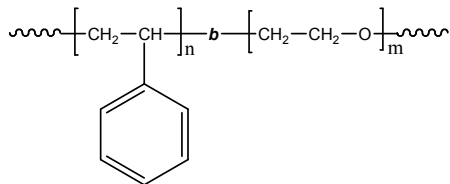


**Sample Name:** Poly(styrene-b-ethylene oxide)

**Sample #:** P5883P-SEO

**Structure:**



**Composition:**

Mn x 10 <sup>3</sup> S-b-EO	PDI
170.0-b-6.0	1.09

**Synthesis Procedure:**

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

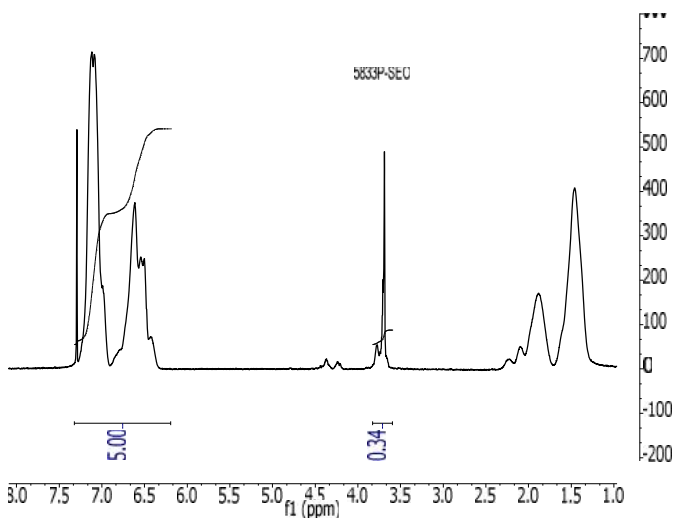
**Characterization:**

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 <sup>1</sup>H-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:**

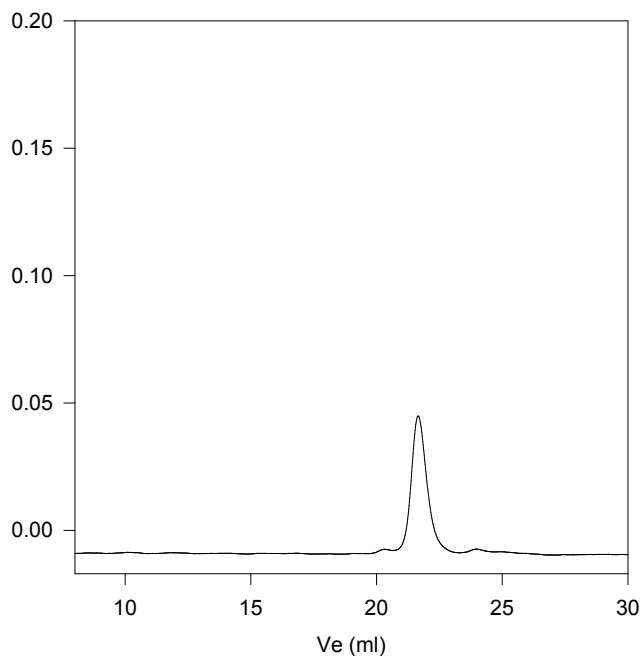
The polymer is soluble in THF (at 35 °C), CHCl<sub>3</sub>, benzene, toluene, dioxane. Low molecular weight SEO with high contents of the polyethylene oxide block can also be solubilized in methanol and water.

**<sup>1</sup>H NMR spectrum of the sample**



**SEC profile of the block copolymer**

**P5883P-SEO**



Size exclusion chromatography of poly(styrene-b-ethylene oxide)

— Poly(styrene), M<sub>n</sub>=170,000, M<sub>w</sub>=184,000, PI=1.08

Block Copolymer PSt(170,000)-b-PEO(6,000), PI=1.09  
Composition from <sup>1</sup>H NMR