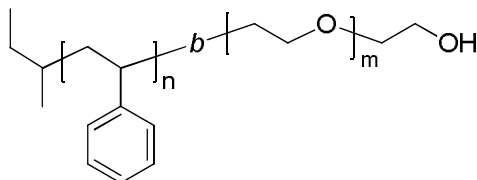


Sample: Poly(styrene-*block*-ethylene oxide)

Sample # P18428A-SEO

Structure:



Composition:

$M_n \times 10^3$ (g/mol) [PS- <i>b</i> -PEO]	M_w/M_n
20.5- <i>b</i> -4.0	1.02

Synthesis:

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

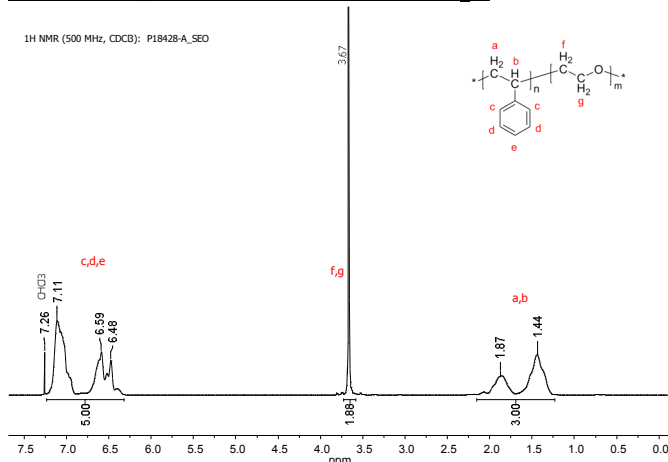
Characterization:

The molecular weight of the first (polystyrene) block and polydispersity index (M_w/M_n) of the final diblock copolymer were determined by size exclusion chromatography (SEC). The molecular weight of the second (PEO) block was calculated from ^1H NMR spectroscopy data by comparing the peak area of the phenyl polystyrene protons ~6.4–7.2 ppm and the ethylene oxide protons at ~3.7 ppm.

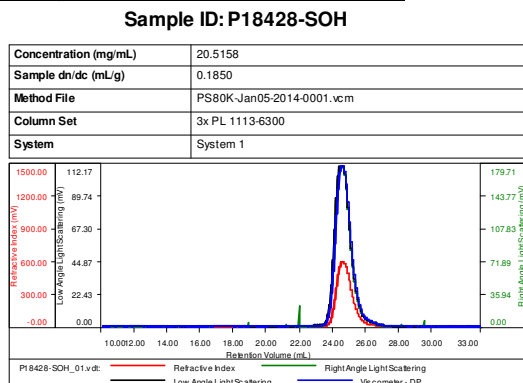
Solubility:

The polymer is soluble in THF (at $T > 35^\circ\text{C}$), chloroform, benzene, toluene, dioxane. PS-*b*-PEO having low total molecular weight and high content of PEO block can also be soluble in methanol and water.

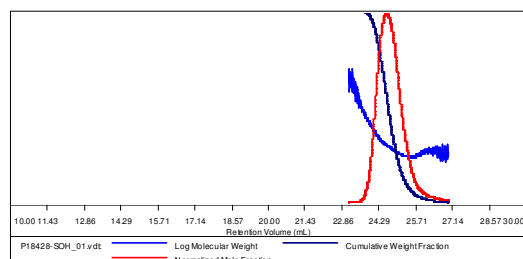
^1H NMR spectrum (500 MHz, CDCl_3):



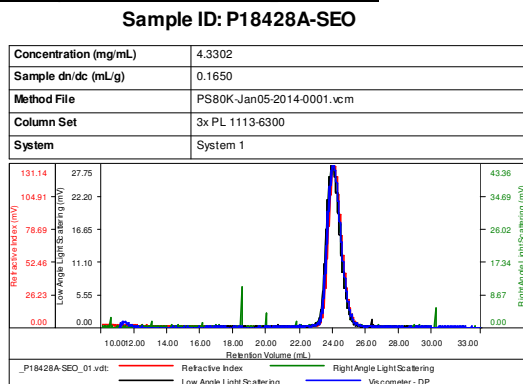
SEC elugram of the first (PS) block:



Sample	Mn	Mw	Mp	Mw/Mn	IV
P18428-SOH_01.vdt	20,277	20,531	20,390	1.013	0.1517



SEC elugram of the final product:



Sample	Mn	Mw	Mp	Mw/Mn	IV
_P18428A-SEO_01.vdt	24,480	24,810	24,690	1.013	0.1893

