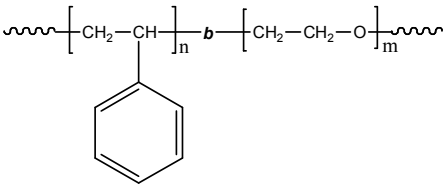


Sample Name: Poly (styrene-b-ethylene oxide)

Sample #: P40232-SEO

Structure:



Composition:

$M_n \times 10^3$ S-b-EO	PDI
105.0-b-155.0	1.12

Synthesis Procedure:

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

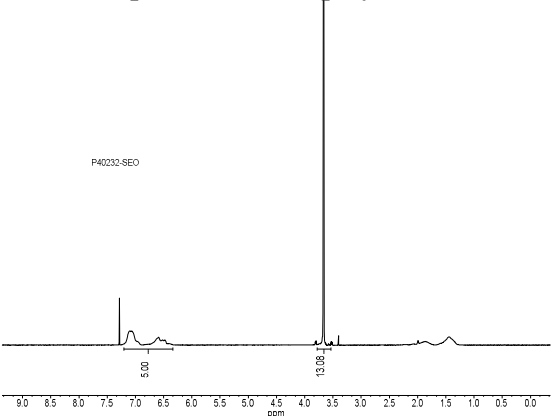
Characterization:

The molecular weight and polydispersity index (PDI) of the block copolymer are characterized by size exclusion chromatography (SEC). 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:

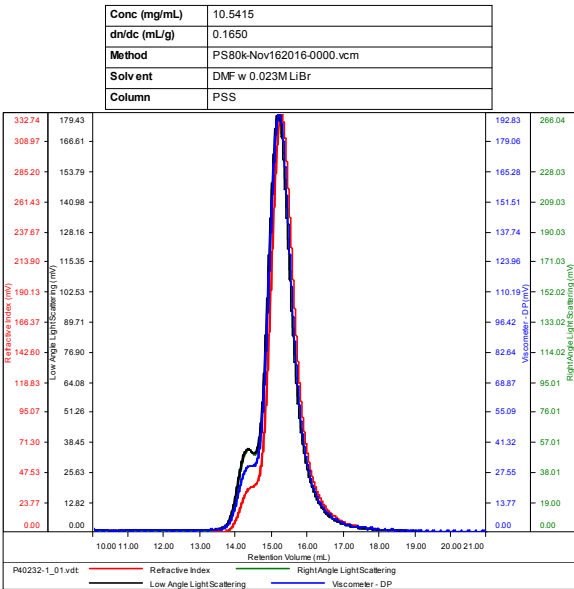
The polymer is soluble in THF (at 35 °C), $CHCl_3$, benzene, toluene, and dioxane. Low molecular weight SEO with high contents of the polyethylene oxide block can also be solubilized in methanol and water.

1H NMR spectrum of the polymer:



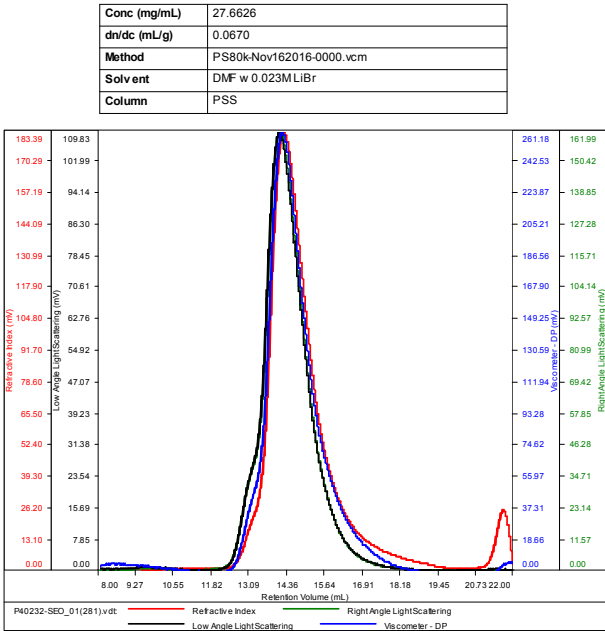
SEC elugram of the block copolymer:

P40232-1



Sample	Mn	Mw	Mp	Mw/Mn	IV
P40232-1_01.vdt	104,864	109,119	105,787	1.041	0.1783

P40232-SEO



Sample	Mn	Mw	Mp	Mw/Mn	IV
P40232-SEO_01(281).vdt	259,817	292,268	294,515	1.125	0.1751