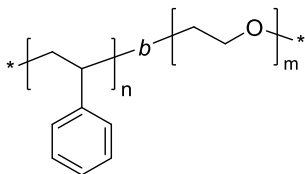


Product Name:

**Polystyrene-*b*-poly(ethylene oxide),**  
amphiphilic diblock copolymer

Sample#: **P42673-SEO**

**Structure:**



**Composition:**

$M_n \times 10^3$ (g/mol) [S- <i>b</i> -EO]	$M_w/M_n$
10.0- <i>b</i> -23.0	1.01

**Synthesis Procedure:**

The PS-PEO diblock copolymer was synthesized by living anionic polymerization method.

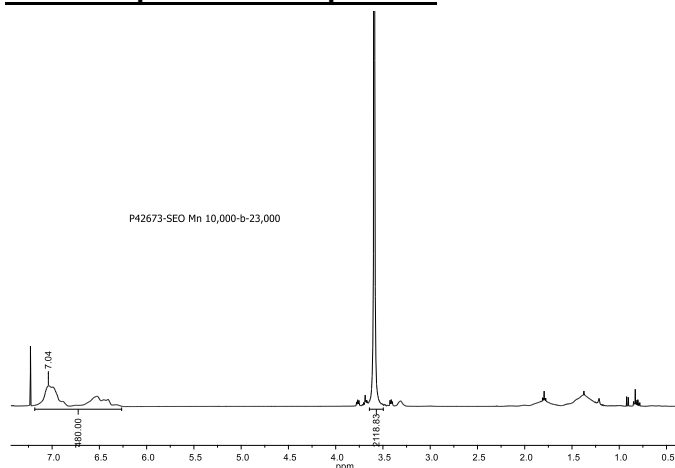
**Characterization:**

The product was validated by proton NMR spectroscopy and size exclusion chromatography (SEC).

**Solubility:**

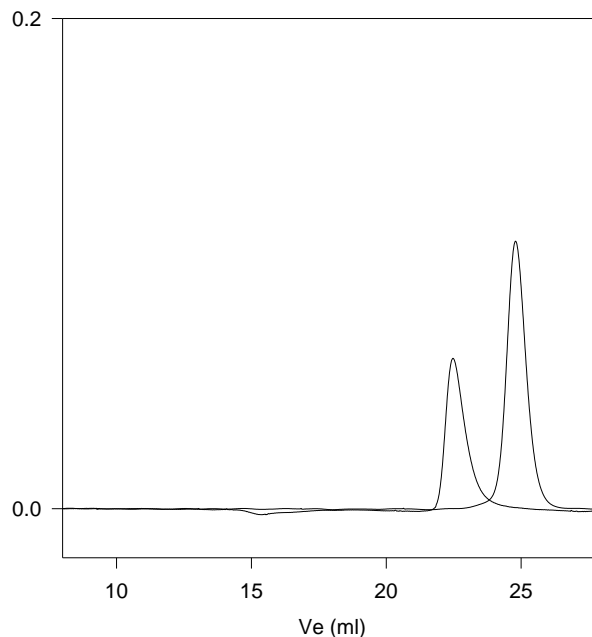
The polymer is soluble in tetrahydrofuran at 35°C, chloroform, benzene, toluene, dioxane. Low molecular weigh PS-PEO with high content of PEO block can also be soluble in methanol and water.

**<sup>1</sup>H-NMR spectrum of the product:**



**SEC chromatograms of the product in THF:**

**P42673-SEO**



Size Exclusion Chromatography:

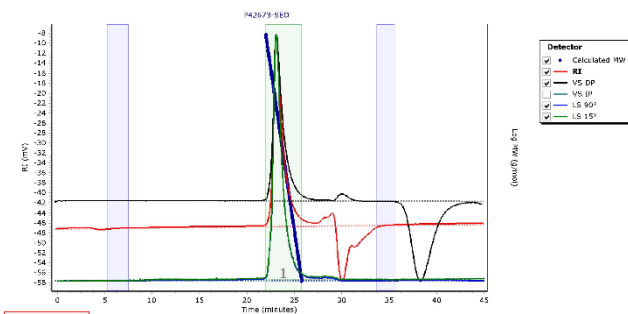
— Polystyrene,  $M_n=10,000$ ,  $M_w=10,500$ ,  $PI=1.05$

— Block Copolymer Polystyrene-*b*-Poly(ethylene oxide)

$M_w$ : PS(10,000)-*b*-PEO(23,000),  $PI=1.01$

**P42673-SEO**

Chromatogram Plot



Molecular Weight Averages

Peak	$M_p$ (g/mol)	$M_n$ (g/mol)	$M_w$ (g/mol)	$M_z$ (g/mol)	$M_z+1$ (g/mol)	$M_v$ (g/mol)	PD
Peak 1	35774	33172	33591	33968	34307	33836	1.013