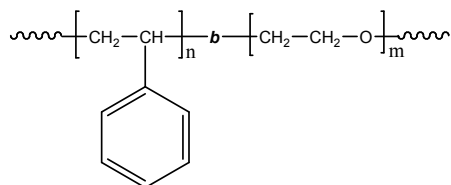


## Sample Name: Poly(styrene-b-ethylene oxide)

### Sample #: P11402P-SEO

#### Structure:



#### Composition:

Mn x 10 <sup>3</sup> S-b-EO	PDI
98.0-b-104.0	1.12

#### Synthesis Procedure:

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

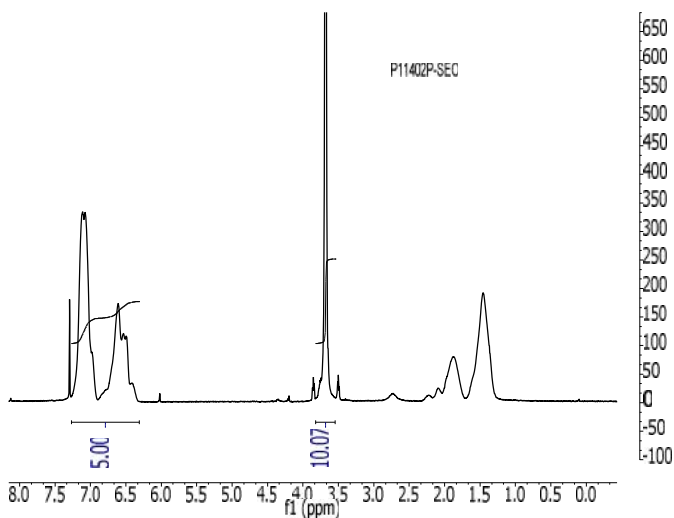
#### Characterization:

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 <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.

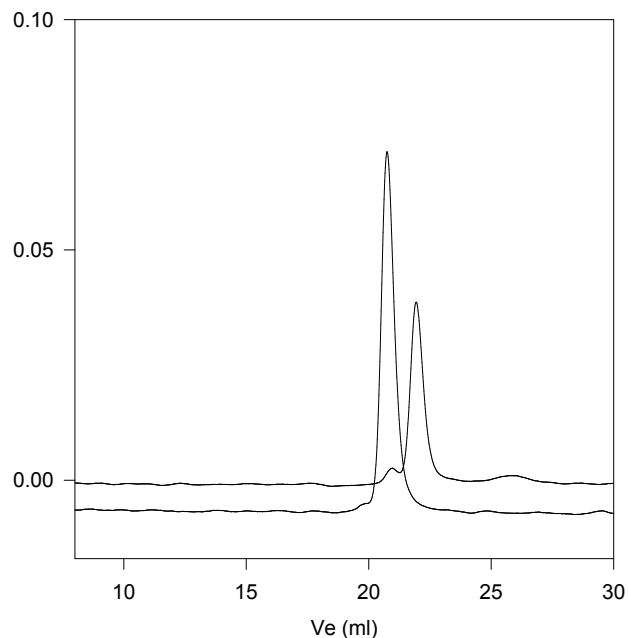
#### Solubility:

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.

#### SEC profile of the block copolymer



#### P11402-SEO



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

— Poly(styrene), M<sub>n</sub>=98,000, M<sub>w</sub>=103,000, PI=1.05

— Block Copolymer PSt(98,000)-b-PEO(104,000), PI=1.12  
Composition from <sup>1</sup>H NMR