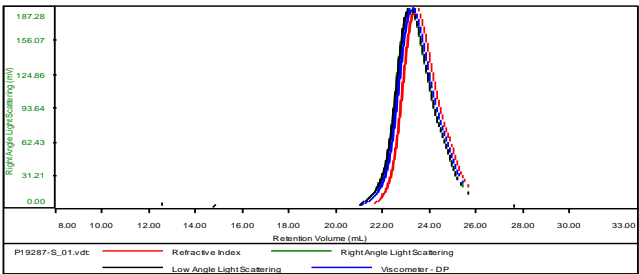
¹H NMR spectrum of the polymer:



SEC elugram of the first polystyrene block:

Sample ID:P19287-S

Concentration (mg/mL)	1.1020
Sample dn/dc (mL/g)	0.1850
Method File	PS80K-April29-2015-0000.vcm
Column Set	3x PL 1113-6300
Solvent	THF

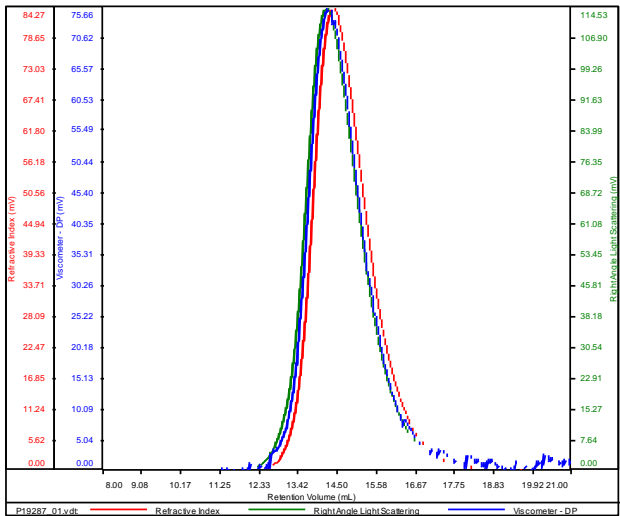


Sample	MW Number Average (Da)	MW Weight Average (Da)	MW at Peak (Da)	Polydispersity	Intrinsic Viscosity (dL/g)
P19287-S_01.vdt	158,063	170,625	158,964	1.079	2.3097

SEC elugram of the block copolymer:

P19287-SEO

Conc	4.0317
dn/dc	0.1500
Solvent	DMF w 0.023M LiBr
Flow Rate	0.7000
Method	PS100k_2017-Oct11-0000.vcm



Sample	Mn	Mw	Mp	Mw/Mn	IV
P19287_01.vdt	172,904	184,510	173,906	1.067	0.3852