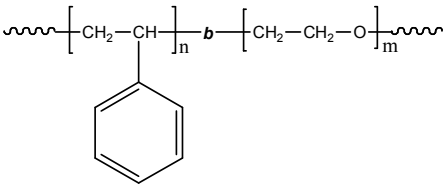


Sample Name: Poly (styrene-b-ethylene oxide)

Sample #: P40230-SEO

Structure:



Composition:

Mn x 10 ³ S-b-EO	PDI
208.0-b-71.0	1.10

Synthesis Procedure:

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

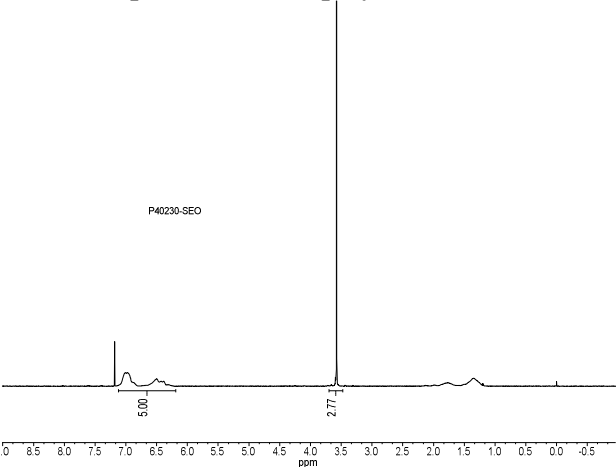
Characterization:

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:

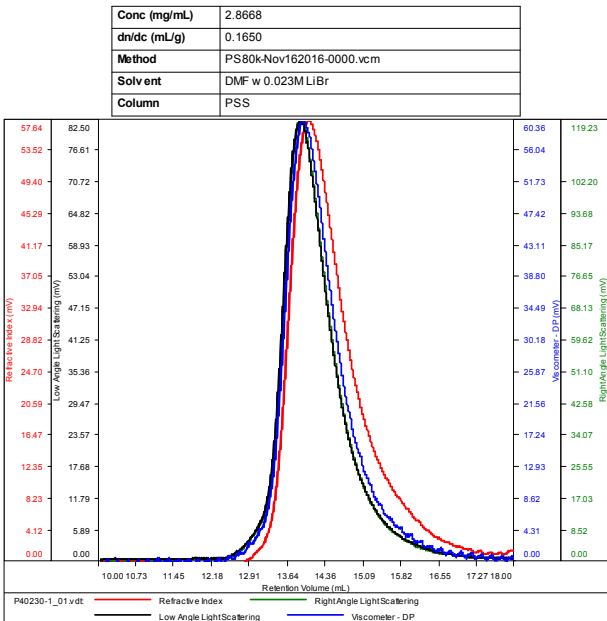
The polymer is soluble in THF (at 35 °C), CHCl₃, benzene, toluene, and dioxane. Low molecular weight SEO with high contents of the polyethylene oxide block can also be solubilized in methanol and water.

¹H NMR spectrum of the polymer:



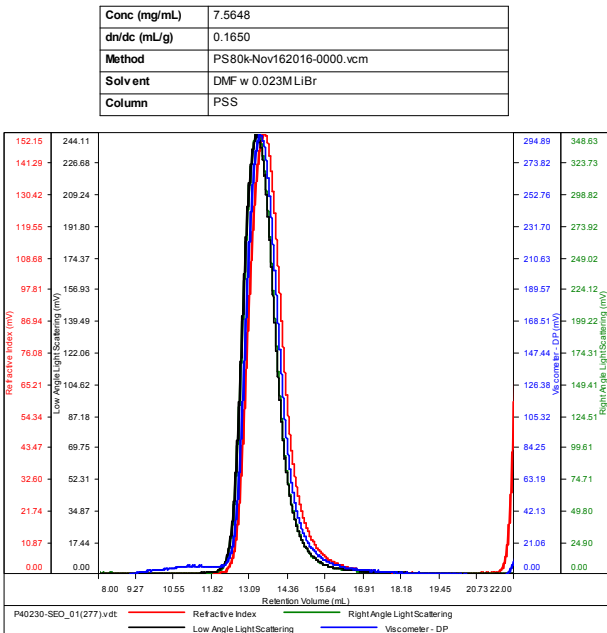
SEC elugram of the block copolymer:

P40230-1



Sample	Mn	Mw	Mp	Mw/Mn	IV
P40230-1_01.vdt	207,768	243,206	271,001	1.171	0.2844

P40230-SEO



Sample	Mn	Mw	Mp	Mw/Mn	IV
P40230-SEO_01(277).vdt	279,388	307,393	305,868	1.100	0.5666